



(A STUDY OF EDUCATIONAL TECHNOLOGY AND THE
PROVISION OF IN-SERVICE COURSES FOR
PRIMARY AND INTERMEDIATE SCHOOL TEACHERS IN BAHRAIN)



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DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
REGULATIONS FOR THE DEGREE OF MASTER IN EDUCATION
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MARCH 1986



DECLARATION

I declare that this ~~study~~ study submitted for the Degree of Master in Education has not already been accepted in substance for any degree, and is not being concurrently submitted in candidature for any degree.

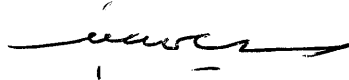
Signed



Mohammed Jaffar Al-Moosawi

I declare that this study submitted for the Degree of Master in Education is the result of my own work and investigation. Wherever possible I acknowledge the authors of references used and of views expressed which are other than my own.

Signed



Mohammed Jaffar Al-Moosawi

SUMMARY

This study describes the education and training of primary and intermediate school teachers in Bahrain, with special emphasis on Educational Technology. In particular, a study is made of the views of teachers on relevant topics to assist in the design of further in-service training.

Moreover, the study proposes some modification of in-service education and the introduction of further courses related to the application of educational technology. The history of teacher training in Bahrain, whether in-service or pre-service, in the past years of expansion and adaptation demonstrate how much has already been achieved.

Nevertheless, there is evidence that the present system is no longer adequate for its purpose. This inadequacy arises from what may be called the absence of 'Educational Technology' in almost all the previous in-service teacher education and training programmes, and the inadequate attention to it in the present system.

The suggestions and recommendations for the modification are based upon a survey of approximately 300 teachers in 14 schools. A questionnaire sought information on teachers' background to in-service training, their attitudes towards these courses, their views and opinions about the teaching methods they use and the delineation of their attitudes towards the development of educational technology in the training programmes.

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INTRODUCTION

BAHRAIN : GENERAL DESCRIPTION

The State of Bahrain comprises a group of 35 small islands with a total area of approximately 677.9 square kilometers, and lies midway down the Arabian Gulf, a few miles off the Arabian peninsula (figure 1).

The largest island, Bahrain, is approximately 48 kilometers long and 16 kilometers wide, with a total area of 562 kilometers. Its capital is Manama in the northeast, and it is connected to the second largest island, Muharraq, by a 2.4 kilometer causeway. The third principal island is Sitra Island, which is connected to Manama the capital by another new causeway. Sitra is an important centre for shipping and oil refining. Nearly all the population live on the three islands of Bahrain, Muharraq and Sitra, the remaining areas are largely uninhabited deserts.

The population of Bahrain in 1981 was 350,798 (238,420 Bahraini and 112,378 non-Bahraini). With an estimated annual growth rate of 3.5 percent, the population of Bahrain in 1986 will be approximately 425,000 (table 1).

The State of Bahrain has three characteristic seasons. The Bahrain summer is very hot, long and humid, temperatures rising sharply from March and reaching a peak in August. The period from December to March is coolest with rainfall at less than three inches per annum. October and November are the favourite months in Bahrain.

The existence of generous supplies of fresh water, and the strategic location of the island, have made Bahrain an important centre of trade since earliest recorded history. By the 19th century, pearling and trading with neighbouring countries generated enough money for the beginning of public education, health and other welfare services.

Nearly 20 percent of the total area of Bahrain is under cultivation; the average size of a farm is approximately 15 acres. Less than 10 percent of the agricultural area is owned by the farmers, the rest renting the land from its owners.

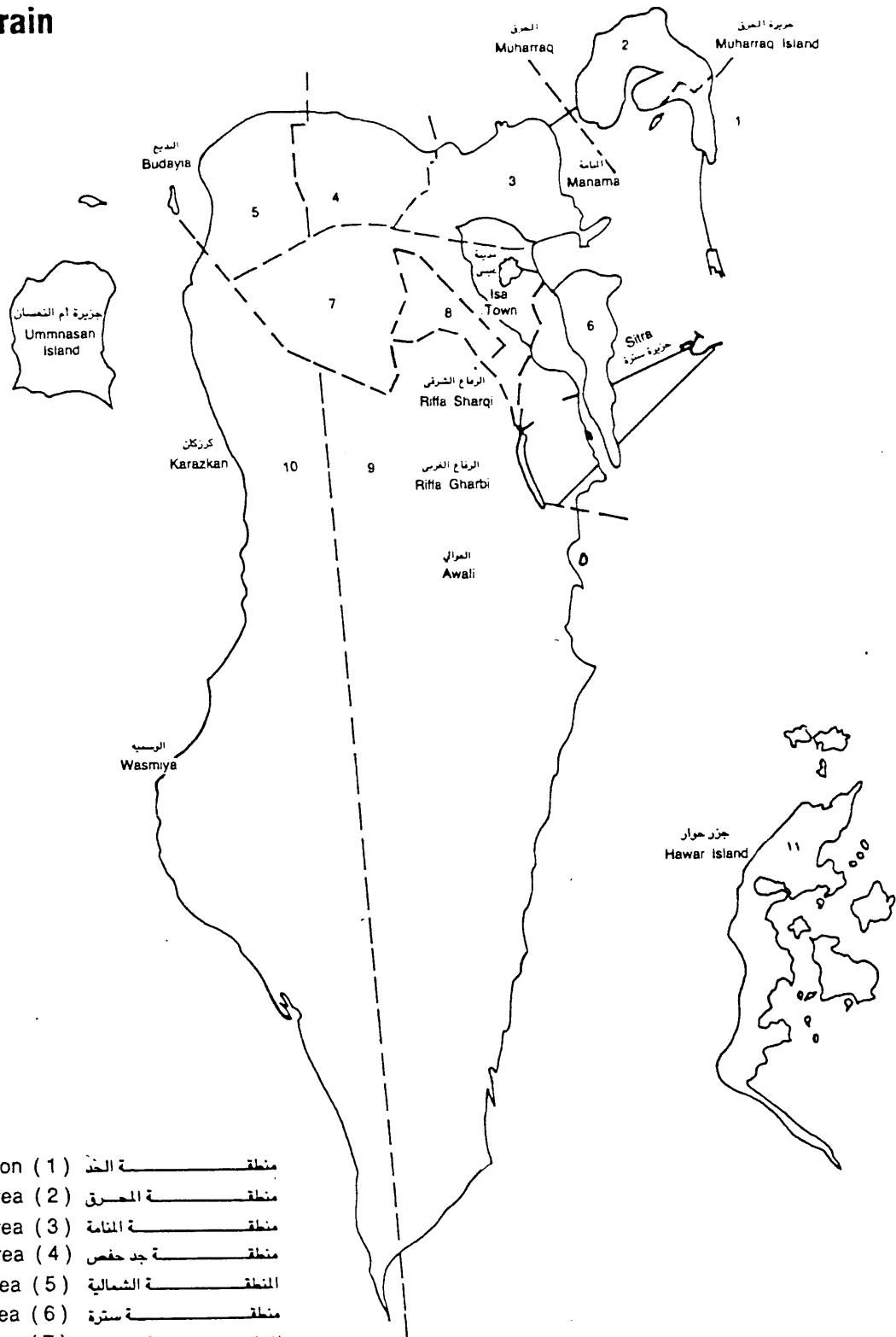
The most important crop is palm dates, which takes up more than two-thirds of the land under cultivation. In addition to dates, a variety of vegetables and fruits are grown, the most common being tomatoes and melons.

Before 1930, Bahrain depended largely on farming, pearl fishing and trading for its economic support. Then, in the early 1930's oil was discovered. The subsequent development of industry and service and the relatively high incomes earned from those activities brought about a steady decline in farming.

In recent times so much fresh water has been taken from underground reservoirs that they are becoming salty. This salty water is unsuitable for irrigation and hence the area of land under irrigation has diminished.

Bahrain's oil deposits are relatively small in comparison with those of neighbouring Gulf states. Nevertheless, the economy of Bahrain is heavily dependent on oil - approximately 80 percent of the total public revenue comes from oil and oil related activities. After oil production and allied activities, the trade and service sector is the most important source of income in Bahrain economy. This sector, which includes government services, trade, banking, finance, transport, communication and public administration, contribute roughly 10 percent of the total income of Bahrain.

البحرين Bahrain



- منطقة الحد (1) Al-Hid Region
 منطقة المحرق (2) Muharraq Area
 منطقة المنامة (3) Manama Area
 منطقة جد حفص (4) Jidhafs Area
 المنطقة الشمالية (5) Northern Area
 منطقة ستره (6) Sitra Area
 المنطقة الوسطى (7) Central Area
 منطقة مدينة عيسى (8) Isa Town Area
 منطقة الرفاع (9) Riffa Area
 المنطقة الغربية (10) Western Area
 جزر حوار (11) Hawar Island

Figure 1

Age Groups	Total Population			مجموع السكان			Non-Bahraini	غير البحرينيين			Bahraini	البحرينيون		فئات العمر
	المجموع Total	اناث Female	ذكور Male	اناث Female	ذكور Male	المجموع Total		اناث Female	ذكور Male	المجموع Total		اناث Female	ذكور Male	
0 — 4	43762	21588	22174	3744	3967	7711		17844	18207	36051		17844	18207	٤ - ٠
5 — 9	37487	18588	18899	2668	2773	5441		15920	16126	32046		15920	16126	٩ - ٥
10 — 14	34213	17007	17206	1912	1975	3887		15095	15231	30326		15095	15231	١٤ - ١٠
15 — 19	35410	17642	17768	1739	2334	4073		15903	15434	31337		15903	15434	١٩ - ١٥
20 — 24	41543	16705	24838	3503	12191	15694		13202	12647	25849		13202	12647	٢٤ - ٢٠
25 — 29	44168	13676	30492	4562	20691	25253		9114	9801	18915		9114	9801	٢٩ - ٢٥
30 — 34	31186	9088	22098	3454	15698	19152		5634	6400	12034		5634	6400	٣٤ - ٣٠
35 — 39	21271	7157	14114	2215	9797	12012		4942	1317	9259		4942	1317	٣٩ - ٣٥
40 — 44	17842	6417	11425	1468	7094	8562		4949	4331	9280		4949	4331	٤٤ - ٤٠
45 — 49	13400	5175	8225	923	4019	4942		4252	4206	8458		4252	4206	٤٩ - ٤٥
50 — 54	10623	4255	6368	548	2369	2917		3707	3999	7706		3707	3999	٥٤ - ٥٠
55 — 59	6793	2701	4092	305	1025	1330		2396	3067	5463		2396	3067	٥٩ - ٥٥
60 — 64	5336	2307	3029	199	496	695		2108	2533	4641		2108	2533	٦٤ - ٦٠
65 — 69	2867	1278	1589	104	185	289		1174	1404	2578		1174	1404	٦٩ - ٦٥
70 — 74	2386	1184	1202	89	133	222		1095	1069	2164		1095	1069	٧٤ - ٧٠
75 & over	2511	1237	1274	76	122	198		1161	1152	2313		1161	1152	٧٥ فأكثر
Total	350798	146005	204793	27509	84869	112378		118496	119924	238420		118496	119924	المجموع

Table 1 : Number of Population in Bahrain by Nationality and Age Group - 1981

CHAPTER 1

EDUCATION IN BAHRAIN

EDUCATION IN BAHRAIN

Before the development of secular education there was an education system associated with the Quranic (Kuttab) schools. Kuttab schools were run by 'Mullahs', i.e. 'Readers', in their homes, in shop corners and, in the summer, in the bazaars. Mullahs used to make children, boys and girls, memorise and repeat verses of the 'Koran' and 'Traditions' of 'Muhammed' the prophet. They devoted themselves to giving religious instruction voluntarily, but parents usually bestowed donations of food or money for their efforts in order for them to carry on their instruction.

"When a boy or a girl finished reading the whole Quran, then parents and friends joined in the most popular celebration, called al-Khatmeh, a celebration comparable to commencement in present day schools."

Al-Hamer (1968)

There is no exact date for the beginning of Quranic (Kuttab) schools in Bahrain, but it is obvious that this kind of school predated all other types of school, be they national, private or governmental.

Al-Hamer (1968), after R. Bwinder, states that

"the first western-style schools in Bahrain were founded by the Arabian Mission, an independent group which began its operations in al-Bahrayn in 1892 and which was adopted by the reformed church in America in 1894."

The Quranic (Kuttab) schools continued even after the formation of public schools, but the use of the Quran as a means of teaching children to read was forbidden in 1940.

The idea of having modern schools in Bahrain and the Arabian Gulf countries to teach general subjects, had been circulating for some time before the early 20th century. We have to turn to Bahrain for the formation of the first private primary school for boys - opened in 1919 by Shaika Isa Bin Ali Al-Khalifa, the ruler of Bahrain at that time (a pioneer who had visited schools in Britain and felt that similar schools should be formed in Bahrain). The leaders were taking a very cautious step and were not fully convinced at the beginning that their venture would succeed.

The development of education in Bahrain was very slow in the early days. The first private primary school for girls being opened in 1928. In 1930. the government of Bahrain took over responsibility for schools and started the public school period. Since 1950, rapid changes have taken place in schooling and in educational services for the whole country. For example, the total number of students in 1949-50 was 4,977, in 1959-60 it was 12,464, by 1966-67 numbers had risen to 15,997, while in 1982-83 it was 75,434 (figure 2).

The total number of schools in 1969-70 was 107, in 1974-75 it was 117, it was 121 in 1979-80, and by 1983-84 it had risen to 135. Figure 3 shows the development of schools in Bahrain.

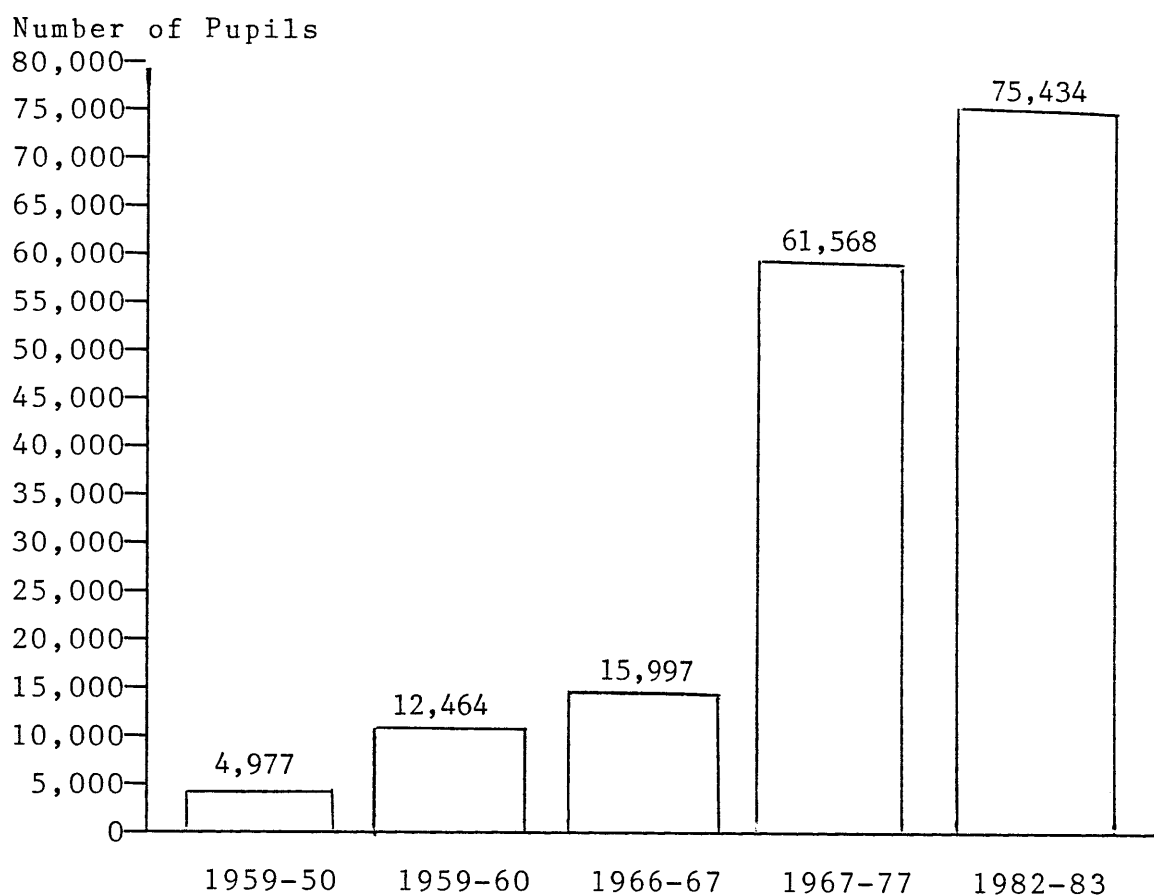


Figure 2 : School Enrolment in Selected Years



Figure 3 : Development of Schools in Selected Years

THE SCHOOLING SYSTEM

The current pattern of schooling in Bahrain begins with six years of primary education, followed by three years at the intermediate level and three years at the secondary level (see figure 4).

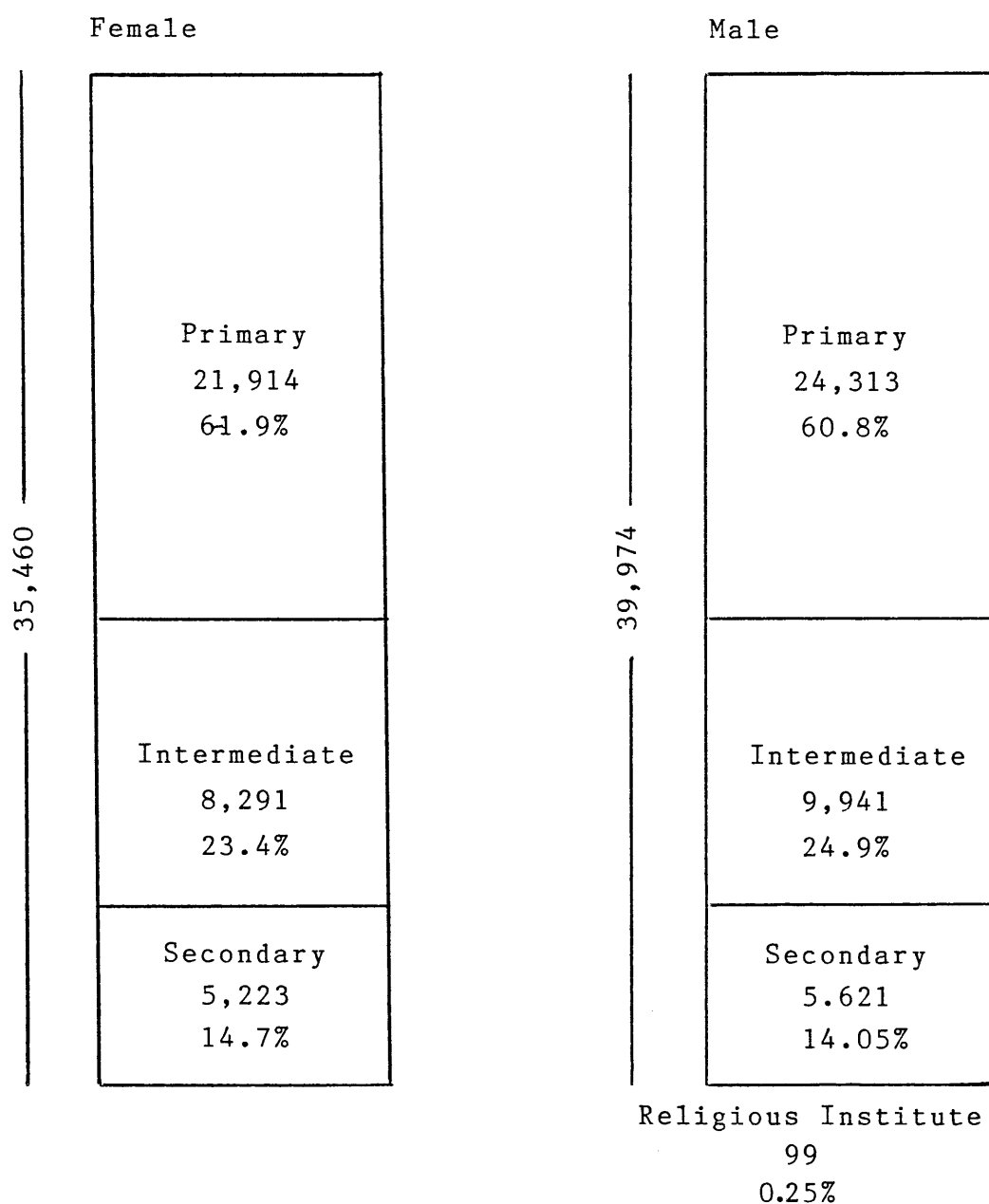


Figure 4 : Number of Students by Level and Sex, 1982/83

In 1982-83 roughly two thirds (65.81%) of the Bahraini school age population of 72,546 pupils were enrolled in state schools

Age	نسب الاستيعاب Enrolment Ratio			عدد الطلبة Students			عدد السكان Population			العمر
	المجموع Total	اناث Female	ذكور Male	المجموع Total	اناث Female	ذكور Male	المجموع Total	اناث Female	ذكور Male	
5 years	4.6	3.7	5.5	326	130	196	7054	3500	3554	٥ سنوات
6 years	89.7	85.1	94.3	6200	2921	3279	6909	3431	3478	٦ سنوات
7 years	89.3	87.5	91.1	6063	2951	3112	6788	3373	3415	٧ سنوات
8 years	85.7	84	87.4	5736	2796	2940	6690	3327	3363	٨ سنوات
9 years	87.8	82.9	92.7	5808	2728	3080	6613	3291	3322	٩ سنوات
10 years	91.8	85.1	98.4	6006	2773	3233	6545	3260	3285	١٠ سنوات
11 years	89	86.1	91.8	5767	2783	2984	6481	3232	3249	١١ سنة
12 years	86.2	85.3	87.1	5556	2744	2812	6448	3218	3230	١٢ سنة
13 years	89.4	86.6	92.1	5770	2792	2978	6456	3223	3233	١٣ سنة
14 years	87.4	83.3	91.4	5666	2698	2968	6484	3237	3247	١٤ سنة
15 years	80.8	76.5	85	5252	2483	2769	6504	3247	3257	١٥ سنة
16 years	78.4	74.9	81.8	5111	2435	2676	6523	3253	3270	١٦ سنة
17 years	71.4	68.3	74.5	4629	2212	2417	6483	3237	3246	١٧ سنة
18 years	44	35.9	52.2	2798	1144	1654	6357	3190	3167	١٨ سنة
19 years	19.2	10.6	28.1	1187	330	857	6167	3117	3050	١٩ سنة
20 years	7.9	4.1	11.9	474	125	349	5973	3040	2933	٢٠ سنة
21 years	3.4	1.4	5.5	197	43	154	5766	2959	2807	٢١ سنة
Total	65.8	61.8	69.8	72546	34088	38458	110241	55135	55106	المجموع

* تقديري بواقع ٩٦ / لجملة الطلبة البحرينيين من مجموع الطلبة

* Source: Central Statistic Organisation estimation 1983

Table 2 : Enrolment Ratio of Bahraini Population by Age and Sex: 1982/83

in Bahrain. Of these 34,088 (30.9%) were females and 38,458 (34%) were males (table 2).

According to the educational statistics of the Ministry of Education in Bahrain for 1982/83, the total number of students at all levels was 75,434, of whom 39,974 (53%) were males, and 35,460 (47%) were females (table 3).

An overwhelming majority of the students, 46,227 (61.2%), were at the primary level (figure 4). This high percentage of students in primary education has been noticeable for many years (figure 5). In the academic year 1980-81 the number fell, but in 1981-82 the number rose again (table 3).

Academic Year	Student Population	Academic Year	Student Population
1971-72	36,953	1978-79	44,003
1972-73	37,903	1979-80	44,592
1973-74	38,562	1980-81	44,109
1974-75	40,425	1981-82	44,694
1975-76	41,741	1982-83	46,259
1976-77	42,590	1983-84	47,792
1977-78	43,164		

Table 3 : Student Numbers 1971/72 - 1983/84

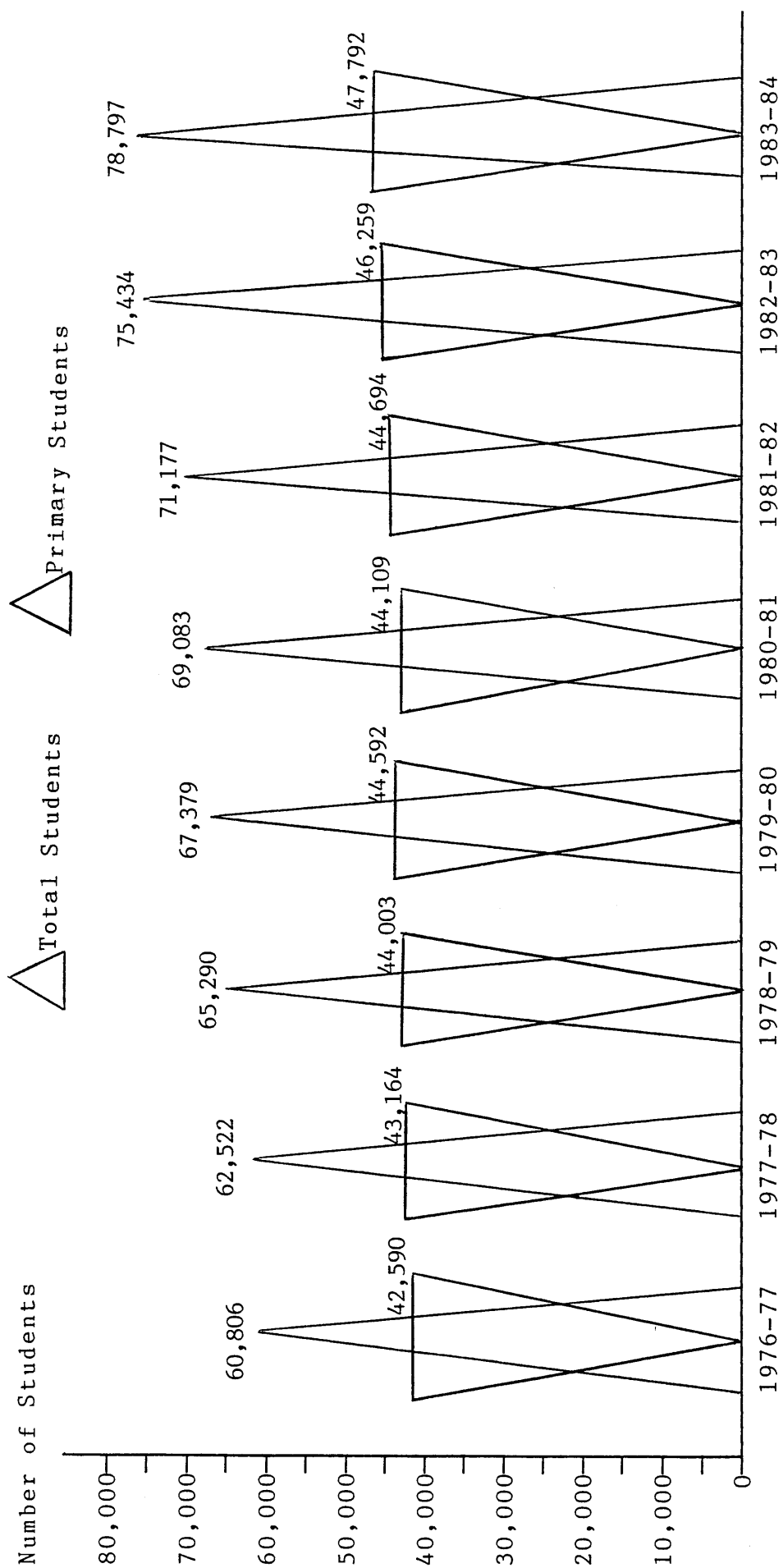


Figure 5 : Number of Enrolments in all Levels and the Development of Primary Level for the Years 1976-77/1983-84

THE EDUCATIONAL LADDER IN BAHRAIN

The structure of statutory public education in Bahrain has been changed many times; until 1960 it was organised on three levels: Infants (tahdiriyych), Primary and Secondary. In 1960 the pattern of the educational ladder was changed from 2-4-4 (total of ten years from the age of 6+, namely: 2 years Infants, 4 years Primary and 4 years Secondary) to 6-2-3 (a 11 year pattern which includes a unified 6 years primary stage, 2 years intermediate and 3 years secondary schooling). The intermediate stage was extended from two to three years as of the 1979-80 academic year (figure 6).

The legal position is that education is compulsory for nine years (6 years primary and three years intermediate), but in spite of this no legal action has been taken against any family for preventing their children attending school. The total enrolment ratio of the Bahraini population in 1982-83 was 65.8% (table 2).

A - Primary Education

The primary stage is compulsory (as is the intermediate) and is of six years duration. Commencing at grade 1 for children of chronological age 6 years, it proceeds through to grade 6 where children should, ideally, move to the intermediate level at the age of 12. The largest number of children in public schools are in the primary stage (i.e. about 68% of all school children). Promotion from one year to the next is not automatic; the two main criterion for promotion being:

- and
- (1) The passing of an annual examination.
 - (2) Regular school attendance.

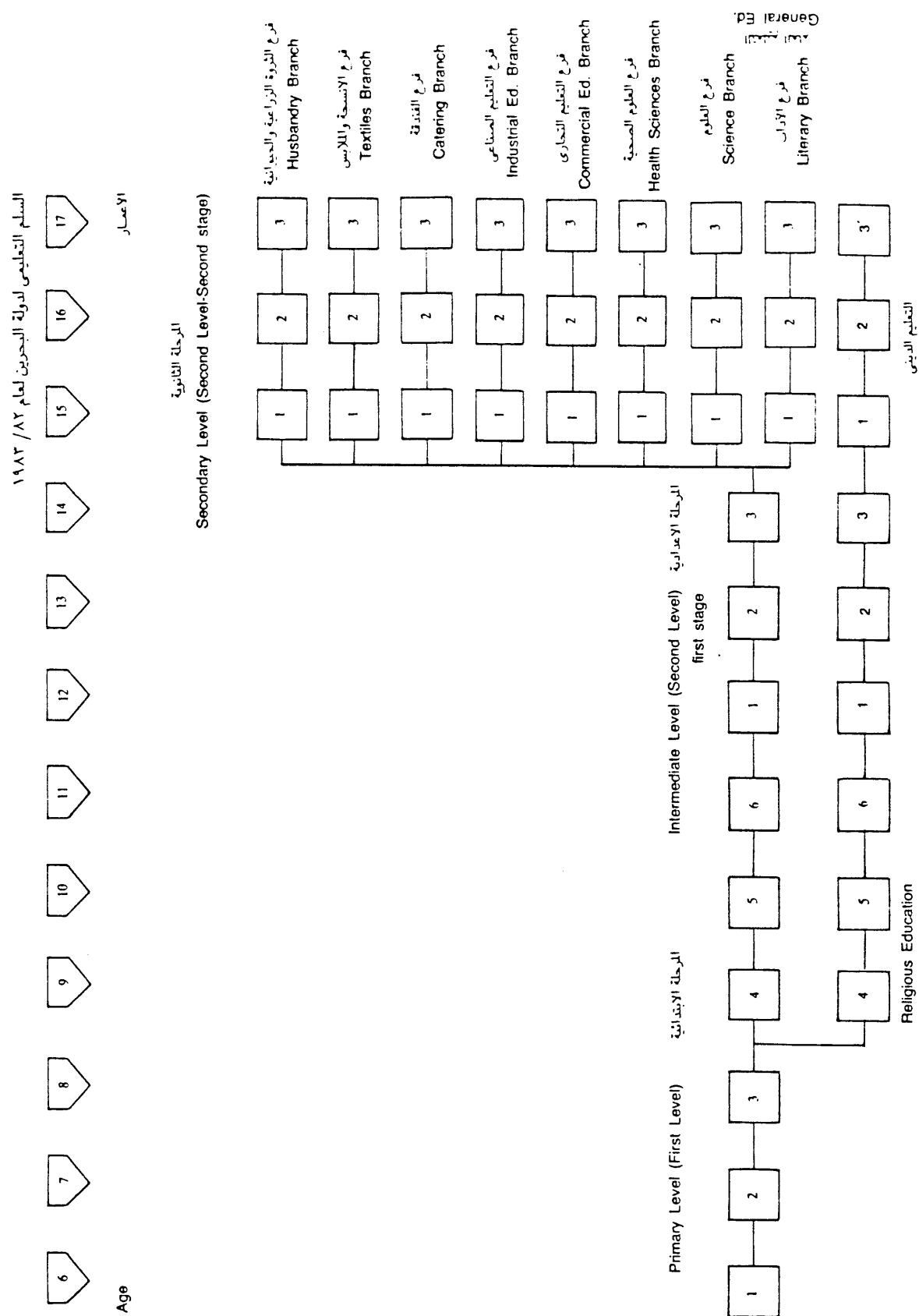


Figure 6 : Educational Ladder in Bahrain 1982/83

For grades 1-3 promotion is based on:

- (1) Annual attendance of at least 75%.
- (2) Satisfactory work on the basis of test results.
- (3) Opinion of headteacher and teachers.

For grades 4-5 promotion is based on:

- (1) Class work - 30%
- (2) Mid-year examination - 20%
- (3) Final annual examination - 50%

The 6th grade ends with a promotion examination for entry into the intermediate stage.

The primary school certificate was cancelled in 1979-80 by Ministry decision and a school certificate examination was introduced to replace it at the end of the intermediate stage.

The curriculum for the primary stage is determined by the Ministry of Education (as in the intermediate and secondary stages). The first three years are spent in learning basic subjects; the remaining three years introduces a wider curriculum including: English, Geometry, History, Geography, Science and Hygiene (table 4).

B - Intermediate Education

The student is admitted to the Intermediate stage after successful completion of the primary stage (or its equivalent). This stage lasts three years and the curriculum is divided into separate subjects, interrelated. For example, social subjects are divided into History, Geography and national education, and the Arabic Language is divided into Reading, Belles-lettres,

Subject	Type	Total الجمالي	Songs & Music الغناء والموسيقى	Physical Ed. التربية الرياضية	Drawing الرسم الفني	Social Subjects المواد الاجتماعية	General Sciences مبادئ العلوم العامة	Mathematics & Geometry (الرياضيات والهندسة)	English Language اللغة الانجليزية	Arabic Language اللغة العربية	Islamic Religion الدين الاسلامي	النوع	المادة
First Year	Boys Girls	30 30	2 2	3 3	3 3	— —	2 2	6 6	— —	11 11	3 3	بنين بنات	السنة الاولى
Second Year	Boys Girls	30 30	2 2	3 3	3 3	— —	2 2	6 6	— —	11 11	3 3	بنين بنات	السنة الثانية
Third Year	Boys Girls	32 32	2 2	3 3	3 3	2 3	2 2	6 6	— —	11 11	3 3	بنين بنات	السنة الثالثة
Fourth Year	Boys Girls	36 36	1 1	2 2	3 3*	3 3	3 3	6 6	6 6	10 10	2 2	بنين بنات	السنة الرابعة
Fifth Year	Boys Girls	36 36	1 1	2 2	3 3*	3 3	3 3	6 6	7 7	9 9	2 2	بنين بنات	السنة الخامسة
Sixth Year	Boys Girls	36 36	1 1	2 2	3 3*	3 3	3 3	6 6	7 7	9 9	2 2	بنين بنات	السنة السادسة

* تتضمن حصص منها للتدبير المنزلي في مدارس السات

• includes one period for home economics

Table 4 : Curriculum Plan for Primary Education: 1982/83

Composition, Grammar and dictational writing. In the intermediate stage practical subjects, such as Hand-Crafts, are offered (table 5).

According to their wishes, and to a certain extent according to their results at the end of this level, students can choose to enrol in the General, Health Sciences, Commercial, Industrial, Catering, Textiles or Husbandry branch at the Secondary level. Most of these branches of secondary education have emerged recently, as a result of the curriculum reform since the beginning of the 1980's.

C - Secondary Education

The secondary stage lasts three years, being sub-divided into:

- (1) General: Art, Science and Mathematics are taught in the first year, whilst in the remaining two years students are grouped, by choice, in two branches: Scientific or Literary. Both lead to the Secondary General Certificate (see Appendix 1).
- (2) Secondary Health Education: This is a study programme carried out in co-operation between the Ministry of Education and the Ministry of Health. It aims at graduating practical nurses (both male and female) on the level of the Secondary School Certificate (see Appendix 2).
- (3) Secondary Commercial: This was originally founded to meet the needs of Government departments and the commercial sector of the economy. Besides the general subjects, the commercial subjects of Book-Keeping, Commercial Arithmetic, Economics, Business Training, Arabic and English and Type-writing are taught (see Appendix 3).

Subject	Sex	الجموع Total	التربية الرياضية Physical Ed.	التربية الفنية Fine Arts	الدراسات العملية Practical Studies	العلوم Sciences	المواد الاجتماعية Social Subjects	الرياضيات Mathematics	اللغة الإنجليزية English Language	اللغة العربية Arabic Language	التربية الدينية Islamic Religion	الجنس	المادة
Schoolastic Year	First Year	36	2	2	4	4	3	5	7	7	2	بنين	السنة الاولى
Second Year	Boys	36	2	2	4	4	3	5	7	7	2	بنين	السنة الثانية
Third Year	Girls	36	2	2	4	4	3	5	7	7	2	بنات	السنة الثالثة

• حصتان منها تخصصان للمادة الاقتصاد المنزلي في مدارس البنات

• Two periods for Home Economics in Girl's Schools.

Table 5 : Curriculum Plan for Intermediate Education: 1982/83

- (4) Secondary Industrial: This type of education is devoted to male students only. Preference is given to students who are good at Mathematics, Science and English. Students major in one of the following fields of specialisation: Blacksmithing and Welding, Carpentry, Radio and Television Electricity, Fitting and Machine-Shop, Auto-Mechanics, Refrigeration and Diesel Engineering (see Appendix 4).
- (5) Secondary Catering: This study programme is carried out in co-operation the Ministry of Information (Hotels and Catering Training Centre) and aims at preparing graduates to work at hotels in various sections.
- (6) Secondary Animal Husbandry (section of animal & agriculture fortune): This study programme is carried out in co-operation with the Ministry of Commerce and Agriculture. The curriculum includes principles of irrigation, soil and animal production along with fish farming, navigation, fishing, in addition to general culture.
- (7) Secondary Textiles and Cothes: A study programme established for female students only. It includes theoretical and practical subjects in designing fashions and tailoring dresses in addition to general culture.

D - Religious Education

As explained earlier, religious education started in Bahrain a long time ago as private education by Qurain (Kuttab) schools. Religious education came under the educational ladder in Bahrain in the late 1960's. The total enrolment in religious schools in 1970 was only 17, and in 1980 was 41 in three different classes.

Religious education is a special type of education for male students only and is available at all three education levels. This institute follows the curriculum of Al-Azhar Asharif in Egypt.

E - Higher Education

Higher education in Bahrain is a relatively new field of education, nevertheless it has various stages and fields of study. Its institutions train many kinds of technicians - some of them specialise in training for commerce and industry (an example is the Gulf Polytechnical College).

Training in Health Science is offered by the College of Health Science under the supervision of the Ministry of Health.

Another institute of higher education is the University College of Arts, Science and Education, which contains the following departments: Arabic and Islamic Studies, Biology, Chemistry, Education, English Language, Humanities, Physics, Mathematics and Psychology. Entry is conditional upon successful completion of the secondary stage.

The University College of Arts, Science and Education offers the degrees of Bachelor of Art (BA), Bachelor of Education (BEd), Bachelor of Science (BSc) and Bachelor of Physical Education (PE). It also provides programmes leading to a diploma or degree at the postgraduate level in education. In addition, the College offers pre-service and in-service programmes of training for elementary school teachers, re-training of subject-teachers at the upper primary (or intermediate and lower secondary) level as well as a pre-medical programme.



TEACHER EDUCATION IN BAHRAIN

TEACHER EDUCATION IN BAHRAIN

A - INITIAL TEACHER TRAINING 1948-78

It is now sixty-six years since the emergence of public education in 1919, a period in which there have been fundamental changes in almost every aspect of national life in Bahrain. Teacher education, reflecting the needs of the school system and therefore much wider demographic, structural and ideological currents, has been at the very heart of the changes. Improvements in the curriculum and teaching methods of schools cannot be effective without reference to the quality of the teachers and their preparation. Teachers are the mainstay of development in any educational system.

In this connection, Katul and Nahhas, in Al-Hamer (1968), drew attention to the low level of teachers' qualifications in Bahrain in 1980. However, Bahrain has been dependent on hiring expatriot teachers for all school levels since the start of the schooling system and, until recent times, mostly for the secondary level. In other words, the shortage of local teachers has been noticeable until recently, despite many efforts to recruit and train teachers in Bahrain.

The total teaching force in Bahrain schools in 1982-83 was 4,409 teachers, of whom 3,021 (68.5%) were Bahraini and 1,388 non-Bahraini (see Appendices 5 and 6).

The first initial teacher training programme started in 1954-55, as part of a revised secondary curriculum which included General Academic, Commercial, Technical and Teacher-Training (Qism al-mu'allimin al-Khass). This training programme was intended to prepare teachers for primary schools. The two sub-divisions for secondary teacher training was the Scientific

Section and Literary Section. The study programme for both sections lasted for two years, starting with the third secondary stage. Table 6 describes the weekly lesson timetable for secondary teachers' training for boys and girls, both literary and scientific sections.

The curriculum consists of general subjects as well as professional subjects. However, the professional studies may be outlined as follows:

- (A) Foundation of Education
- (B) Child Psychology
- (C) Special Methods of Teaching

Table 6 displays the weekly timetable for secondary teachers' training for boys and girls. In this table one notices the absence of any training in the use of audio-visual teaching aids between 1954 and 1967. The only subject through which audio-visual techniques might be introduced was as part of the methods of teaching course. We notice in table 6 that the methods of teaching course was allocated three hours in the years 1954 to 1959, it was doubled in the years 1960 to 1964, then in the years 1965 to 1967 it was reduced to five hours a week.

In 1960 the study programme for secondary teacher training was reformed in both the scientific and literary sections. The main change was the addition of courses on the special methods of teaching different subject-matter (e.g. methods of teaching Arabic, social subjects, etc.).

In February 1965 the Secondary Teacher Training classes were required by the Department of Education to extend into three years instead of two years. A major change was the

Subject	1954 - 1959				1960 - 1964				1965 - 1967		
	3rd Sci	4th Lit	3rd Sci	4th Lit	3rd Sci	4th Lit	3rd Sci	4th Lit	1st	2nd	3rd
Religion	2	2	2	2	1	1	1	1	2	2	2
Arabic Language	6	6	6	6	6	6	6	6	7	6	7
English and Translation	9	9	9	9	9	9	9	9	7	6	7
Geography	-	3	-	3	-	2	-	2	2	2	2
History	-	3	-	3	-	2	-	2	2	2	2
General Science									4	2	2
Biology	2	-	2	-	-	-	2	-			
Chemistry					2	-	-	-			
Psychology	2	2	2	2	2	2	2	2	1	1	2
Physics	2	-	2	-							
Mathematics					5	5	5	5	5	4	4
Algebra	2	2	2	2	2	2	2	2			
Geometry and Trigonometry	2	-	2	-	2	2	2	2			
Education and Hygiene	2	2	2	2	2	2	2	2	1	1	1
Health Education									1	1	-
Methods of Teaching	3	3	3	3	6	6	6	6	-	5	5
Physical Training	1	1	1	1	1	1	1	1	2	2	1
Drawing	2	2	2	2	2	2	2	2	2	2	1
Library	1	1	1	1							
Total	36	36	36	36	36	36	36	36	36	36	36

Note: The 3rd and 4th in 1954-59 and 1960-64 were preceded by a two-year Secondary School (General Academic)

Table 6 : Weekly Lesson Timetable for Secondary Teacher's Training for Boys and Girls

removal of the division between the scientific and literary classes (see table 6). This revised three-year scheme of secondary teacher training lasted for only two years, until 1967, then the Secondary Teacher Training in schools was cancelled following the establishment of Specialist Teacher Training Colleges. The Teacher Training College for boys was established in 1966, followed by a Teacher Training College for girls in 1967.

TEACHER TRAINING COLLEGES

The second stage in the development of teacher education was the opening of specialist teacher training colleges (for males in 1965 and for females in 1967). The task of both colleges was to prepare teachers for both primary and intermediate cycles in Bahrain (according to the 1960 pattern of education). The following were some of the specific objectives of both colleges:

- (a) To provide students with qualifications, ability and teaching skills in an academic discipline.
- (b) To develop the mental and physical abilities of the students and to improve their intellectual efforts to ameliorate their community.
- (c) To accustom students to a systematic and scientific way of thinking.
- (d) To help student teachers to acquire the skills of passing on their knowledge and experiences to students in a democratic atmosphere.

- (e) To prepare the student in such a way that he will treat a child as a growing human being with his own wishes, abilities, problems, needs, concepts, experiences and environment.
- (f) To prepare the students to be capable of improving their professional status and standards.

CRITERIA FOR ADMISSION

The requirements for admission stated below are the minimum required by the College. They were as follows:

Programme	Requirement
Literary Section	Secondary School Certificate with pass marks in English Language.
Scientific Section	Secondary School Certificate with pass marks in English, Mathematics and the Sciences.

All candidates undergo a personal interview and, in addition, the College will look for evidence from the candidate's pre-college career of strong character - evidenced by leadership ability and interest in teaching and other educational affairs.

The number of students at the mens' college in the first year was rather small, only 25 students, of whom 16 were in the Literary Section and 9 in the Scientific Section. The two-year course was divided into four sessions, each session lasting at least 16 weeks. Each session was regarded as a unit in itself.

THE CURRICULUM OF TEACHER TRAINING COLLEGES

The curriculum falls into three main fields: general knowledge, educational theories and the field of specialisation. The first two fields were obligatory for all students (see tables 7 and 8). By the second semester, students specialised in a particular subject such as Mathematics + Science, History + Geography, Arabic + Religion, English Language, Art + Craft, Visual Aids or Gymnastics.

In addition to this the students spent two hours weekly in schools, observing experienced teachers at work. They studied the curricula, textbooks and classroom administration of those schools and tried to simulate the teachers' roles. When the students came back to the college they spent an hour with their supervisor discussing what they had noticed in the schools and tried to develop teaching methods, using audio-visual aids if possible.

In the third semester (at the beginning of their second year), fewer theoretical subjects were studied and the students spent two periods each week teaching in one of the primary schools and later in the intermediate schools. In the fourth and final semester the student teachers taught in schools for four weeks, under the supervision of their tutors.

Each student teacher was required to write a number of essays in his specialist subject and in other subjects as well. On graduation, the student teacher obtained the College Diploma which qualified him/her to teach in both primary and intermediate schools in Bahrain.

Teacher Training Colleges, both the mens' and womens' colleges, were under the direct supervision of the Ministry of Education. At the beginning of the 1970's, the Ministry of

Education felt that the curriculum of both colleges (which depended on what may be called a 'Knowledge Based Curriculum'), which prepared the student to teach the content of a number of subjects in a particular area, was inadequate for preparing teachers to cope with the requirements and needs of children in today's changing society.

For the above reasons, in July 1971 the Ministry of Education asked the UNESCO organisation to plan a curriculum reform project for both colleges. The plan was completed by 1973 and applied immediately.

In spite of this reform, the Ministry of Education felt that the two-year studying system of the former colleges was simply not adequate to fulfil the need for sufficiently qualified teachers for all types of school, i.e. primary, intermediate and secondary. They felt that there was a need for an alternative institute to provide highly qualified Bahraini teachers to teach in all types of school.

Following the recommendation of the UNESCO experts, and with the agreement of the Ministry of Education, the University College of Art, Sciences and Education was established in 1978. This was an autonomous institution of higher education to replace the Training Colleges.

The Teacher Training Colleges had graduated approximately 1,800 teachers for both primary and intermediate schools since their establishment in 1966-67, and thus made a significant contribution to education in Bahrain.

Field	No	Subject Provided	Number of Hours				Total Number of Periods
			1st Year		2nd Year		
			First Session	Second Session	Third Session	Fourth Session	
General Education	1	Islamic Culture	2	2	-	-	4
	2	Arabic Language	3	3	2	-	8
	3	English Language	3	3	2	-	10
	4	The Arab World	2	2	-	-	4
	5	Fine Art	1	1	1	1	4
	6	Physical Education	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	2
	7	General Science	3	-	-	-	3
	8	Mathematics	3	-	-	-	3
	9	Societal Growth & Development	-	-	-	2	2
	9		$17\frac{1}{2}$	$11\frac{1}{2}$	$5\frac{1}{2}$	$3\frac{1}{2}$	38
Educational Theory	1	Developmental Psychology	2	-	-	-	2
	2	Educational Psychology	-	2	-	-	2
	3	Introduction to Education	2	-	-	-	2
	4	General Strategies	-	2	-	-	2
	5	Educational Aids	-	1	1	-	2
	6	Primary Strategies	-	-	3	-	3
	7	Evaluation & Assessment	-	-	2	-	2
	8	Curriculum	-	-	-	2	2
	9	Practical Education	-	1	1	4	6
	10	Strategies for Specialisation	-	-	1	-	1
	10		4	6	8	6	24
Specialisation	1	Religion and	-	3	3	3	9
		Arabic Language	-	3	4	4	11
	2	English Language	-	6	6	6	18
	3	Fine Art	-	6	6	6	18
	4	Mathematics	-	6	6	6	18
	5	Social Sciences					18
		a. Ancient History	-	3	2	-	5
		b. History of Europe	-	2	2	-	4
		c. Islamic History	-	-	-	3	3
		d. Geography	-	-	3	3	6

Source: Ministry of Education, Curriculum Plan for Teacher Training Colleges, 1977/78 'C' (p.1)

Table 7 : Curriculum Plan for Teacher Training Colleges - Literary Section

Field	No	Subject Provided	Number of Hours				Total Number of Periods
			1st Year		2nd Year		
			First Session	Second Session	Third Session	Fourth Session	
General Education	1	Islamic Culture	2	2	-	-	4
	2	Arabic Language	3	3	-	-	6
	3	English language	3	3	-	-	6
	4	The Arab World	2	2	-	-	4
	5	Fine Art	1	1	-	-	2
	6	Physical Education	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	2
	7	Societal Growth & Development	-	-	-	2	2
	7		$11\frac{1}{2}$	$11\frac{1}{2}$	$\frac{1}{2}$	$2\frac{1}{2}$	26
Education Theory	1	Introduction to Education	2	-	-	-	2
	2	Developmental Psychology	2	-	-	-	2
	3	Educational Psychology	-	2	-	-	2
	4	General Strategies	-	2	-	-	2
	5	Educational Aids	-	1	1	-	2
	6	Primary Strategies	-	-	3	-	3
	7	Evaluation & Assessment	-	-	2	-	2
	8	Curriculum	-	-	-	2	2
	9	Practical Education	-	1	1	4	6
	10	Science Strategies	-	1	1	1	3
	11	Mathematics Strategies	-	2	1	1	4
	11		4	9	9	8	30
Specialisation	1	Mathematics and	3	3	6	6	18
		Physics	3	4	6	7	20
	2	Chemistry and	2	5	6	7	20
		Biology	2	5	6	7	20

Source: Ministry of Education, Curriculum Plan for Teacher Training Colleges, 1977/78 'C' (p.2)

Table 8 : Curriculum Plan for Teacher Training Colleges - Scientific Section

INITIAL TEACHER EDUCATION IN THE UNIVERSITY COLLEGE OF ART, SCIENCES AND EDUCATION

One of the major problems during the period 1954-79 was the persistent shortage of qualified Bahraini teachers for the secondary stage. The development of the secondary stage in Bahrain has been associated with the importation of curricula, teachers and, until recently, the types and regulations of examinations, mainly from Egypt. The majority of secondary school teachers are, at present non-Bahraini. If we take, for example, the total number of male Bahraini teachers at secondary schools (General, Commercial and Health Sciences), we find that they number 69 (26.4%), while non-Bahraini teachers number 192 (73.6%) in 1982-83. As another example, in 1983-84 the total number of male Bahraini teachers in all types of secondary school was 134 (16%) while the non-Bahraini teachers numbered 717 (84%).

The University College of Art, Sciences and Education was established by Amiri Decree Number 11, issued by H.H. Shaikh Isa bin Salman Al-Kalifa, the Amir of the State of Bahrain, to overcome the problem of shortage of secondary school teachers in particular and to provide teachers for primary and intermediate schools as well. Because, as previously mentioned, it is a relatively new institution, the College has not yet been able to supply secondary schools with their need for teachers.

The programme of this College includes various forms of in-service training for Ministry of Education school teachers and this will be looked at in more detail in Section B.

THE INITIAL TEACHER TRAINING PROGRAMME

The College's Department of Education offers courses and programmes at the undergraduate level leading to the degrees of Bachelor of Arts, Bachelor of Science and Bachelor of Physical Education in teaching subjects through double-majors, e.g. English-Education, Physics-Education, Mathematics-Education. In fact, this programme concentrates on both the academic and professional side of teacher education. The College also offers courses proceeding to the degree of Bachelor of Education (BEd) for the preparation of classroom teachers at the primary school level. The College further offers a programme proceeding to the Postgraduate Diploma in Education (PGDE) for the preparation of teachers for intermediate and lower secondary level.

THE UNIVERSITY SYSTEM

The College follows the semester system, which divides the academic year into two semesters, each extending over approximately 16 weeks.

"One credit is given for each hour of lecture per week or for each 2-3 hours of laboratory or studio work per week over a period of one semester."
(UCB Bulletin, 1983-84: 14)

Normally, a student requires two hours of preparation for each credit. For example, a student requires 48 hours to be spent in class and laboratory to fulfil 16 credits in a semester. The academic load each student is required to earn for the degree of BEd is at least 128 credits. The maximum number of credits a student can enrol for in a semester is 20 credits.

A student normally fulfils the required 128 credits in four years. However, students registered for less than 12 credits in any semester are considered to be part-time students in that semester.

UNDERGRADUATE STUDIES OPEN TO STUDENTS/TEACHERS

Bachelor of Education (BEd)

This study is open to private (self sponsored) students as well as those sponsored by the Ministry of Education, Bahrain. The programme is intended for both in-service and pre-service training for classroom teachers at the primary level. Students must complete the following requirements for the BEd degree:

(a) Academic Courses (45 credits)

ARB 171	Arabic Grammar Review (3 cr)
ARB 172	Arabic Language Skills (3 cr)
ARB 241	Introduction to Modern Arabic Literature (3 cr)
ISL 171	Sira Wa Hadith, deals with the biography of the prophet, Muhammad, in the light of the Quran and Hadith (3 cr)
ISL 172	Interpretation and Recitation of the Quran (3 cr)
INTEG. SC. 171	Integrated Science I (3 cr)
INTEG. SC. 271	Integrated Science II (3 cr)
INTEG. SC. 371	Integrated Science III (3 cr)
MATH 101A	Mathematics for Primary Teachers I (3 cr)
MATH 101B	Mathematics for Primary Teachers II (3 cr)
MATH 101C	Mathematics for Primary Teachers III (3 cr)
ENG 171	English in Use I (3 cr)
ENG 172	English in Use II (3 cr)
ENG 173	Reading in English I (3 cr)
ENG 174	Reading in English II (3 cr)
GEDG 271	Man and Environment in the Arabian Gulf (3 cr)
SOC 371	Sociological Development in the Arabian Gulf (3 cr)

(b) Educational and Psychological Courses (30 credits)

ED 105 Educational Foundations (3 cr)
ED 156 Primary School Curriculum (3 cr)
ED 271 Classroom Management (3 cr)
ED 321 Methods of Teaching (3 cr)
ED 404 Crucial Issues in Primary Education (3 cr)

One course from:

ED 362 Development of Education in Bahrain (3 cr)
ED 402 Economics of Education (3 cr)
ED 461 Development of Educational Thought (3 cr)
ED 474 Educational Planning (3 cr)

(c) Professional Courses (44-47 credits)

PE 171 Physical Education in Primary Schools (3 cr)
ART 271 Art Education (3 cr)
PE 371 Health Education (3 cr)

ED 191 Library and Study Skills (3 cr)
ED 221 Methods of Teaching Arabic and Islamic Studies (3 cr)
ED 222 Teaching Strategies (3 cr)
ED 223 Methods of Teaching Mathematics (3 cr)
ED 224 Methods of Teaching Science (3 cr)
ED 311 Introduction to Educational Technology (3 cr)
ED 392 Child Literature (3 cr)
ED 453 The Design and Improvement of the Curriculum (3 cr)
ED 242 School Practice I (3 cr)

(d) Electives (6-9 credits)

B - IN-SERVICE TEACHER TRAINING 1948-1964

The first attempt at in-service training for teachers in Bahrain started in 1950. The 'Complementary Evening Studies', or 'ad-Derasesh at takmilijeh al-Masaiyeh', as an in-service teacher training began in 1950-51. These voluntary evening studies were held for those teachers who had not obtained a school leaving certificate in their schooldays. Such study was later made compulsory for all teachers already in service so as to raise their standard of learning up to that of secondary education. The course was given over two years, each 'year' consisting of six months part-time study, and consisted of languages and subject-matter, plus an introductory study of the general foundation of education.

In 1954 a further step was taken by adding a third evening year, namely 'Qism al-Muallimin al-Khass', for those teachers who had successfully passed the 'Complementary Evening Studies' course, or for teachers with secondary education but without training.

Another initiative for in-service training was made for the senior male teachers by sending them to the American University of Beirut for a refresher course during summer vacations; female teachers continued to attend in Bahrain a special course on teaching methods.

By the end of 1963-64 this kind of in-service training for teachers was able to accomplish its intended aims and objectives by training a total of 563 teachers for the primary cycle. (The intermediate schools had not, of course, been opened at that time.) It was decided that sufficient teachers had passed through the courses so it was stopped at the end of 1964.

IN-SERVICE TRAINING FOR PRIMARY AND INTERMEDIATE TEACHERS IN BAHRAIN 1973-79

During the ten year period from 1963 to 1973, there was no official in-service Teacher Training Scheme in Bahrain; the Teacher Training College supplied the teachers for both the primary and intermediate cycles. However, the supply was inadequate in quantity and for this reason the Ministry of Education reluctantly continued employing unqualified teachers for the primary cycle.

By 1973 there were nearly 1,200 unqualified teachers, some teaching at the primary school level, among them were teachers who were both inadequately trained and inefficient, others teaching in intermediate schools. Table 9 shows the number of Bahraini and non-Bahraini teachers at all levels of education in 1974-75 according to their qualifications.

From table 9 we notice that there were 1,238 (46%) unqualified Bahraini teachers in all schools in Bahrain.

The rapidly increasing number of children attending primary and intermediate schools made it urgent to think seriously about a new institution which would be aware of its crucial role in training and upgrading teachers who could understand the life of which education is a part and in which experiences could be developed as a result of conscious planning.

In view of this problem, the Ministry of Education, with the assistance of the UNRWA/UNESCO Institute of Education, Beirut, studied the different ways of overcoming this problem and decided to establish an in-service teacher training project (INSTT) in September 1973.

The INSTT was a two-year part-time course targeted on those 1,200 unqualified teachers, and intended to qualify 200

Qualification Nationality	Sex	Secondary & Below		TTC Diploma		Above Secondary- High & University		Total	
		Number	%	Number	%	Number	%	Number	%
Bahraini	Male	769	65.8	305	26.1	95	8.1	1169	100
	Female	413	44.5	394	42.5	121	13.0	928	100
	Total	1182	56.4	699	33.3	216	10.3	2097	100
Non-Bahraini	Male	36	10.9	3	0.9	292	88.2	331	100
	Female	20	7.7	9	3.4	232	88.9	261	100
	Total	56	9.5	12	2.0	524	88.5	592	100
Total	Male	805	53.7	308	20.5	387	25.8	1500	100
	Female	433	36.4	403	33.9	353	29.7	1189	100
	Total	1238	46.0	711	26.5	740	27.5	2689	100

Source: Ministry of Education, Educational Development in Bahrain, Comparative Statistical Review, 1974/75 - 1975/76 (1976 'c', p.45)

Table 9 : Overall Number of Bahraini and Non-Bahraini Teachers According to their Qualifications Before any Graduated from the In-Service Training Scheme

teachers a year. The reasons why the Ministry of Education chose this part-time system of in-service training can be summarised as follows:

- (1) Because there was an overall shortage of qualified teachers in both primary and intermediate cycles. Had the Ministry of Education chosen a full-time training course for all unqualified teachers, it would have given rise to a new problem. Those teachers who would be on a full-time course would have to be replaced by special relief teachers, who were not available.
- (2) Even if the Ministry of Education managed to supply relief teachers, by appointing new teachers as a temporary solution, they would again be unqualified for the job and that would only exacerbate the problem.
- (3) Borrowing qualified teachers from neighbouring Arab countries would seem to be another possible solution to overcoming this problem, however evidence has shown that this would not be a wholesome solution. These teachers would be appointed on a short-term basis and would lack the opportunity of acquiring a better understanding of the principles and methods of the Bahraini system of education. Most teachers from the other Arab countries bring with them the teaching techniques which they used in their own countries and by which they themselves had learnt. They would need a better understanding of the principles and methods of the Bahraini system of education and they might need to be informed about the use of Bahraini textbooks. Moreover, the expatriate teachers might lack the enthusiasm to do the job well.
- (4) Lastly, it was clear that the part-time in-service teacher training system seemed to be economically reasonable.

N.H. Almosawi (1981), who was one of the tutors of this project, reported in a study of the multi-media approach to in-service teacher training in Bahrain that

"The unit cost is much lower than any other approach in teacher training."

He added that

"The average cost per trainee per annum in 1967 was much cheaper, compared with the pre-service training."

The above-mentioned four reasons for adopting in-service teacher training in Bahrain were endorsed by the Ministry of Education as well as by the co-ordinator of the project and all the tutors who worked in the INSTT.

Therefore, in view of the previously mentioned reasons and constraints, the idea of INSTT was widely acceptable to the Ministry of Education and to the UNRWA/UNESCO team alike. It was also well suited to the need of the primary and intermediate teachers who, because there is no other attractive alternative, accepted the idea of INSTT with a relatively high motivation.

The overall aim of the project was to raise the professional competency of more than one thousand teachers, headmasters and headmistresses by improving their school practices. Candidates would thereby be provided with a more adequate knowledge and the latest methods of teaching and administration.

THE OBJECTIVES

The expected behavioural objectives of the INSTT programme were as follows:

- (1) To provide the unqualified teachers and headteachers in the primary and intermediate cycles with a training which will raise their abilities and understanding of teaching.
- (2) To upgrade educationally 1,200 male and female teachers and headteachers who teach in Bahrain schools.
- (3) To supply the teachers and headteachers with the ability to conduct a rigorous and rational discussion on educational topics.
- (4) To provide teachers and headteachers with knowledge and understanding of the historical contexts of current educational problems in Bahrain.
- (5) To provide them with knowledge of human growth and development.
- (6) To provide them with knowledge of theories of learning and empirical data.
- (7) To provide the trainees with a series of professional courses related more directly to the subject which they teach and methods of teaching them.
- (8) To provide the trainees with knowledge of theories of learning and related empirical data.
- (9) To apply theories and methods of practising action researches.
- (10) To apply a variety of educational media within a teaching situation, through the multi-media approach.

FURTHER DEVELOPMENT IN THE IN-SERVICE TEACHER TRAINING

Important developments took place in 1977; more responsibilities were given to the in-service teacher training

centre, such as:

- (1) Providing and conducting long-term courses leading to a training certificate in the field of education for head-teachers, teachers, counsellors and librarians.
- (2) Providing and conducting short-term courses to satisfy the needs of the Ministry of Education, with the co-operation of other concerned Departments.
- (3) Co-ordinating with other Ministries and the Civil Service Bureau in conducting in-service activities.
- (4) Planning, providing and conducting special programmes of study for in-service re-training of subject-teachers of upper primary (or intermediate) and lower secondary schools who are holders of Bachelor's degrees in a particular subject area but are, at present, teaching different subjects. This type of training was later transferred to the University College of Bahrain.

INSTT was intended only for Bahraini teachers who taught in government schools. To enrol on the in-service courses a teacher must have a secondary leaving school certificate and the course has to be undertaken at least seven years before retirement.

In-service teacher training in Bahrain adopted the so-called multi-media approach to training teachers. The following figure illustrates its components:

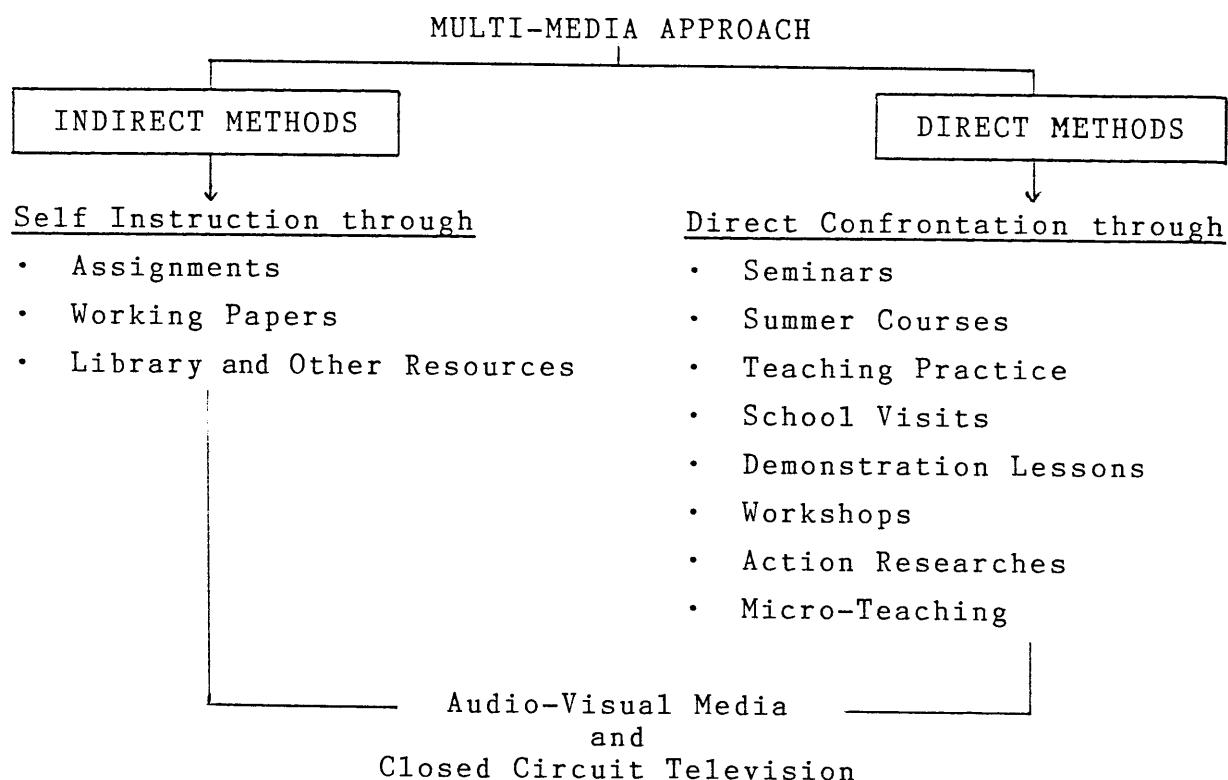


Figure 7 : The Multi-Media Approach to In-Service Teacher Training

Rowntree (1981) defined the multi-media approach as:

"The integrated use of a variety of educational media within a teaching situation in order to take advantage of the special contributions each can make to the student's learning."

Nashif (1973) stated that:

"It is so called because it combines indirect and direct forms of training in one integrated whole. The former include those methods where instruction takes place not through direct confrontation between teacher and learner, but through a media or channel. The latter include methods where instruction takes place through direct confrontation between teacher and learner."

Mainwaring (1979) defined the multi-media approach as:

"A variety of different media often incorporated into the learning units. These include slides or filmstrips, audio tapes, models and experiments, video tapes and study guide. The characteristics of the different media can be used to help in communicating with the student."

THE CURRENT SITUATION

In 1982 the Ministry of Education recommended a reform of the education and training of teachers. An enormous amount of money was allocated for this project, 21,212,190 Bahraini Dinars. What was envisaged was a reform in teacher training in general and the training of primary school teachers in particular. It was the first time that such a large sum of money had been allocated for any development or amendment in education.

As far as primary and intermediate teachers are concerned, the main part of the project was the re-education and training of all primary school teachers so that they would qualify for a BEd degree in classroom teaching. The University College of Art, Science and Education, Bahrain (UCB), took responsibility for organising this course of study.

In September 1982 the first group of teachers (120), was enrolled on the programme. The total number of 'classroom teachers' on the course in 1984-85 was 382. The first group is expected to graduate at the end of 1985-86.

It is important to note that the classroom teaching programme is also open to secondary school leavers who wish to be primary school teachers. Therefore, the 'classroom teacher' programme is both an in-service training programme for primary

school teachers and a pre-service education and training programme for those secondary school leavers who intend to join the teaching profession.

Another part of the project was a special certificate course for in-service re-training of subject-teachers of upper primary and lower intermediate schools who are holders of Bachelor's degrees in particular subjects but are, at present, teaching a different subject.

For these intermediate school teachers, the Ministry of Education has provided a special 'Postgraduate Diploma' programme in education, run by the UCB. This programme can be followed either on a year's full-time basis or a two-year part-time basis. It is important to realise, however, that all the above programmes are sponsored by the Ministry of Education and the Ministry has seconded teachers on full salary and hired extra teachers to fill their places.

CHAPTER 3

EDUCATIONAL TECHNOLOGY AND TEACHER EDUCATION AND TRAINING IN BAHRAIN

EDUCATIONAL TECHNOLOGY AND TEACHER EDUCATION AND TRAINING IN BAHRAIN

During the history of initial and in-service teacher training in Bahrain, many aspects of educational technology have been neglected. Educational technology as a systematic approach has not been introduced to the teacher training literature until recently.

Looking back to the earlier practice in teacher training, both in-service and pre-service, one notices the absence of 'Educational Technology' or even 'Audio-Visual Aids' subjects in almost all the courses offered, from 1948 right up to the establishment of the teacher training college for boys in 1966 and for girls in 1967.

The first appearance of 'Educational Aids' as a subject was in the curriculum plan for teacher training colleges (see tables 7 and 8, pp.27, 28). 'Educational Aids' was introduced under the Educational Theory field twice - one hour a week in the second session of the first year and another hour a week in the third session of the second year. In other words, teachers spent not more than 24 hours on audio-visual aids and related aspects over their two years of training.

The present writer was a student at the college and recalls how those 24 hours over the two years of training made it impossible for any student to become fully acquainted with audio-visual media. At that time there was very little equipment available for students to use - only one 16mm film projector, one slide projector and a few tape recorders.

Despite this, the 'Educational Aids' course in teacher training colleges has hastened the development of educational technology in Bahrain.

The next development was in the introduction of audio-visual media in the curriculum of the 'In-Service Teacher Training Project' in 1973.

As pointed out earlier, the 'In-Service Teacher Training Project' adopted the so-called 'Multi-Media Approach'. In this approach, audio-visual media and the use of closed circuit television played a vital role, especially in seminars. There audio-visual aids helped to facilitate, supplement and extend the study of topics and increase the communication abilities of the seminar leaders. Moreover, as most of the tutors in the training centre pointed out, audio-visual aids and the use of video tapes played a specific and positive role in the implementation of the objectives of seminars.

However, following this instruction in the use of audio-visual aids in 1973, a basic change in the techniques of teaching has taken place. Audio-visual media became available to most of the primary and intermediate schools. It is interesting to note that video tape recorders and closed circuit television were used for the first time in Bahrain for training purposes in 1973, by the in-service teacher training project. In addition to the use of hardware such as video tape recorders, overhead projectors, slide and filmstrip projectors, there was also software such as video tapes, overhead transparencies, wall pictures and audio-tapes. The above materials, once used by the tutors associated with the in-service teacher training project, have gradually penetrated to other Bahraini schools.

The adoption of audio-visual media techniques has, therefore, been a turning point for education in Bahrain. The present writer has witnessed how trainees, even those who were

less qualified, would be able to teach more effectively by using these new techniques, and how many trainees were keen on booking the workshop for practising and producing their audio-visual materials.

Audio-visual media helped the creative development of both tutors and trainees, and their attitudes to teaching and learning became more favourable.

By 1974-75 a good collection of audio-visual materials were produced by trainees, and tutors, with the co-operation of the Audio-Visual Section in the Centre. In this context, there were 30 video tapes, more than 45 audio tapes, and in addition to different visual aids, all were locally produced for the purposes of training the teachers.

Secondly, the trainees, having become more confident in the use of the new 'multi-media' approach, were able to supplement the use of textbooks with a variety of media. At the same time, the textbooks had to recognise both the use and the role of the media, and this was reflected in the subsequent revision and new editions of textual material.

Thirdly, and very importantly, many teachers and tutors were inspired to seek special courses from the Audio-Visual Tutor in preparing and using audio-visual materials. In this respect, the writer, who has been the Audio-Visual Tutor of the In-Service Teacher Training Project since its establishment in 1973, recalls how some of the tutors were full of enthusiasm for training in the production and use of audio-visual material. The fruit of this growing interest was an updating of the knowledge of audio-visual methods and techniques. It has also created a healthy atmosphere which makes further development of the multi-media approach possible.

It is important to realise, however, that the earlier attempts in teacher training advised teachers how to use audio-visual aids to enrich and supplement the familiar patterns of classroom teaching. Moreover, audio-visual materials were used primarily to give information which any reasonably effective teacher could give anyway. They merely augment conventional teaching. In short, audio-visual materials were seldom used to bring about educational change.

"There has always been confusion about the nature of educational technology. Many think that it is merely learning how to operate, use and promote the use of devices such as television, computers and other instructional and teaching devices and machines. It is because of this that many developing nations are reluctant to introduce educational technology."

Adiby (1966-78: 80)

Inevitably, the availability of hardware such as overhead projectors, language laboratories, computers, video recorders, etc., would not in itself improve the quality of education; but the use of such aids necessitates radical changes in conventional types of education. It is very important to consider such aids as an integral part of any given curriculum, rather than simply as a means of enriching that curriculum. Educational technology courses are offered under the following headings:

ED 311 : Introduction to Educational Technology

"A predominantly laboratory-based course stressing the application of educational technology to instruction and learning. A systematic approach towards the selection, design, production and evaluation of inexpensive instructional materials for use in the stage for which the student is prepared."

UCB Bulletin (1983-84: 105)

ED 511 : Educational Technology

This course was described in the UCB Bulletin as being exactly the same as 'ED 311', but with the addition that it included field testing of instructional media.

DEFINITIONS OF EDUCATIONAL TECHNOLOGY

A common accusation levelled against educational technologists by many people, and even some educators, is that such people are 'projector operators', or audio-visual aids suppliers. This misunderstanding arises from unresolved challenges within educational technology itself. Some educators claim that the term 'educational technology' does not suitably describe the exact nature of the concept. The main reason for this confusion is that educational technology, like many new disciplines, has problems in defining its precise role.

I.K. Davies (1972) stated that:

"In the space of a very few years, educational technology has come to mean many things to different people ... whatever meaning is attached to it, however, it can best be viewed as a well disciplined and systematic approach to education and training, characterised by explicitness (particularly in regard to objectives), by sophisticated analysis and by synthesis, by the utilisation of optimal decision-making procedures and by rigorous empirical evaluation."

Many people confuse educational technology as a system or systematic approach to educational issues, with the application of technological devices such as radio, television, projectors and computers in education. Indeed, this is the wrong concept.

"Those who look at educational technology from this point of view are like those who cannot see the wood from the trees. ... They are making a great mistake in believing that simply involving these new technological devices will improve education."

Alabed (1979)

H.T. Conway (1975) adduced this confusion in understanding educational technology to a number of reasons:

- (1) "Educational technology is a relatively new and developing field and thus it is difficult to define its expanding limits with any true precision."
- (2) "Another source of confusion about educational technology is the word 'technology' itself."

Conway adds:

"This word tends to arouse misgivings or even hostility among educators who rightly value the importance of personal relationships in education and who think that educational technology is a 'take-over bid' by enthusiasts who are interested mainly in electrical gadgets."

D. Rowntree (1982) has proposed a long definition, i.e.:

"Educational technology is as wide as education itself: it is concerned with the design and evaluation of curricula and learning experiences and with the problems of implementing and renovating them. Essentially, it is a rational, problem-solving approach to education, a way of thinking sceptically and systematically about learning and teaching."

Tickton (1970) stated that:

"Instructional technology can be defined in two ways. In its more familiar sense, it means the media born of the communications revolution which can be used for instructional purposes alongside the teacher, textbook, and blackboard

The second, and less familiar, definition of instructional technology in his view is:

"It is a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and non-human resources to bring about more effective instruction."

Leedham (1973) defined educational technology as:

"Educational technology concerns the systematic use of modern methods and technologies in teaching and learning. It involves teachers in a variety of roles, some of which are traditional, some still emerging."

In Leedham's definition special consideration is given to the adoptive role of teachers. He argued that:

"Earlier attempts to use teaching machines effectively, failed because they were employed as alternatives to the presence of a teacher rather than extensions of his capability."

Further, Heinich (1982) defined educational technology in the following way:

"A technology of instructions is a particular, systematic arrangement of teaching/learning events designed to put our knowledge of learning into practice in a predictable, effective manner to attain specific learning objectives."

H.T. Conway suggests that some interpretations of the term educational technology are very wide, e.g. that of D. Rowntree (1974):

"In their zeal to promote the total educational environment ... and the harmonious and successful interactions of all the people and things within it, educational technologists may one day be remembered as the pioneers of educational ecology."

He further suggests that there is a need to look closely at what exactly is meant by educational technology.

The above definitions are clearly concerned as much with the process of improving learning as with any device or equipment. The emphasis then is given to the importance of specific learning objectives.

Another useful definition for educational technology was given by the National Council for Educational Technology (NCET) in Britain, in October 1967, as:

"The development, application and evaluation of systems, techniques and aids to improve the process of human learning."

This early definition has been reviewed several times by Council members and staff, but it stands as the Council's working definition.

This definition of educational technology by the NCET seems to be the most suitable definition as it is essentially problem-centred, rather than centred upon particular methodologies or mechanisms. It is not concerned simply with the development of tools and machines. The mechanical apparatus of education, e.g. projector, film, etc., are merely a means of

implementing educational technology, and do not of themselves constitute educational technology. The emphasis is on the improvement of learning and the evaluation of learning and teaching in terms of specific objectives, systems theory and on the effective use of non-human resources to improve learning. Thus it covers the process of applying available knowledge in a systematic way to problems in human learning. At its basic level it attempts to identify how problems in human learning arise and suggest strategies by which they can be overcome.

THE SYSTEMS APPROACH TO EDUCATIONAL TECHNOLOGY

Educational technology then is an organised and methodical approach to education. It is not disordered, unplanned or random, instead it is a systematic approach.

"A systems approach is nothing more
or less than a sophisticated process
for identifying and solving problems."
Gerlach et al (1980: 7)

The systems approach is based on the premise that any organisation of people, things, or people and things, is a system made up of elements. Each element has its own functions and goals. The goals of the total system are attained only when all the elements are integrated in an effective and efficient pattern.

Beswick (1980) has summarised four basic activities or stages of the systems approach to educational technology:

- (1) The identification of objectives: What must the student learn?

- (2) The design of appropriate learning experiences: How will they learn it?
- (3) The evaluation of effectiveness in practice: How well did they learn it? (Also: How can I know whether they have learnt it or not?)
- (4) The improvement of the design for the next occasion.

Gerlach et al (1980), in a different situation, stated that:

"Both the goal defining and planning are absolutely essential to good teaching. The entire concept of a systematic approach to instruction is based on this assumption, and it is necessary to keep this in mind as we examine the elements in systematic planning."

He suggests ten elements for a systematic approach; these are summarised below in figure 8:

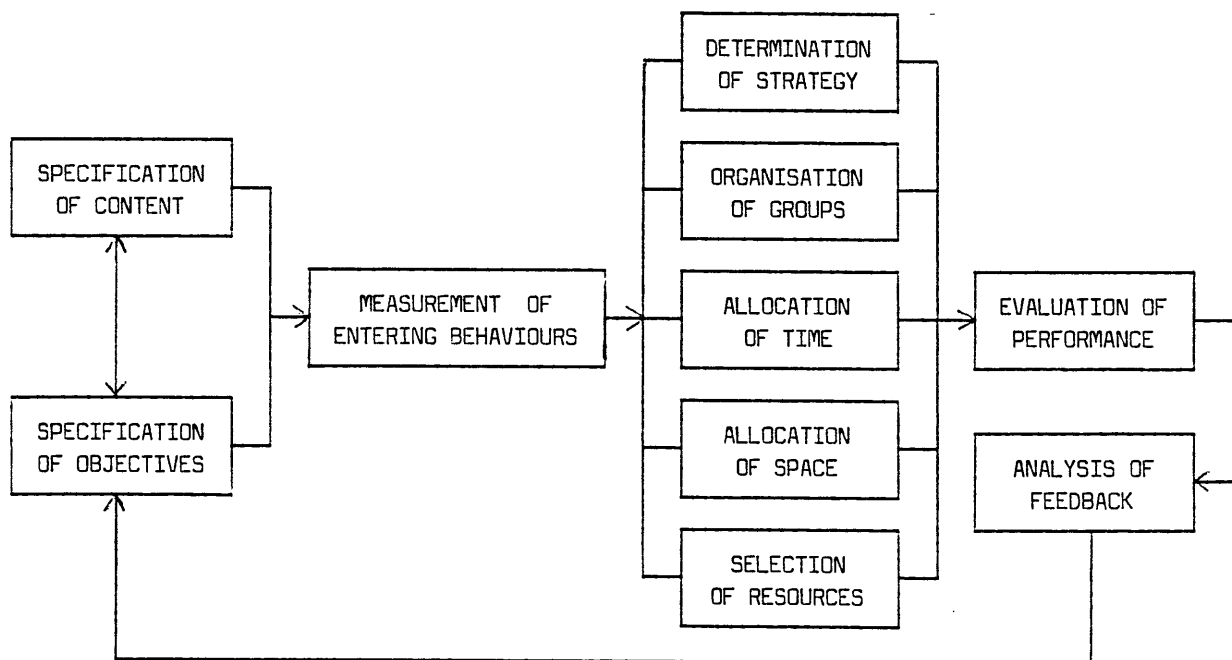


Figure 8 : A Systematic Approach to Instruction

The analytical structures of Gerlach (1980) and Beswick (1980) can be applied widely in education as well as in the design of appropriate administrative structures.

The application of systematic thinking in education results not only in the production of syllabuses, learning methods and study materials which are of high quality but also profoundly influences the approach of teachers and administrators.

In actual fact, applying educational technology in a systematic way is not a simple task. Beswick quotes Rowntree in this context:

"If educational technology is what educational technologists do, then educational technology is educational problem-solving ... You may feel that this ... is not very revolutionary. Nor is it, unless applied by someone brave enough to face up to all the disturbing hypotheses that can arise in the course of it."

Rowntree (in Beswick 1980)

However, Gerlach (1980) in his model (A Systematic Approach to Instruction), pointed out that this model is an attempt to "portray graphically a method of systematically planning instructions."

SPECIFICATION OF OBJECTIVES

The early view of objectives is well put by Mager (1962):

"If you are teaching skills that cannot be evaluated, you are in the awkward position of being unable to demonstrate that you are teaching anything at all."

The first and most important factor in applying educational technology as a systems approach model, is the formulation of objectives, and unless the teacher can be certain that he has stated every objective in a way that he can evaluate it, he will be in a difficult position.

When using this tight approach, the teacher should specify behaviour in terms of what the learners should be able to do at certain points along the instructional continuum.

"If we can never be certain that we have stated every objective we might have, in the clearest form, and with the most practical means of testing whether it has been achieved, this does not mean that we abandon the attempt or that to try one's best under the circumstances is not a helpful activity."

Beswick (1980)

Beswick also stated (1983):

"The hidden curriculum marches on, if we don't specify the objectives we want, we'll have to put up with those we get."

Tyler offers his own formula for stating objectives, saying:

"The most useful form for stating objectives is to express them in terms which identify both the kind of behaviour to be developed in the student and the content or area of life in which this behaviour is to operate."

Tyler (in Stenhouse 1978: 54)

He added:

"One can define an objective with sufficient clarity if we describe or illustrate the kind of behaviour the student is expected to acquire so that one could recognise such behaviour if he saw it."

Tyler (in Stenhouse 1978: 50,54)

However, the modern concern with the clarification of educational objectives is largely a result of the publication of Bloom's Taxonomy of Educational Objectives, which represented an attempt to classify objectives in terms of behaviour. The Objectives Model, however, has been criticised by many educators. Mrs. James in Lawton (1971) objects to the idea of curriculum planning by objectives. She doubts whether evaluation can be carried out in terms of the kind of objectives listed by Bloom and others. She stated:

"It is impossible to know whether, for instance, a pupil has engaged in a complex act of synthesis or has displayed a feat of memory recall. A whole super-structure of theory has been built up, which is not, I suspect, in practice greatly used."

Mrs. James (in Lawton 1971: 26)

Furthermore, Lawton (1971) suggested that

"... it is not practicable to draw up a long checklist of precise objectives ... It is possible to draw up an exact checklist if you are instructing soldiers how to strip and clean a rifle, but much of education is more complicated than a 'naming of parts' exercise."

Hence, the objectives model may be appropriate for some sections of subjects, such as mathematics and science, but may not be appropriate for other subjects, such as English Literature. For example, how can the teacher measure the pupils' level of appreciation?

So, not every objective that we want to write can fulfil the HARD criterion outlined above. Thus, educational technology in its system analysis approach is best applied to certain portions of syllabuses, etc.

The importance of a definition of objectives is accepted in educational technology; but it is also important to remember that a classification of objectives is not in itself enough to help apply a systematic approach to educational technology. More must be known about both the underlying structure of the disciplines and about the facts themselves.

SPECIFICATION OF CONTENT

The second vital element in any systematic planning is the selection of content that will help the pupil to attain the selected objectives. Traditionally, in a country like Bahrain, content on a general level has been determined by curriculum committees or co-ordinators. Specific implementation is done by the individual teacher or instructor.

"... people who are responsible for establishing curricula frequently specify content but fail to specify objectives (that is, they fail to specify the reason for teaching the content)."
Gerlach (1980: 10)

Content should be determined by the previously stated objectives, not the opposite.

Wheeler in Nickson (1971) states that

"... to relate objectives specifically and directly to previously selected subject-matters is an illicit curriculum process."

He adds:

"If subject matter cannot contribute in any specific way to this achievement it should be discarded."

Therefore, content should be selected in such a way as to fulfil the needs of the specific objective. In other words, objectives should be specified first, and then content should be selected that will assist the learner in attaining those objectives; but in real life this is not always the case.

The selection of content should involve more than one person. It should be determined by content specialists, instructional developers, and materials producers who produce the units of instruction; practising teachers should also advise on the practicability of putting these suggestions to work.

When content has been determined by this team, the role of the local curriculum committee and individual teacher changes. The local committee now has merely to select from a series (hopefully) of alternatives - removing their responsibility for the total curriculum.

This does not mean that a teacher is to be reduced to an 'implementation machine', instead he is a member of the team that forms the curriculum development and brings together methods and content that presents the greatest challenge to the curriculum development movement. In this sense, teachers are always involved in planning, they need to make an inventory of the content of their courses, they have to know the main ideas and skills they want to develop and what are their component parts.

MEASUREMENT OF ENTERING BEHAVIOURS

Bloom (1982) defined entry behaviour or entry characteristics of learners as:

"Those prerequisite types of knowledge, skills and competencies which are essential to the learning of a particular new task or set of tasks."

Bloom (1982: 32)

Decocco defined entry behaviour as:

"The behavioural capabilities resulting from previous learning that the student brings with him/her to the new instructional event."

Decocco (in Kibler et al: 1974: 66)

Measurement of the students' entry behaviours in the systematic model of instruction, is vital for an understanding of the learners' abilities, aptitudes, and to evaluate the relevant learner's capabilities resulting from previous learning that each student brings to the course or section of content as it begins.

Teachers are often tempted to use various standardised tests, such as the use of available records, or final examination which he had used in the same course the previous term, reading age or I.Q. test, to assess a student's entry behaviour.

The purpose of entry behaviour of the pupils can be listed as follows. Teacher will:

- (1) Recognise the pupil's previous relevant achievement.
- (2) Determine the pupil's existing knowledge that is necessary for understanding of the learning.
- (3) Test the aptitude and the personality of the pupils to aid the choice of strategy and methods of learning.

Ausubel in Riding (1978) has argued that for new learning to be meaningful it must be attached to what is already known to the pupil. Riding confirmed that:

"If information is presented that is not relatable to existing concepts in Long Term Memory then, and it is learned at all, the learning will be rote and the new material stored as an isolated package."

Riding (1978: 42)

DETERMINATION OF STRATEGY AND TECHNIQUE

The term 'Learning Strategies' is often used in place of the more traditional term 'Lesson Planning' to describe the way in which the teacher will tackle a given area of content. Simply, strategy is applying different methods and media for a series of elements of instruction.

Gerlach defined strategy as:

"The teacher's approach to using information, selecting resources, and defining the role of the students. It includes specific practices used to accomplish a teaching objective."

Gerlach et al (1980: 14)

There are different strategies to be chosen at different levels of scales. For example, at the level of a whole course and also at the level of an individual lesson unit. A teacher should determine his strategy according to the requirements of learning style and the objectives of the lesson.

Techniques or methods are the procedures and practises used to accomplish teaching objectives by any approach. Gerlach et al (1980) defined techniques as:

"The ways and means adopted by a teacher to direct the learner's activities toward an objective."

The teacher should always be involved in making decisions about the appropriate strategy or technique for a lesson. It is simply not possible to find a single strategy appropriate to every pupil and every situation.

Understanding the learners and the subject-matter, making an inventory of the content of the course and knowing the main ideas and skills that the teacher wants to develop, are useful aids for the teacher in determining a suitable strategy and technique. The teacher also needs to understand the logical organisation of his subject.

There are different strategies a teacher can choose from, such as:

(1) Exposition Approach

A traditional approach in which the teacher proceeds along a linear and, to some extent, deductive approach to presenting information to the student.

The teacher's role is fundamental. He is the one who originates all the rest of the procedure, once the overall programmes and conceptions have been defined.

In this approach the teaching media are considered as teaching aids, i.e. instructional methods and situations are chosen without reference to them. Media exist merely to assist and strengthen an educational activity which has been defined independently of them. In this approach the teacher is the central factor in the procedures.

(2) Inquiry or Learner-Centred Approach

In this approach the teacher's role becomes one of guidance and assistance. He assumes the role of facilitator or learning experiences and arranges situations in which students raise questions about a topic.

In a learner-centred approach the contents are determined once the objectives have been determined and not the reverse. The role of the teacher is defined in relation to the overall strategy and not the reverse. This procedure can be considered as a regressive method which starts with the end product and works back to the resources applied. The media here have become learning media rather than teaching media. The function of media is, in fact, totally different.

(3) The Task Analysis Approach

This is a systematic approach to teaching and learning. The procedure is much less linear than the previous ones. In the task analysis approach, before any decision on sequence can be taken, an analysis of the subject-matter into its component parts must be made. Analysis of the subject-matter will indicate the relationships between the parts and suggest the appropriate and most logical sequence of teaching.

The task analysis approach is based on Gagné's idea that higher level capabilities will be more easily learned if lower capabilities have been previously acquired.

"The specific rules that are learned make possible the learning of other more complex rules that are increasingly general in their applicability."

Gagné (1977: 52)

Task analysis is a commonly used approach in educational technology, for indicating the sequence that instruction should take. It can also be useful revealing the conceptual framework of a subject. However, this approach is more useful in some subject areas than others.

Many techniques can be used to fulfil an objective by any of the previously mentioned approaches. For example, the teacher can use lecture, discussion, demonstration, direct experience, field trip, role-playing or the audio-visual media technique, with any decided strategy.

ORGANISATION OF GROUPS

One of the basic characteristics of the systems approach is the flexibility of grouping methods which can be employed. The students are grouped according to their achievements, interests and needs. Thus, groups are formed according to the demands of the learning task which eases the problem of material preparation.

The basic categories used are individual study, small groups and large groups. These categories may be further subdivided into individual differences, group differences and content differences.

Since the mastery of content is the criteria for progress, the groups are continually changing. This can be a disadvantage from the viewpoint of socialisation as a student may move from one group to another whenever he makes significant progress.

Recent developments in group organisation for learning have focussed on programmes that offer practical strategies to meet the specific requirements of the learner at his own pace providing him with immediate feedback to increase his motivation.

ALLOCATION OF TIME

In this approach some breakdown of the ideal flexibility of scheduling time for teaching and learning is necessary. Each learning task has an optimum time for its completion. Ideally periods of instruction should be worked out by summing up the time taken to complete each task. Thus, daily or weekly scheduling might vary in length. Gerlach, for example, gives the following definition:

"... the organisation of the school day, pupils and course units into modules of 5-20 minutes (or combination of these modules) according to specified instructional objectives."

Gerlach et al(1980: 232)

Some flexible time should be allocated for the different activities, and planning for optimum use of time has to link with the organisation of groups and the allocation of available space.

The conventional school timetable severely limits this aspect of the application of a systematic approach to teaching and learning. The 45- or 50-minute time period minimises the chance for allocating time in changing blocks.

However, the creative school organisation can overcome this constraint and afford varied time appropriate to the different activities. For example, the school can develop a

mixed-ability organisation with its emphasis on individual learning and the deployment of teaching teams instead of individual teachers. In addition, the teacher's plan should take into account the estimate time for each type of activity after analysing the objectives.

Taken to its extreme, we would find that classes might be scheduled outside the conventional school day limits. However, this would pose many problems, particularly in rural areas. Higher Education is more likely to implement this aspect of flexible scheduling than the school.

ALLOCATION OF LEARNING SPACE

Space is often one of the most limiting factors in applying the systems approach to any learning situation. Planning for its most effective use puts great demands on the imagination and organising ability of teachers and administrators.

Traditionally, classrooms are equipped with rows of 30 to 40 students' desks, a teacher's desk, blackboard and a bulletin board. This type of arrangement is a suitable one for using 'chalk and talk'. However, with the new approach (systems approach), emphasis changes to groups of various sizes (i.e. large group, small group and independent study using a variety of strategies and media).

(1) Space for Large Group Teaching

The main requirement in the systems approach is for a variety of spaces for from 2 to 300, depending upon the subject-matter and the grade level. The old schools can

use the cafeteria or any other spaces which are available in the school.

(2) Space for Small Group Teaching

Regular classrooms can be converted into several small spaces by using movable partitions. Students can also use headsets to avoid disturbance which would be caused by sound from a loudspeaker, when using films and other audio-visual media.

(3) Space for Independent Study

Independent study necessitates a move from a regular classroom to a special study unit where the student works at his own pace. One of the most prominent 'symbols' of the new interest in independent study is the carrel. Most carrels often contain only a chair and a working surface (in addition to access to electrical service for audio-visual equipment). These carrels are not a prerequisite for individual study but they do help to ensure privacy for the learner. Independent study can carry on within the ordinary classroom using their own conventional desks (e.g. traditional library work) and movable partitions.

Determination of space allocation is based upon the consideration of learning objectives. Thus a systems approach can result in a demand for both increased and better equipped teaching and learning areas.

SELECTION OF APPROPRIATE INSTRUCTIONAL MATERIALS

Different types of instruction need access to different types of equipment and materials. Teachers should first of all determine the objectives, then select the content, and finally the minimum of instructional materials

When the teacher considers the full range of instructional media available to him, he should understand that these media will be selected in terms of the responses he desires from the learners and not in terms of stimuli alone.

EVALUATION OF PERFORMANCE

The major purpose of performance evaluation is, of course, assessment of students' achievements. Its basic purpose, however, is an assessment of the entire instructional process, including students' achievement of objectives, the instructional approach, the act of teaching and teacher effectiveness. Continuous evaluation also provides a series of pre- and post-tests along the course of instruction.

Although ultimate evaluation of performance must await completion of the act of teaching, evaluation is an on-going process. Evaluation should take place before, during, and after instruction. All the effort which has gone into the formulation of objectives, gains significance or becomes non-significant as a consequence of evaluation.

The purpose of evaluating performance is to detect and correct learning/teaching problems and difficulties in the instructional process which may threaten the attainment of objectives.

Glaser in Gerlach (1980) points out that there are two

primary assessments which are made at this point:

"One is to provide information about a student's present behaviour; measurement of this purpose is primarily designed to discriminate between individual. The second use is to provide information about instructional techniques which produce that behaviour; measurement for this purpose is designed to discriminate between instructional methods."

Glaser (in Gerlach 1980: 27)

However, as was mentioned earlier, it is not always easy to evaluate every objective because of the difficulty in measuring the outcomes of some of the stated objectives.

"Some objectives are simple to evaluate. If they are observable and measurable, there is little difficulty. However, there are other objectives which are much more complex and not easily evaluated. How does one assess the qualities of good citizenship, a task often stated as an objective of the social studies?"

Gerlach et al (1980: 27)

ANALYSIS OF FEEDBACK

Feedback refers to information received by the instructor as to the success/failure of the process of instruction. It implies an evaluation of the product (terminal behaviour) in direct relation to the specified objectives.

As teachers, we have a constant need to see where we are, where we are going and how we are getting there. Of course, we need to assess the achievement of our pupils, but we also need to evaluate our methods of teaching. How well are our pupils responding to them? Do our pupils enjoy our instruction? Do our pupils have better ideas for accomplishing some of the same

goals that we have set? Information on failure is as valuable as information on success.

It is useful for feedback to occur as soon as possible after learning. Delay in feedback decreases its effect.

"The usefulness of frequent feedback during the acquisition of newly learned capabilities should not be overlooked."
Gagné (1977: 298)

A good example for applying these principals can be seen in programmed learning.

"The designers of programmed instruction frequently emphasise the importance of confirming responses for each 'frame' of the program."
Skinner (in Gagné 1977: 298)

* * *

To sum up, the main assumption underlying this chapter is that, if audio-visual media is to substantially improve the training of teachers, it must be encircled in a system, a re-delineate of the condition of learning that integrates the reform of most aspects of teacher training.

Definition of educational technology in this chapter goes beyond any particular device or side. Educational technology, in this sense, is a systematic way of designing, applying and evaluating the whole operation of learning and teaching in terms of specific objectives.

CHAPTER 4

THE QUESTIONNAIRE

INTRODUCTION

In spite of the availability of teaching media in primary and intermediate schools in Bahrain, the write of this study felt that the impact of these media on teaching and learning has been small compared with the overall development of the educational system in Bahrain as a whole. For example, official documents of the Ministry of Education, dated 1983-84, showed that there were 929 different items of audio-visual equipment in all 62 boys primary and intermediate schools, and 618 in all 52 girls primary and intermediate schools.

In other words, the average number of items in each school was approximately 14. Dividing this number by the average number of teachers (25 in each school) gives an average ratio of approximately 2 teachers to each piece of equipment. This does not appear to be very generous.

Statistical records of the Audio-Visual Centre indicates that many of the existing hardware in the schools is not being used (or used properly). This has come about partly because a good number of teachers lack the skills required to operate the equipment. If teachers don't know how to use the equipment then the teacher trainers (or the teacher training programmes) are at fault. Of course, there are a variety of reasons why teachers might not use AVA materials.

In order to investigate these problems and in an attempt to acquire more accurate information about teachers opinions on in-service training in general and educational technology in particular, this study was undertaken. A postal questionnaire was designed and distributed to a number of primary and intermediate schools in Bahrain in April 1985.

This approach was adopted as the writer was currently studying at the University College of Wales, Aberystwyth, and was unable to visit schools personally. The problem was how to obtain the required information for the purposes of the present study. There were three possible ways of doing this:

- (1) Asking the teachers to write an account of their experiences. This was avoided because analysing such open-ended essay-type information would have been
 - (i) time consuming and unreliable
 - (ii) difficult to make valid comparison.
- (2) A personal visit to each school. This was difficult to achieve as the writer was in Great Britain and so unable to organise such visits.
- (3) Sending a questionnaire to the teachers.

For practical reasons, the postal questionnaire was decided upon, and the approval of the Ministry of Education was sought.

This approach was also selected because:

- (1) All teachers approached were asked the same questions.
- (2) It would be possible to categorise the replies in ways more careful than the personal interview.
- (3) The researcher's own experience within the system was such that he felt able to understand the approaches of teachers teaching the topic.

AIMS AND OBJECTIVES

This questionnaire was designed to investigate the present practices of educational technology in primary and intermediate schools in Bahrain. The two main aims were:

- (1) To delineate their attitudes towards the development of educational technology in the teacher training programme.
- (2) To get information relating to the teachers' suggestions concerning further development of the in-service training system.

Precisely, the questionnaire aimed to:

- Find out whether the training courses in educational technology are sufficient to cover the teachers' needs.
- Trace the problems which confront teachers in obtaining, producing and utilising teaching media.
- To gather general information about the teachers' (i.e. their ages, qualifications, type of school and subjects taught).
- To gather some specific information about their background in in-service teacher training.
- To trace the teachers' attitudes and preferences towards the topics of the in-service programmes.
- To identify the teachers' views towards the application of educational technology.
- To investigate the most needed field in educational technology by the teachers.

- To investigate the availability of hardware and software in their schools.
- To trace the utilisation of different audio-visual media by the teachers.
- To identify the teachers' background in producing teaching media.
- To find out the preferred source for the supply of learning materials.

The sample was divided into the following six groups:

- G1 47 primary school teachers, male
- G2 98 primary school teachers, female
- G3 50 combined primary/intermediate school teachers, male
- G4 51 combined primary/intermediate school teachers, female
- G5 20 intermediate school teachers
- G6 23 intermediate school teachers

To minimise the problem of a particular school being under-represented, the writer grouped the schools by size, and ensured that each of the groups was adequately represented in the final sample.

The participants were Bahraini teachers only (expatriate teachers were excluded); each teacher included should have served in a primary, combined, or intermediate school in Bahrain. They were heterogeneous in age, years of experience, type of school, subjects taught, qualifications, and sex.

To ensure that all parts of the country were represented, the teachers were stratified by all areas into which Bahrain is divided.

The respondents have different background and qualifc qualifications, some have attended courses in educational technology while others have not.

In designing the sampling frame, each type of school was divided according to its size, to ensure that each type of school was represented in the selected sample. Also each of these schools would contain teachers with different backgrounds in in-service teacher training.

A sample of 320 teachers in 14 schools was chosen. Table 10a shows the number of teachers selected in each type of school and the number of teachers who replied to the questionnaire. The total number of teachers in each type of school was taken from Ministry of Education statistics for 1984.

Type of School	Number of Teachers in all Schools	Sample	Replies	Replies %
Primary	1,564	150	145	5.2
Combined	897	105	101	3.6
Intermediate	311	65	53	1.9
Total	2,772	320	299	10.7

Table 10a : Teachers Replying to the Questionnaire

The total number of schools answering the questionnaire represent 12.5% of the total number of schools in Bahrain. In table 10b the type of schools returning completed questionnaires is displayed.

Type of School	Males	Females	Total	Total Number of Schools	Ratio
Primary	5	3	8	74	1:10
Combined	2	2	4	27	1:7
Intermediate	1	1	2	10	1:5
Total	8	6	14	111	1:8

Table 10b : Schools Replying to the Questionnaire

All fourteen schools, without exception, replied to the questionnaire.

LIMITATION OF THE QUESTIONNAIRE

The questionnaire asked teachers in fourteen selected schools in Bahrain - primary, combined (primary and intermediate) and intermediate - a number of questions related to the in-service courses they have attended, the utilisation of educational technology in their every-day teaching and the problems faced in those areas.

The sample schools (14) were chosen from a total of 114 schools in Bahrain. In other words, the sampling ratio was 1:8. A total of 320 teachers were approached.

THE DESIGN OF THE QUESTIONNAIRE

The main focus of this study is on the in-service teacher training courses and the role of educational technology in these courses. From this point of view, the questionnaire consists of four parts.

Part I seeks general information about the teachers, such as sex, age range, type of school, qualifications and subject taught.

Part II comprised eight multiple response questions in an attempt to acquire information about the teachers' experiences and their background and to measure the extent of their interest in attending in-service courses.

Part III was designed to investigate teachers' attitudes to some teaching methods.

Part IV was dedicated to the study of educational technology in general. It consisted of fourteen questions to survey the teachers' opinions about educational technology and its application, to produce evidence upon which can be based systematic suggestions for the development of educational technology courses in any further in-service training programme.

The questionnaire was written in Arabic, the teaching language of the respondents. The original version and its English translation can be found in Appendices 7 and 8. It is hoped that the English translation is sufficiently accurate to avoid any possible misunderstanding by English readers.

DISTRIBUTION PROCESS OF THE QUESTIONNAIRE

The questionnaire was sent to the headmasters and headmistresses of the schools, with an official covering letter, through the Ministry of Education, inviting them to distribute the questionnaire to their school teachers. Since the distribution procedure was carried out officially through the Ministry of Education, an excellent response was obtained. Of

the 320 copies of the questionnaire which were sent to the schools, 299 (93.4%) were returned.

It must be realised that as a result of the method of distribution, the teachers' response might be 'favourable' (i.e. what they think officials want) in their nature rather than 'true'.

Another limitation of this questionnaire lies in the possibility of not giving a very accurate picture of teachers' opinions, due to what may be called 'personal amiability'. This is a reflection of the social background of Bahraini teachers, where personal relations play a role in the nature of their responses to questions. Related to this is the fact that the writer of the questionnaire was himself an educational technology tutor for the Ministry of Education for more than seven years.

SCORING AND ANALYSING THE QUESTIONNAIRE

Scoring of questionnaires was all done manually, but in order to investigate possible differences between variables, the results of the sorting were tabulated and 'MINITAB', version 82.1A of 'PENN STATE UNIV' was applied, mainly for Chi square tests. Descriptive analysis was also used for interpreting the results, using tables and various graphics displays.

Different types of questions were designed, such as straightforward questions with leading answers, essay questions and ranks order questions. Also different scoring techniques were employed according to the nature of each question.

THE QUESTIONNAIRE RETURNS

The completed questionnaires were collected and sent to the writer for scoring and analysis. As was pointed out earlier, 299 of the 320 questionnaires sent out were returned. In other words, the response was 93%. Moreover, all 299 teachers, without exception, answered all elements of the questionnaire. This positive participation amongst the teachers, may be due to the official support shown by the manner of distribution of the questionnaire. Of course, this may affect the overall results, which must be treated with caution.

STUDY AND ANALYSIS OF THE QUESTIONNAIRE

Part I : Background Information about the Teachers

The total number of teachers who returned the completed questionnaire was 299; among them 172 were female teachers and 127 male teachers. Figure 10 shows that the teachers who completed the questionnaire are grouped into three different categories, namely, primary, combined (primary and intermediate) and intermediate school teachers. The majority, 145, were primary school teachers - approximately 48% - followed by the combined (primary and intermediate) school teachers - 101 (34%) - then the intermediate school teachers - 53 (approximately 18%). From figure 9 it is clear that the majority of the teachers who responded to the questionnaire were female teachers (57.5%), whereas males represented 42.5% of the total replies.

Furthermore, figure 10 clearly shows that each category contains males and females. This indicates that co-education

Number of Teachers

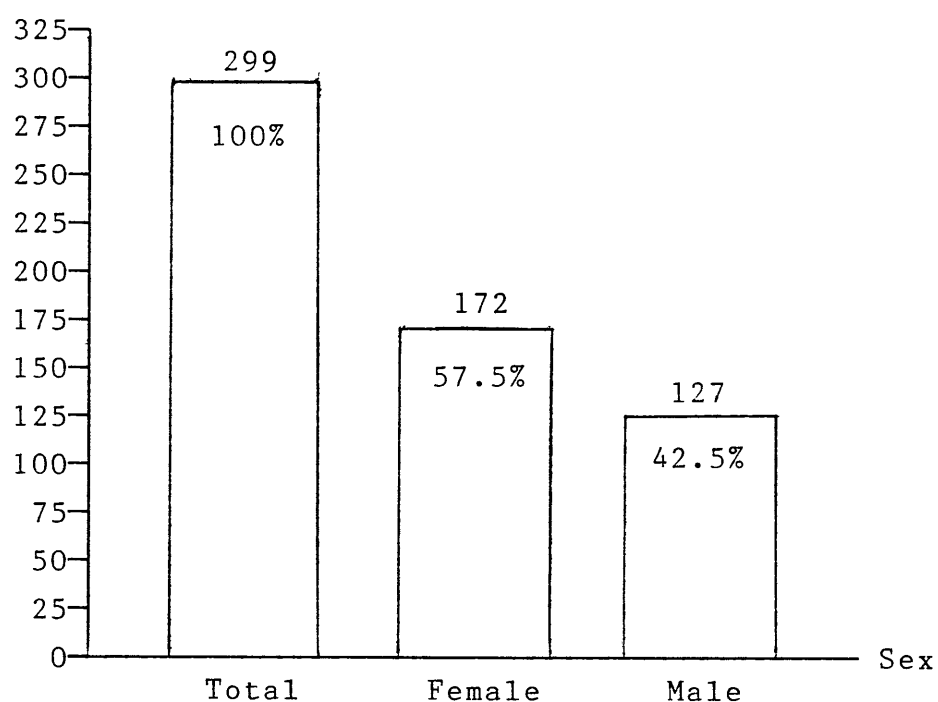


Figure 9 : Percentage and Number of Teachers who Responded to the Questionnaire - by Sex

Number of Teachers

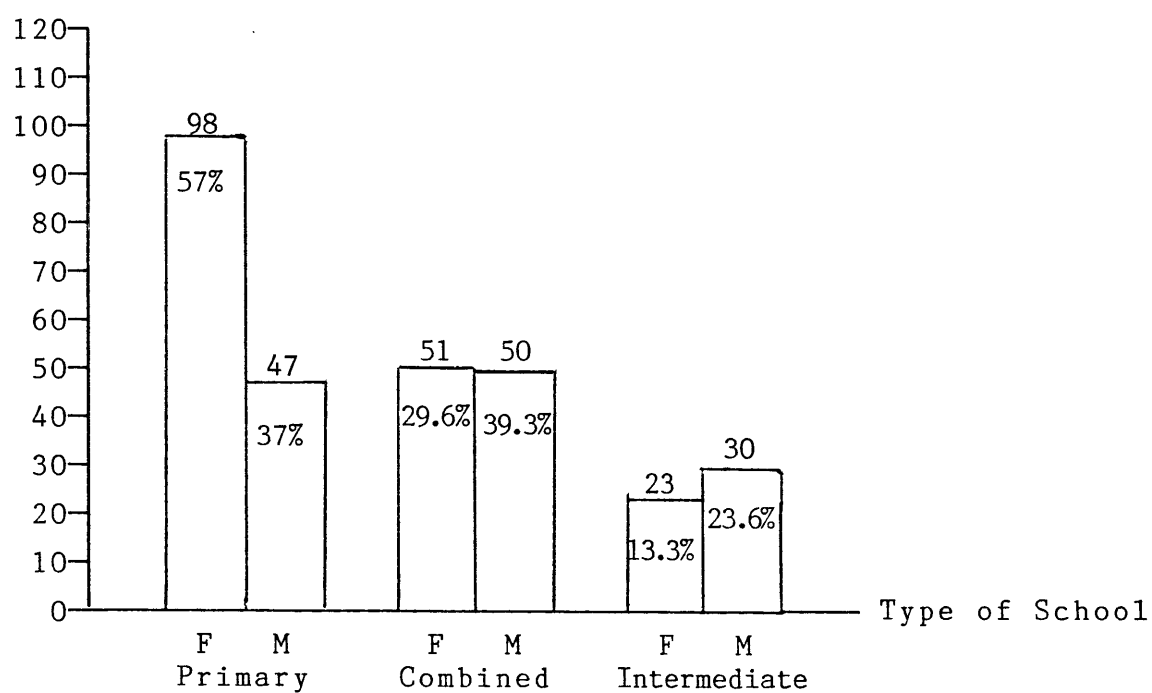


Figure 10 : Percentage and Number of Teachers who Responded to the Questionnaire - by Type of School and Sex

does not exist in Bahrain schools. Boys are taught in different schools from girls. In this context, it is worthwhile mentioning that, recently, the Ministry of Education has employed female teachers to teach in some boys primary schools. This is due to the shortage of male teachers. The Ministry of Education statistics for 1983-84 showed that there were 168 female teachers teaching in boys schools. Among those who completed the present questionnaire were 20 female teachers who are teaching in boys primary schools.

It is interesting to realise that females in Bahrain, in general, have a natural tendency towards giving family responsibilities a priority in their lives. Teaching careers tend to accommodate their demands by its long summer holidays and half day work. In addition, the Bahraini males have access to a wide range of jobs (many of which are better paid) in fields other than teaching.

Figures 11 and 12 indicate that more than half the teachers (179 or 60%) placed themselves in the 21-30 age group; The majority (127 or 42.5%) of these were females, whereas only 52 (17%) were males. However, it is obvious from figure 12 that the majority of female teachers were centred in the first two age groups (21-30 and 31-40), whereas there were only 2 female teachers in the 41-50 age group. There were no female teachers in the 51-over age group.

In the writer's view, the disappearance of female teachers from the older age groups is due to the following reasons:

- (1) Female education is comparatively recent in Bahrain. As was mentioned in chapter 1, female education started nine years later (1928) than males. Until 1938, there were

Number of teachers

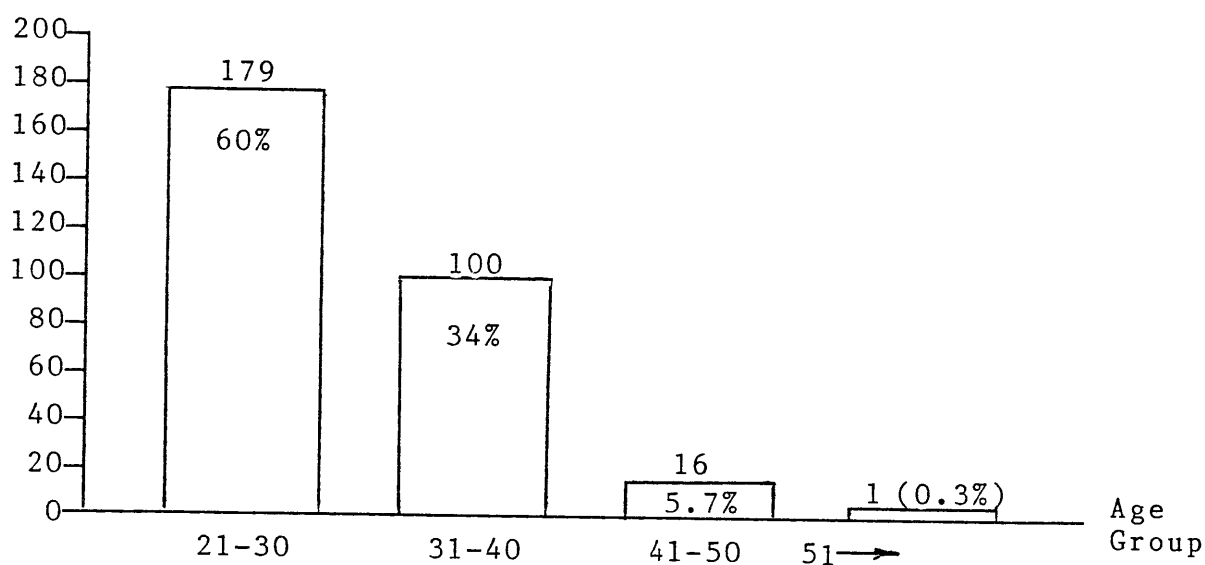


Figure 11 : Percentage and Number of Teachers who Responded to the Questionnaire - by Age Group

Number of Teachers

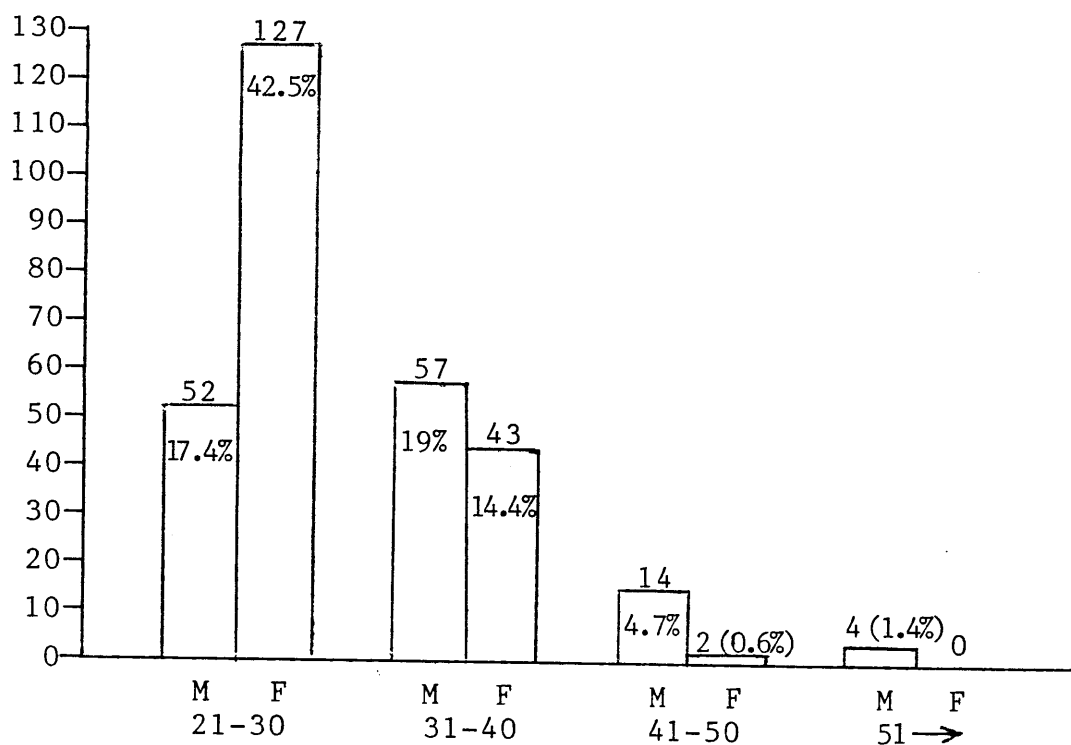


Figure 12 : Percentage and Number of Teachers who Responded to the Questionnaire - by Age Group and Sex

Number of Teachers

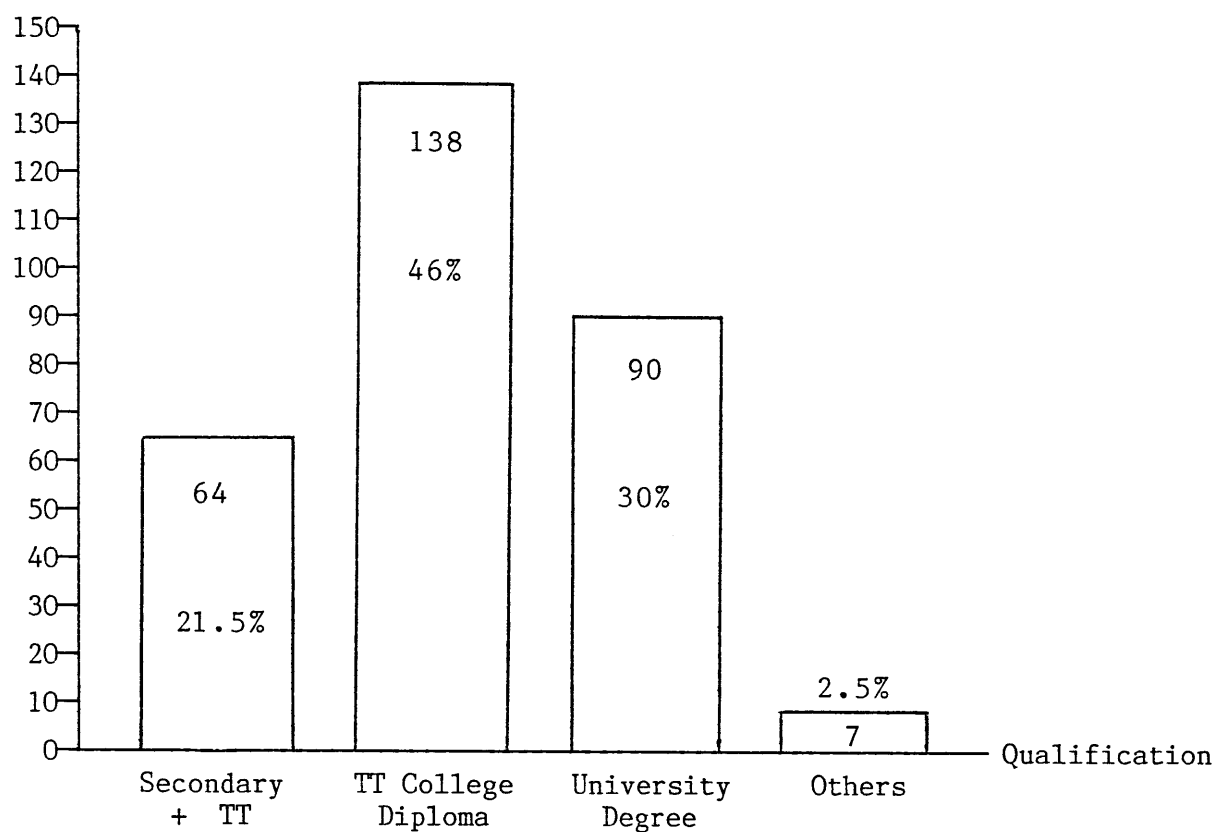


Figure 13 : Percentage and Numbers of Teachers who Responded to the Questionnaire - by Qualifications

Qualification	Primary	Combined	Intermediate	Total
University Degree	26	42	22	90
TT College Diploma	73	36	29	138
Secondary + In-Service	43	21	0	64
Others*	3	2	2	7
Total	145	101	53	299

* pre-secondary level

Table 11 : Number of Teachers who Responded to the Questionnaire - by Type of School and Qualification

only 14 female teachers in all four girls schools in Bahrain. Moreover, Ministry of Education statistics for 1971 showed that the total number of females graduating from different universities and colleges by 1970 was only 97, whilst by this time there were 447 males.

- (2) Bahraini female teachers are most likely to retire early, to give more time to their responsibilities as housewives (due to their inherited social background). Also, it has become fashionable in the last few years for a married female teacher to leave her teaching career after having children, thus depending on her husband's income for their livelihood.

The above reasons have also proved to affect the attendance of a number of the older female teachers at many teacher training courses, especially afternoon and evening courses. However, in total there are only 53 female teachers in primary and combined schools in Bahrain registered as over 40 years old according to the Ministry of Education statistics for 1982-83, and only 3 teachers in intermediate schools just under 40 years old. Thus we have a population of young female teachers who, in general, have been teaching for less than 20 years.

As we proceed to the qualification side of the question, we notice in table 11 that 138 (46%) of the total teachers' qualifications is the Teacher Training Diploma, then 90 (30%) of the teachers have an University Degree, while the less qualified teachers (64 or 21.5%) are those with secondary school certificates plus some in-service teacher training courses.

Generally, it may seem obvious that the last group could be an ideal one to be a target for in-service courses in

educational technology. In my opinion the other two groups do not need less attention than the others mentioned as most, if not all, the university degree holders have graduated from colleges in subjects other than Education as their main study. Therefore, they did not get pre-service training and I think this is the main single reason why they have to be considered as a target group for in-service training. The only group which seems to have some sort of training, are those teachers with a teacher training diploma but, returning to the curriculum plan for teacher training colleges (see tables 7 and 8, pp.27 and 28) we notice that 'educational aids' was introduced as 1 hour a week in the second session of the first year and the same in the first session of the second year for both the literary and scientific sections. In other words, the total of 24 hours studying was not enough for both practical and theoretical aspects of educational technology.

Tables 12 and 13 indicate that 124 (41%) of the total teachers who responded to the questionnaire taught intermediate school subjects, while 175 (59%) of the total number of teachers taught primary school subjects. We notice that combined school teachers were divided into these two groups, primary subject teacher or intermediate subject teacher.

These tables show that the teachers answering the questionnaire taught a wide range of subjects, both in primary and intermediate schools, and this is an important point to consider when planning in-service courses for these teachers. We also notice that some teachers teach more than one subject, usually an important one as a main subject and another less important one as a second subject.

Intermediate School Subject	Number of Teachers	
	Main Subject	Second Subjects
Islamic Religion	18	7
Arabic Language	24	--
English Language	14	--
Mathematics	12	2
Social Subjects	13	6
Sciences	20	3
Practical Studies	6	--
Fine Arts	12	10
Physical Education	5	2
Total	124	30

Table 12 : Intermediate School Teachers - Subjects Taught

Primary School Subject	Number of Teachers	
	Main Subject	Second Subjects
Islamic Religion	22	12
Arabic Language	29	2
English Language	22	4
Mathematics & Geometry	19	--
General Science	26	5
Social Subjects	16	6
Drawing	18	15
Physical Education	13	4
Songs and Music	10	10
Total	175	58

Table 13 : Primary School Teachers - Subjects Taught

Looking at the above tables, we understand that most teachers in the sample are subject teachers, whether in primary or intermediate. This is so because the classroom teaching system is not yet employed in Bahrain, though it is in an experimental stage in some schools (class teaching is the norm in Britain).

The important point to be made in conclusion from the above is that the selected sample does cover the whole curriculum in primary, combined and intermediate schools, so it cannot be said to be biased when looking at any one subject. Therefore, the study is generally getting a picture of the school as a whole.

Part II : General Information about In-Service Courses

The first question of part two was: "Have you attended any in-service teacher training courses?". A large proportion of the teachers (223 or 74.6%) said 'Yes', while 76 (25.4%) answered 'No'. It appears that those teachers who answered 'No' could benefit from an intensive in-service training. However, the teachers with 'No' answers can be divided as follows: 33 male teachers and 34 female teachers in the three types of school. Among these teachers the majority (57 or 85%) are in the 21-40 age group, while only 10 teachers (15%) are in the 41→ age group. Clearly, the 57 (85%) are teachers with more than 20 years still to serve. This finding has serious implications and three possible explanations can be put forward for their non-attendance at courses:

- (1) They are recently trained teachers who therefore feel no deficit, and consider in-service courses are unnecessary for them.
- (2) Family responsibilities for female teachers and other responsibilities for male teachers, such as private jobs, etc.
- (3) The courses are not sufficiently well formulated and designed to satisfy their needs.

We would suggest the design and implementation of a specified special short course for these young teachers. One for primary teachers (male and female) and one for intermediate teachers (also for both sexes).

As far as cost-effectiveness is concerned, it would be very expensive to design a special in-service courses for the 10 teachers in the 41—over age group. This is because these teachers are very few in number and most of them will retire shortly. Those who wish to join in can be distributed among the other two groups of teachers.

The hypothesis for those who attended in-service courses was: "There will no no significant differences in the number of courses attended by teachers in the three types of school". Since the Chi square test in the following table (table 14) showed that the total χ^2 5.43 (with 4 df) is not significant, we accept the hypothesis.

Number of Courses	Primary	Combined	Intermediate	Total
1 - 3 times	69	40	17	126
4 - 6 times	28	15	4	47
more than 6	22	24	4	50
Total	119	79	25	223

Table 14a : Number of Times Teachers Attended In-Service Courses in the Three Types of School

Most of the teachers (223 or 64.6%) have attended in-service training courses and their attendance is equally distributed between the three categories of schools, as is shown by the X^2 test.

More than half the teachers (126 or 56.5%) attended 1-3 times, and the rest (97 or 43.5%) attended more than 3 times. Further analysis of table 14a above into male and female teachers (see table 14b) shows that there is not much difference between sexes.

Number of Courses	Primary			Combined			Intermediate			Total		
	T	M	F	T	M	F	T	M	F	T	M	F
1 - 3 times	69	27	42	40	19	21	17	17	0	126	63	63
4 - 6 times	28	6	22	15	9	6	4	2	2	47	17	30
more than 6	22	4	18	24	10	14	4	1	2	50	15	35
Total	119	37	82	79	38	41	25	20	5	223	95	128

Table 14b : Number of Teachers who Attended In-Service Courses by Type of School and Sex

Inspection of table 14b shows that 119 primary school teachers attended in-service courses, 37 male teachers and 82

female teachers who represent 31% and 69% respectively of the total number of primary school teachers in the sample. In other words, there were only 10 male primary school teachers and 16 female primary school teachers who had not attended any in-service courses out of the total 145 primary school teachers in our sample.

In combined schools there were 79 teachers, of whom 38 (48%) were male and 41 (52%) were female teachers, who attended some in-service courses. Again, there were only 12 male and 10 female teachers in the combined schools who did not attend any in-service courses.

Only a total of 25 teachers attended in-service courses from the intermediate level, of whom 20 (80%) were male and 5 (20%) were female. Therefore it is clear that there were more female teachers who had not attended any in-service courses than males.

Generally, the obvious conclusion is that most teachers in all types of school are, in fact, familiar with in-service courses. Undoubtedly they came across the use of various audio-visual methods through these training courses.

The second question in part two asked those teachers who had attended in-service courses: "When was the last course you attended?" This question was to investigate the updating of their knowledge and experience of audio-visual methods. The results confirm the previous finding that the majority of the teachers (120 or 53.8%) had attended in-service courses recently (within the last two years), and 103 (46.2%) teachers had attended in-service courses more than two years ago. This suggests a significant number of teachers should be attending courses.

The hypothesis for the following Chi square test was:
 "There will be no significant differences in the number of teachers who attended courses, between the three categories: this year, last year and more than two years ago". Since the Chi square test showed $\chi^2 = 6.47$ (with 4 df), we accept the hypothesis. Therefore attendance at courses is a feature of the individual teachers' wishes rather than the type of school they teach in.

No.	Date	Primary	Combined	Intermediate	Total
1	This year	28	36	16	80
2	Last year	21	13	6	40
2	More than two years ago	54	32	17	103
	Total	103	81	39	223

Total $\chi^2 = 6.47$ (with 4df)

Table 15a : Number of Teachers who Attended In-Service Courses by Type of School and Date of Attendance

Attempting to break down the findings in table 15a into male/female cells (see table 15b) we find the following:

No.	Date	Primary		Combined		Intermediate		Total		
		M	F	M	F	M	F	M	F	Total
1	This year	9	19	16	20	6	10	31	49	80
2	Last year	3	18	7	6	5	1	15	25	40
3	More than two years ago	27	27	12	20	9	8	48	55	103
	Total	39	49	35	46	20	19	94	129	233

Table 15b

Table 15b indicates that out of 172 female teachers answering the questionnaire, there were 129 (75%) teachers attending courses, of whom 49 indicated 'this year', 25 'last year' and 55 'more than two years ago'. Out of the total of 127 male teachers who answered the questionnaire, 94 (74%) teachers attended in-service courses, of who, 31 indicated 'this year', 15 'last year' and 48 'more than two years ago'. A similar percentage of teachers of both sexes attended in-service courses, but looking between the types of school, we notice that 82.9% of male primary school teachers, 50% of female primary school teachers, 70% of male combined school teachers, 90% of female combined school teachers, 66.6% of male intermediate school teachers and 82.6% of female intermediate school teachers had attended in-service courses. Although these percentages are high, the non-participating teachers, specially female primary teachers (50%) and male intermediate teachers (35.4%), should be encouraged to attend in-service courses.

Looking back at table 15a, one notices that the total cells in category 3 indicates that 103 (46.2%) teachers attended in-service courses more than two years ago. These teachers may require further refresher in-service courses, with a special option in educational technology, to keep them up-to-date in knowledge and methods.

Question 3. To investigate the adequacy of the time teachers actually spend on training courses, question three seeks to know the length of the course attended by teachers. Was it: (a) one-day course, (b) two-four day course, (c) more than a week or (d) one-two year course.

In testing this question, statements (a) and (b) were added together in table 16, because of the low frequencies in the cells of these categories which made the X^2 test unreliable. The hypothesis was: "there will be a significant difference between the type of school and the length of course attended".

No.	Course Duration	Primary	Combined	Intermediate	Total
1	1 - 5 days	39	23	8	70
2	More than a week	56	49	15	120
3	1 - 2 years	23	7	3	33
	Total	118	79	26	223

Table 16 : Number of Teachers Attending In-Service Courses - by Type of School and Course Duration

Since $X^2 = 6.23$ (with 4df) is not significant, then we reject the hypothesis and accept the opposite probability that there is a significant difference between the type of school and the length of course attended. This finding, again, confirms the findings in question 2 (p.90), i.e. attendance at courses is a feature of the individual teachers' preference rather than the type of school in which they teach.

Category (1) indicates that a total of 70 teachers (31%) attended 1-5 days courses. If we consider category (1) as a short duration courses, and categories (2) and (3) as long duration courses, then we will find a total of 153 (69%) teachers (120 + 33) attended long duration courses. Assuming that the majority of these 153 teachers are those who attended the in-service teacher training courses run by the Ministry of Education with the co-operation of UNRWA/UNESCO during 1973-80,

then these teachers surely need further refresher courses, especially in the field of educational technology where rapid changes have taken place. The present writer recalls that there was only one assignment for educational technology in the first year and another assignment in the second year of the teacher training programme.

Table 16 shows that more than half of the teachers (118 or 52.9%) who attended in-service courses of different duration were primary school teachers. This probably means that more courses had been provided at the primary level than other levels, leaving a potential gap in the provision for teachers in the other types of school.

Question 4. This question was aimed solely at those teachers who attended long courses (see the previous question, no.3). It was designed to investigate whether they also had followed other short courses with an audio-visual media flavour. In this question the teachers were asked to state whether they had attended any short courses either before or after the long course.

The Response	Primary	Combined	Intermediate	Total
Yes	35 (15.6%)	30 (13.4%)	13 (5.8%)	78 (34.8%)
No	84 (37.7%)	49 (22%)	12 (5.4%)	145 (65.2%)
Total	119	79	25	223

Table 17 : Attendance at Short Courses - Number and Percentage of Teachers' 'Yes' and 'No' Responses in all Types of School

Table 17 explained that 78 (34.8%) of those teachers who had attended 'long courses', has also been involved in some in-service short courses. It is evident from the previous findings in questions 1-3 that a good number (223 or 74.5%) of the total teachers in the sample had experienced many in-service courses for teachers, both long-term and short-term duration. The number of teachers who had never participated in any in-service courses was also high (76 or 25.5%).

Question 5. This question asked "Which two of the following subdivisions of teacher education subjects should, in your view, have the highest priority in planning and designing in-service courses for teachers in primary and intermediate schools?". The teachers were provided with the following headings:

- (a) Teaching Methods
- (b) Curriculum Studies
- (c) Educational Technology
- (d) Psychological Studies
- (e) Sociological Studies
- (f) Teaching Practice
- (g) Syllabuses

The teachers' reaction to this question is shown below in table 18.

Subject Choice	Primary		Combined		Inter- mediate		Total		Total	Final Rank
	M	F	M	F	M	F	M	F		
(a) Teaching Methods	25	56	34	28	16	10	75	94	169	1
(b) Curriculum Studies	11	9	10	11	7	8	28	38	66	6
(c) Educational Technology	16	28	19	20	12	7	47	55	102	2
(d) Psychological Studies	10	24	9	15	10	3	26	45	71	5
(e) Sociological Studies	6	15	4	5	4	2	14	22	36	7
(f) Teaching Practice	14	26	13	12	6	7	33	45	78	3
(g) Syllabuses	12	28	11	11	5	9	28	48	76	4

Table 18 : Teachers' Answers to the Most Important Subjects

The replies obtained in table 18 can be summarised as follows: The question asked the teachers to tick the two most important subjects in the given list. In scoring this question the highest number of points given to a choice was considered to be first choice and the second highest scores was considered to be second choice, and so on.

The final rank order showed that 'Teaching Methods' had the highest priority in their opinion; a total of 169 (56.5%) teachers agreed that this subject was the most important when considering the planning and designing of in-service courses for primary and intermediate school teachers.

Educational Technology takes second priority in their opinion, 102 (34%) teachers agreed that it came after 'Teaching Methods' in importance.

Although the question's aim was to find out the best two choices, the other scoring indicates the rank order of the other choices, which is useful and interesting to know. In this context, it can be said that third choice was 'Teaching

Practice' - 68 (26%), then 'Syllabuses' as fourth choice - 76 (35.4%), followed by 'Psychological Studies' as fifth choice - 71 (23.7%), and lastly 'Sociological Studies' as seventh and final choice - 36 (12%).

It is apparent that most of the teachers preferred those subjects which had some practical aspects in their nature, such as 'Teaching Methods', 'Educational Technology' and 'Teaching Practice', rather than those subjects which have some academic nature, such as 'Psychological and Sociological Studies'.

These findings provide an indication that teachers in Bahrain are more concerned about their actual teaching performance in the classroom than gaining deeper insights into the learning and behavioural characteristics of the pupils.

Question 6. This question sets out to investigate which topics are preferred by teachers in their teaching courses. The question asked was: "What are your expectations of any training programme for teachers?". Teachers were asked to indicate their response by numbering their choice in order of importance (e.g. to give (1) for first choice, (2) for second choice, etc.). The teachers were provided with the following list of topics:

- (a) Learning new teaching methods
- (b) Developing technical skills in writing questions
- (c) Training the teachers in problem-solving skills
- (d) Training the teachers how to teach new syllabuses
- (e) Changing teachers attitudes towards some wrong performances
- (f) Training the teachers how to write learning objectives
- (g) Training the teachers how to prepare AV materials

In scoring question 6, rank order technique was applied to find out first how many teachers ranked '(a) Learning new teaching methods' as (1), first choice, and how many ranked it as (2), second choice, and so on. Applying the same steps for the remaining topics, the following findings were collected:

Choice	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Rank Order
(a)	128	48	51	22	17	17	16	1
(b)	19	20	41	57	65	55	51	4
(c)	30	30	27	47	54	62	49	5
(d)	34	67	37	40	53	35	33	2
(e)	54	43	38	51	33	32	48	6
(f)	60	55	50	47	30	28	29	7
(g)	50	58	60	42	22	32	35	3

Table 19 : The Scores Obtained by the Teachers to Question 6

To find the final rank for each topic in table 19, the total points in each category value were multiplied by its value (e.g. $128 \times 7 = 896$, $48 \times 6 = 288$, $51 \times 5 = 255$, etc.). Having done this, the second step was to look for the category with the maximum score (e.g. the greatest score in category (1) will be first choice, the next greatest score will be second choice, and so on).

Table 19 shows that the overwhelming majority of teachers (128 or 60.8%) ranked (a) 'Learning new teaching methods' as the most important subject for any in-service course. This finding lends support to their response to question 5.

The topics	Order of Importance							Final Rank
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
(a) Learning new teaching methods	128	48	51	22	17	17	16	1
(b) Developing technical skills in writing questions	19	20	41	57	65	55	51	4
(c) Training the teachers in problem-solving skills	30	30	27	47	54	62	49	5
(d) Training the teachers how to teach new syllabuses	34	67	37	40	53	35	33	2
(e) Changing teachers attitudes towards some wrong performances in teaching	54	43	38	51	33	32	48	6
(f) Training the teachers how to write learning objectives	60	55	50	47	30	28	29	7
(g) Training the teachers how to prepare AV materials	50	58	60	42	22	32	35	3

Table 20 : Rank Order of Syllabus Topics

The second most important subject, in the teachers' opinion, was (d) 'Training the teachers how to teach new syllabuses' - 67 teachers (22.4%) were of this opinion. This choice may reflect the teachers' needs and demands to cope with recently changed syllabuses in primary and intermediate curriculae.

The third most important subject, in their opinion, was (g) 'Training the teachers how to prepare AV materials' - 60 teachers (20%) held this opinion. This shows a gratifying degree of interest in audio-visual methods of preparation.

Ranked fourth choice was (b) 'Developing technical skills in writing questions' - the opinion of 57 teachers (19%). This was followed by (c) 'training the teachers in problem-solving skills' as fifth choice, then (e) 'Changing teachers attitudes towards some wrong performances in teaching' in sixth place.

Seventh and final choice was (f) 'Training the teachers how to write learning objectives', as it had a low rank.

The results in table 20 once again confirms the findings in previous questions, i.e. most of the teachers favour those topics which have some practical nature. This suggests either that teachers are confident in the academic subjects or they do not like to be open to any critical remarks.

Question 7. This question asked the teachers whether they had or had not been given adequate practice and guidance in the following classroom practices:

- (a) Lesson preparation
- (b) Selection of teaching objectives
- (c) Writing objectives in a way that they can be used
- (d) Evaluating teaching methods
- (e) Selecting teaching activities
- (f) Writing good questions

In scoring this question, a simple addition operation has been done for the 'Yes' and 'No' answers first and then each subject was tested statistically.

The Subject	Primary		Combined		Inter-mediate		Total		%	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
(a) Lesson preparation	114	31	74	27	27	26	215	84	72	28
(b) Selecting teaching objectives	110	35	76	25	18	35	204	95	69	31
(c) Writing objectives in a way that they can be used	109	36	64	37	16	37	189	110	63	37
(d) Evaluating teaching methods	106	39	62	39	33	20	178	121	59.5	40.5
(e) Selecting teaching activities	102	43	61	40	27	26	190	109	64	36
(f) Writing good questions	105	40	57	44	6	47	168	131	56	44

Table 21 : Number and Percentage of Teachers' 'Yes' and 'No' Replies in all Types of School

Further examination of the replies concerning each sub-division of the question, revealed that there are significantly more teachers who are given adequate practice and guidance in lesson preparation than those who have not been given such practice and guidance. This applies to all three types of school (see table 22).

Reply	Type of School			Total
	Primary	Combined	Intermediate	
Yes	114	74	27	215
No	31	27	26	84
Total	145	101	53	299

Table 22 : Number of Teachers Given/Not Given Adequate Practice and Guidance in Lesson Preparation in all Types of School

Since the total $\chi^2 = 14.86$ (with 2df), we accept the hypothesis that teachers with 'Yes' answers were significantly more (beyond the 0.01 level). This reveals the fact that the greater number of teachers feel adequately guided in the matter of preparing their lessons.

Approximately 72% of the total number of teachers stated that they were given adequate practice and guidance in lesson preparation, of whom 114 (38%) were primary school teachers, 74 (24.7%) were combined school teachers and 27 (9%) were intermediate school teachers. Some of these teachers may have achieved this practice and guidance through their study period in teacher training colleges during 1967-79. These teachers are mostly intermediate school teachers and some combined school teachers. Another group of teachers may have received adequate practice and guidance through in-service teacher training courses (INSTT) run by the Ministry of Education in co-operation with the UNRWA/UNESCO Institute of Education (1973-80) - see page 34. These teachers are mostly primary school teachers and some combined school teachers.

A worthwhile suggestion which may be explored here, is that although these teachers, as they pointed out, have had a background in lesson preparation, this background has not been updated, since both teacher training colleges and in-service training (INSTT) took place a long time ago.

In fact, the main group of teachers who need attention are those 84 teachers (28%) who have not been given any sort of practice and guidance in lesson preparation. Thus it emerges that nearly 30% of all primary school teachers may be in need of courses in this area.

The second hypothesis concerning (b) 'Selecting teaching objectives' was: "There will be significantly more teachers who have been given adequate practice and guidance in selecting teaching objectives" than those who have not, in all types of school.

Reply	Type of School			Total
	Primary	Combined	Intermediate	
Yes	110	76	18	204
No	35	25	35	95
Total	145	101	53	299

Table 23 : Number of Teachers Given/Not Given Adequate Practice and Guidance in Selecting Teaching Objectives in all Types of School

Statistically, the total Chi square test of table 23 is 34.90 (with 2df). Thus, we can accept the stated hypothesis that there are significantly more teachers who have been given adequate practice and guidance in selecting teaching objectives (beyond the 0.01 level) than teachers who have not. The majority of teachers in all three types of school (204 - which represents 72% of the total number of teachers) seem to have practical experience of selecting teaching objectives. Among them are a majority of the primary school teachers (110 or 75.8%), a majority of the combined school teachers (76 or 75.2%), but only 18 teachers (33.9%) from intermediate schools. This last category of teacher could possibly be targeted by an in-service training course.

The third hypothesis, related to (c), was that "There will be significantly more teachers in all types of school who have

been given adequate practice and guidance in writing objectives in a way that they can be used" than those who have not been given such practice and guidance.

Reply	Type of School			Total
	Primary	Combined	Intermediate	
Yes	109	64	16	189
No	36	37	37	110
Total	145	101	53	299

Total Chi square = 33.78

Degree of freedom = 2

Table 24 : Number of Teachers Given/Not Given Adequate Practice and Guidance in Writing Objectives in a Way that they can be used in all Types of School

Since $\chi^2 = 33.78$ (with 2df) we have to accept the hypothesis that there are significantly more teachers who have been given adequate practice and guidance in writing objectives than those who have not.

Though the figures in table 24 showed 101 teachers out of 299 stated that they had not been given adequate practice in the above experience, the intermediate school teachers again stood out.

The hypothesis for component (d) was that "Significantly more teachers have been given adequate practice and guidance in evaluating teaching methods, in all types of schools, than those who have not been given such experience".

Reply	Type of School			Total
	Primary	Combined	Intermediate	
Yes	106	62	33	201
No	39	39	20	98
Total	145	101	53	299

Total Chi square = 4.43

Degree of freedom = 2

Table 25 : Number of Teachers Given/Not Given Adequate Practice and Guidance in Evaluating Teaching Methods in all Types of School

Since total $\chi^2 = 4.43$ (with 2df) is not significant, we therefore reject the hypothesis and accept the alternative choice that there is no significant difference in the number of teachers in both categories ('Yes' and 'No') in all types of school. In spite of this, table 25 shows that 201 teachers out of the total of 299 stated that they had been given adequate practice and guidance in evaluating teaching methods.

This practice and guidance may possibly be offered by the subjects Inspectors of the Ministry of Education or by school headmasters and school headmistresses.

The stated hypothesis for component (e) of question 7 was: "There will be significantly more teachers in all types of school who have been given adequate practice and guidance in selecting teaching activities than those who have not".

Reply	Type of School			Total
	Primary	Combined	Intermediate	
Yes	102	61	27	190
No	43	40	26	109
Total	145	101	53	299

Total Chi square = 6.96

Degree of freedom = 2

Table 26 : Number of Teachers Given/Not Given Adequate Practice and Guidance in Selecting Teaching Activities in all Types of School

Since χ^2 value = 6.96 is just significant (beyond the 0.05 level) with 2df, we accept the hypothesis that there are significantly more teachers in the three types of school who have been given adequate practice and guidance in selecting teaching activities than teachers who have not been given such practice and guidance.

Nevertheless, there were a good number of teachers (109 or 36.4%) who stated that they had not been given adequate practice and guidance in the stated topic. Indeed, this group of teachers should give special interest.

Lastly, the stated hypothesis for component (f) of question 7 was: "There will be significantly more teachers who have been given adequate practice and guidance in writing good questions, in all types of school, than those teachers who have not been given such practice and guidance". Applying the Chi square test to the following table (table 27) showed the following findings:

Reply	Type of School			Total
	Primary	Combined	Intermediate	
Yes	105	57	6	168
No	40	44	47	131
Total	145	101	53	299

Total Chi square = 58.85

Degree of freedom = 2

Table 27 : Number of Teachers Given/Not Given Adequate Practice and Guidance in Writing Good Questions in all Types of School

Since total X^2 value 58.85 (with 2df) is highly significant (beyond the 0.05 level), we accept the hypothesis that there are significantly more teachers who have been given adequate practice and guidance in writing good questions, in all types of school, than those who have not been given such practice and guidance.

Thus, to sum up for question 7 we find:

- (1) There were significantly more teachers in Primary, Combined and Intermediate Schools in Bahrain, who had been given adequate practice and guidance in (a) - lesson preparation, (b) - selecting teaching objectives, (c) - writing objectives in a way that they can be used, (e) - selecting teaching activities, and (f) - writing good questions.
- (2) There was no significant number of teachers in Primary, Combined and Intermediate Schools in Bahrain, who had been given adequate practice and guidance in (d) - evaluating teaching methods.

Question 8. The intention of this question was to investigate the attitudes of teachers towards in-service courses and to measure their degree of interest in attending in-service courses. The teachers were asked to state the degree of their interest in attending in-service courses for teachers; the alternative answers were:

- (a) High interest
- (b) Low interest
- (c) No interest

Because there were two cells with expected frequencies less than (5), which would invalidate the Chi square test, the frequencies (b) and (c) were collected together and the test formulated for (a) versus (b) + (c).

The hypothesis was: "There will be no significant differences between the degrees of interest and the type of school".

Degree of Interest	Type of School			Total
	Primary	Combined	Intermediate	
High interest	118	90	48	256
Low and no interest	27	10	5	42
Total	145	101	53	299

Table 28 : Number of Teachers, in the three types of school, and their degree of interest in attending in-service courses

Since total $X^2 = 4.79$ is not significant (with 2df), we can

accept the hypothesis that there are no significant differences between degree of interest and the type of school.

High interest in attending in-service courses was expressed by 256 teachers (approximately 86%). This reflects the high aspiration of the majority of the teachers towards the development of their teaching career, whatever type of school they are working in.

The last part of question 8 asked the teachers to defend their choice. The following is a summary of their responses:

Teachers who expressed a high interest, defended their choice with the following general statements:

- (a) "For the benefit of my pupils"
- (b) "Because in-service courses update my knowledge and improve my teaching"
- (c) "Teaches me how to operate and use different AV equipment"
- (d) "Provides me with sufficient awareness about the significance of educational technology"
- (e) "In-service courses make teaching more efficient and easier for teachers"

Teachers who expressed low and no interest, defended their choice as follows:

- (a) "I have reasonably adequate experience in my teaching career, for I have been teaching for more than ten years"
- (b) "I do not see the relevance of many in-service courses to my own needs"

Part III : Teaching Methods

Part three of the questionnaire was the shortest section and consisted of only two questions.

Question 9. This question asked the teachers whether

there is or there is not a systematic and adequate supervision and guidance in their classroom teaching. Table 29 below shows their response to this statement.

Variables	Males	Females	Total	%
There is	100	153	253	84.6
There is not	27	19	46	15.4
Total	127	172	299	100

Table 29 : Number and Percentage of Teachers who Answered There is/There is not a Systematic and Adequate Supervision and Guidance for them in their Classroom Teaching, by Sex

Approximately threequarters of the teachers (84.6%) answered that there was a systematic and adequate supervision and guidance in their classroom teaching.

The hypothesis was: "There will be significantly more teachers, of both sexes, offered systematic and adequate supervision than those who had not been offered such supervision.

Since the Chi square test in table 29 showed total $\chi^2 = 5.85$ (with 1df), we accept the hypothesis that there are more teachers who have a systematic and adequate supervision in their classroom teaching than those who have not.

Therefore, threequarters of the total number of teachers answered positively which is, to some extent, predictable. The 46 teachers who stated that there was no systematic and adequate supervision and guidance in their classroom teaching represented only 15.4% of the total number of teachers. In the present writer's view, the unavailability of such supervision is due to the inadequate number of educational inspectors

in the Ministry of Education and to some extent because of unqualified headmasters in some schools. It is always noticeable that a considerable number of teachers have been deprived of any kind of systematic supervision, especially among the primary school teachers.

The second part of question 9 asked those teachers who had stated that they were offered systematic supervision, to indicate the source of this supervision. The different variables were:

- (a) Head Master
- (b) Subject Head*
- (c) Government Inspector
- (d) Others - please name

* This statement was wrongly chosen, as there is no head of subject in primary and intermediate schools

The various responses are shown in table 30.

Variables	Type of School						Total
	Primary		Combined		Intermediate		
	M	F	M	F	M	F	
Head Master	35	78	37	33	7	18	208
Government Inspectors	34	79	40	37	7	18	215
Others	1	2	3	2	2	4	14
Total	70	159	80	72	16	40	437

Table 30 : Number of Teachers in each Type of School and the Source of their Supervision

It is apparent from the above table that the two main supervision sources were the headmasters and government

inspectors. It is also noticeable from the table that none of the teachers had mentioned Head of Subject as a source for supervision. This is because the position of Head of Subject does not exist in the primary and intermediate systems.

The replies of those teachers who mentioned 'others' as being a source of supervision, indicated that the majority of these 'others' were social supervisors. Only three teachers mentioned deputy heads.

Question 10. This was designed to investigate the teachers' opinion of a selection of teaching methods in the classroom. The different variables for selection were:

- (a) Lecturing method all the time
- (b) Lecturing method plus audio-visual media
- (c) Seminar method only
- (d) Seminar method plus audio-visual media
- (e) Demonstration, workshops and experiments method

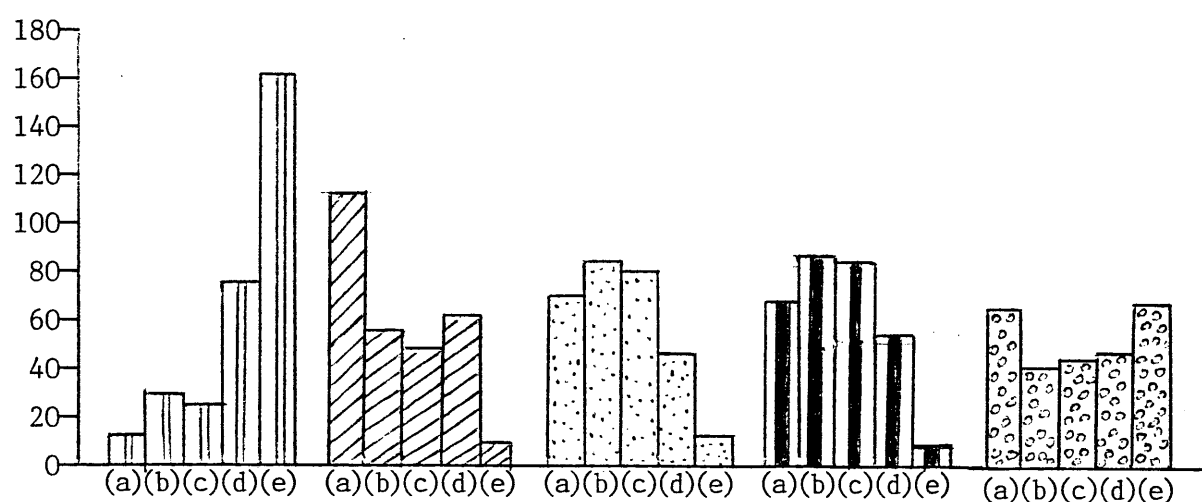
Teachers were asked to number the above variables in order of appropriateness in achieving their teaching objectives (e.g. to put number 1 in front of the most appropriate method, 2 in front of the second most appropriate method, and so on). The following table shows the findings collected.

Variable Methods	Order of Appropriateness				
	1	2	3	4	5
(a)	13	32	26	27	161
(b)	114	57	51	63	9
(c)	70	83	80	52	14
(d)	69	86	82	55	7
(e)	73	49	51	52	74

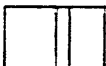
Table 31 : Teachers' Opinions of Selected Teaching Methods

Teachers' opinions are also displayed in the following figure:

Number of Teachers



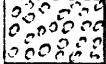
Order of importance

First 

Second 

Third 

Fourth 

Fifth 

(a) = Lecturing method all the time

(b) = Lecturing method plus the use of audio-visual media

(c) = Seminar method only

(d) = Seminar plus the use of audio-visual media

(e) = Practical workshops and experiments

Figure 14 : Teachers Opinions of Different Teaching Methods

To ascertain the final rank order, the same procedure set out in question 6 of part two (p.95) was applied in scoring the present question.

Table 32 below presents the degree of importance and final rank order of the teaching methods.

Teaching Methods	Degree of Importance					Final Rank
	1	2	3	4	5	
(a) Lecturing method all the time	13	32	28	67	161	5
(b) Lecturing method plus the use of audio-visual media	114	57	51	63	9	1
(c) Seminar method only	70	83	80	52	14	3
(d) Seminar method plus the use of audio-visual media	69	86	82	55	7	2
(e) Practical workshops and experiments	73	49	51	52	74	4

Table 32 : Teachers' Opinions and Final Rank of Question 10, Part III

The final finding in table 32 showed that 114 teachers (38%) preferred (b) Lecturing method plus the use of audio-visual media with (d) Seminar method plus the use of audio-visual media as second choice. It is clear that the first two choices was for those methods which had audio-visual media as an integral part of them. Once again, these findings support the findings in question 5, table 18, that most teachers consider audio-visual media as an important element in their teaching.

In third place was (c) Seminar method only, followed by (e) Practical workshops and experiments as fourth choice and (a) Lecturing method all the time as final and fifth choice.

Part IV : Audio-Visual Media

Question 11 was intended to investigate teachers' opinions towards the use of audio-visual media in their teaching. The question asked the teachers to choose only one response from the following:

- (a) I do not see the relevance of AV materials for the subjects I teach
- (b) I would use them, but rooms are unsuitable
- (c) I use those which are already prepared
- (d) I use the prepared ones and make some myself

Table 33 shows the teachers replies.

The variables	Male Teachers	Female Teachers	Total	%
(a)	7	8	15	5
(b)	16	13	29	9.7
(c)	24	6	30	10
(d)	80	145	225	75.3
Total	127	172	299	100

Table 33 : Number and Percentage of Teachers' Replies by Sex

Table 32 clearly indicates that the majority of teachers (225 or 75.3%) chose variable (d) I use the prepared ones and make some myself. It is evident from these findings that the majority of teachers are in fact users of audio-visual media in their classrooms. Moreover, these 225 teachers seem to have at least some of the skills required for preparing their own audio-visual materials.

Unlike the previous target group, 30 teachers (10%), mentioned that they use only those audio-visual media which are already prepared. This may show that these teachers lack either

(1) The skills to design and produce the audio-visual media they need for their teaching

or

(2) The materials for the preparation of audio-visual aids

(3) The aspiration towards a teaching career.

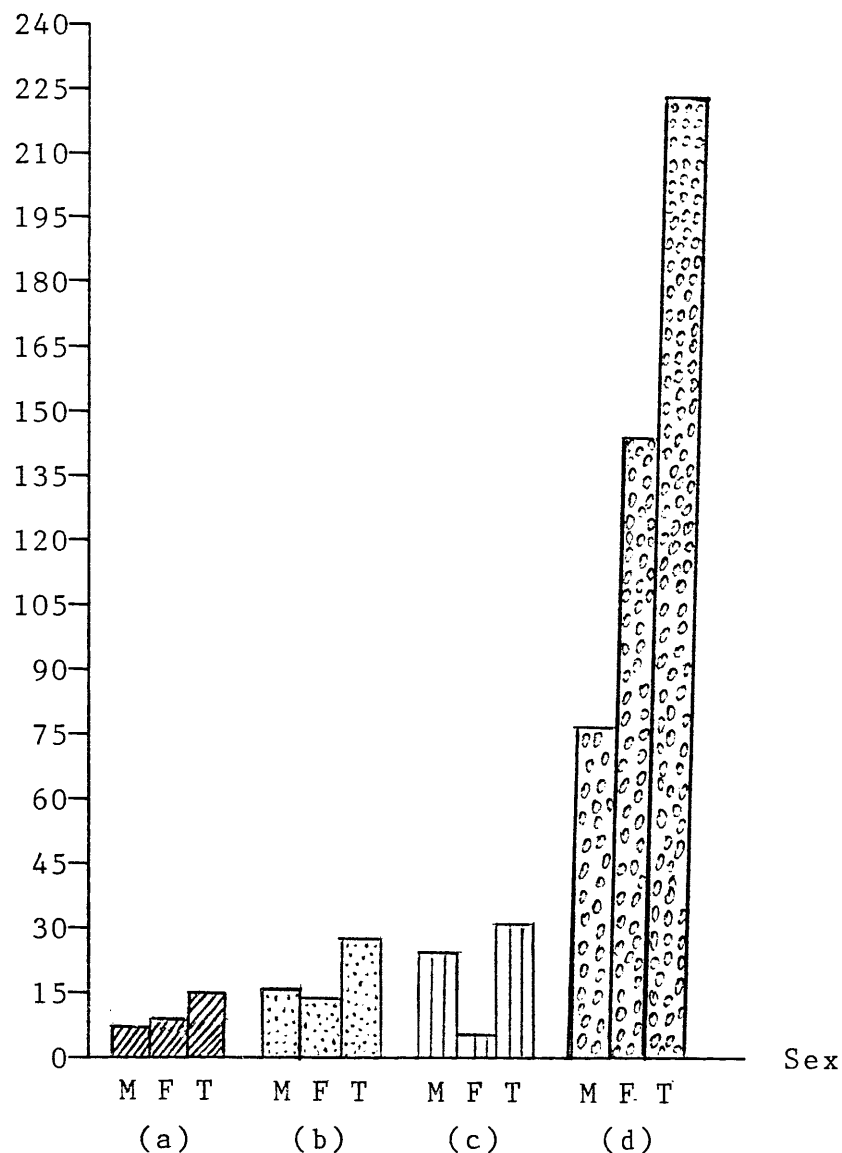
Another group, 29 teachers (9.7%), expressed their opinion by choosing variable (b) 'I would use audio-visual media but rooms are unsuitable'. Clearly, this group of teachers encounter the problem of unsuitable rooms in their schools, which prevents them from using audio-visual media. Despite this evidence that some schools have unsuitable rooms which hinder some teachers from using audio-visual media, in the view of the present writer, a good teacher always adapts himself to the situation that is available, and makes the most suitable choice.

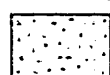
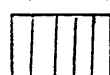
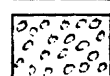
The only pessimistic group were those 15 teachers (5%) who said that they did not see the relevance of audio-visual materials for the subject they taught. These seem to be the main target group for in-service training and special help. The other target group of teachers for in-service training may be those who chose variable (c).

NB Groups A, B and C need suitable encouragement to use media but the enthusiasm of group D teachers should be maintained by adequate supplementary courses.

The teachers' replies to question 11, part IV, can also be presented more visually in the figure below.

Number of Teachers



-  (a) I do not see the relevance of audio-visual material for the subject I teach
 (b) I would use them, but rooms are unsuitable
 (c) I use those that are ready prepared
 (d) I use prepared ones and make some myself

T = Total. M = Male. F = Female.

Figure 15 : Teachers' Replies to Question 11, Part IV

Question 12 asked the teachers to indicate what priority they think should be given to some proposed topics for a training course. The propositions were:

- (a) Training teachers how to operate audio-visual projectors.
- (b) Training teachers how to select audio-visual materials.
- (c) Training teachers how to make audio-visual materials.
- (d) Training teaches how to use audio-visual materials effectively.

Teachers' opinions of question 12, part IV, are displayed in figure 16 below.

Number of Teachers

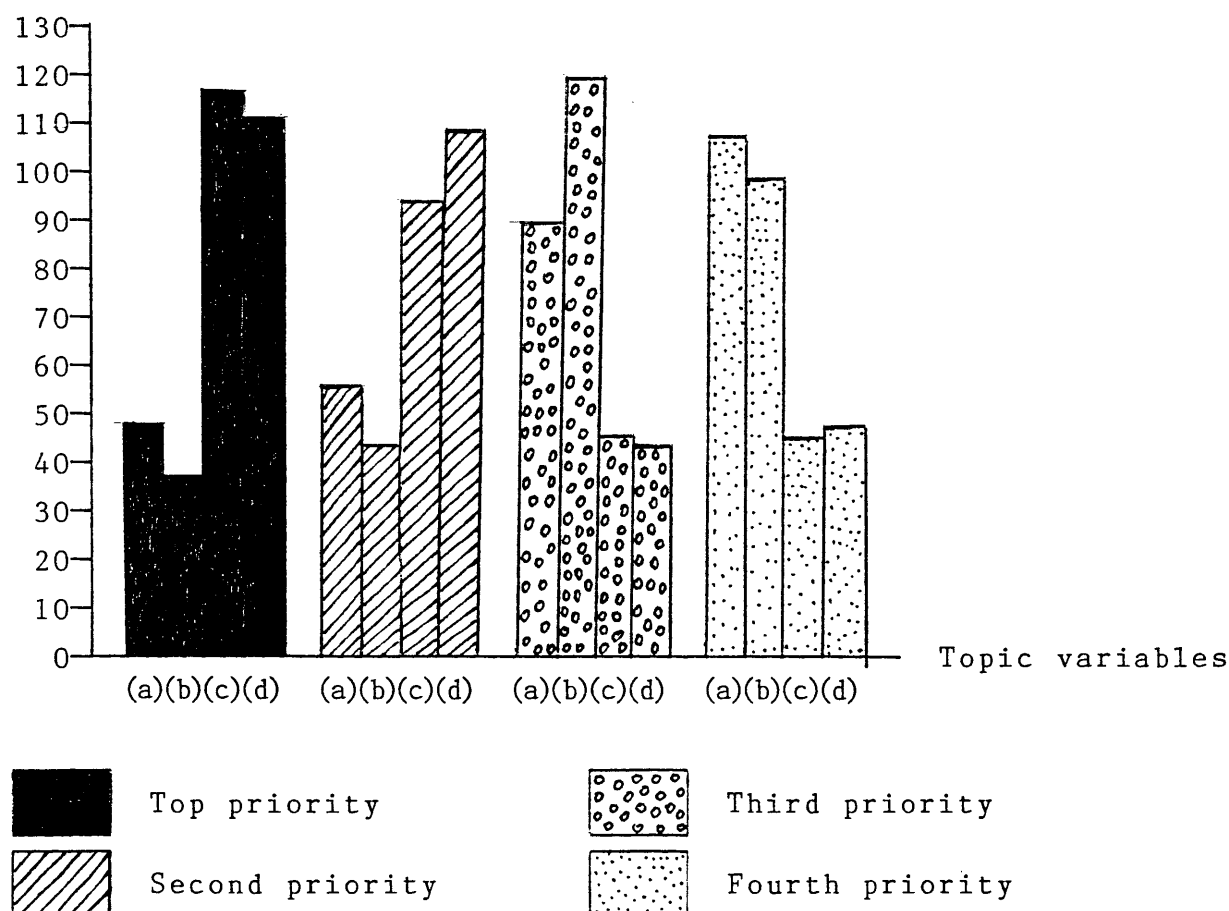


Figure 16 : Teachers' Opinions of Question 12, Part IV

Question 13 asked the teachers to number some statements relating to the use of audio-visual media according to their importance. The items presented were:

- (a) Audio-visual media should be used for all topics in the course textbook.
- (b) Audio-visual media should be used for some topics only when they accomplish the objectives of certain lessons.
- (c) Audio-visual media should be used for some topics when software and hardware are available.

The intention in the above question was to investigate the teachers' awareness of the important role audio-visual technique plays in teaching and learning. It was very important to see that the majority of the teachers had chosen (b) 'Audio-visual media should be used for some topics only when they accomplish the objectives of certain lessons'. This statement reflects a professional opinion towards the utilisation of audio-visual media, and its role in the learning/teaching situation. Further, this choice indicates that the majority of teachers (178 or 59.5%) are, indeed, aware of the proper uses of audio-visual media. The second important statement in their view was (c) 'Audio-visual media should be used for some topics when software and hardware are available'.

Unlike their first choice, the teachers did not adjust their choice in the second statement, as the availability of software and hardware, although it is a prerequisite for the utilisation of audio-visual media, does not necessitate its use, without referring to the objectives of the lesson, and to justify their application. Teachers' opinions are displayed in figure 17 below.

Number of Teachers

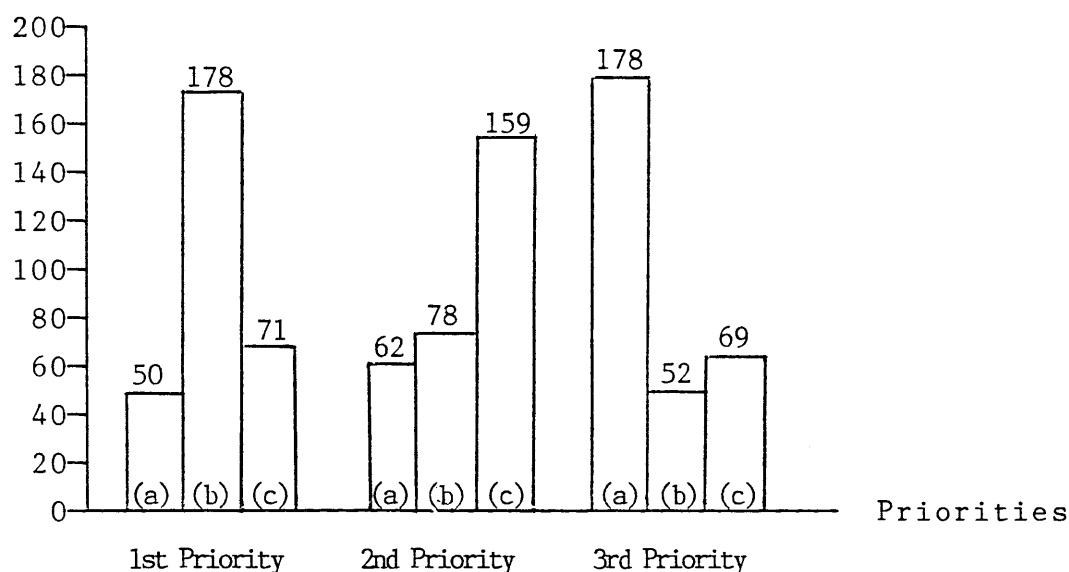


Figure 17 : Number of Teachers and Rank of Priorities Regarding the Use of Audio-Visual Media

Statement (a) 'Audio-visual media should be used for all topics in the course textbook', was considered the least important by 178 teachers (59.5%).

Generally, their replies reflected a good indication that the majority of the teachers had sufficient knowledge and background about the functional use of audio-visual media.

Question 14, in part IV of the questionnaire, was designed to enquire about the problems which face teachers when using audio-visual media in the classroom. It asked the teachers to number the following problems in order of importance:

- (a) Audio-visual equipment are often not available
- (b) I do not know how to use audio-visual equipment
- (c) There are administrative and financial complications in school when buying equipment and materials
- (d) I do not have sufficient time to produce any teaching aids for my own use
- (e) I do not know where I can obtain suitable audio-visual materials.

- (f) The Audio-Visual Centre has not made the materials readily available.

In total, 145 teachers (which represents 48.5% of the total number of teachers) answered positively that they had some difficulty in using audio-visual media in the classroom. The larger number of teachers (154 or 51.5%) answered that they had no difficulty at all in using audio-visual media in the classroom. Table 34 shows the teachers' opinions of the different problems in using audio-visual media.

Audio-Visual Problems	Degree of Importance						Final Rank
	1	2	3	4	5	6	
(a) Audio-visual equipment is often not available	58	8	28	30	16	5	1
(b) I do not know how to use Audio-visual equipment	14	16	37	40	23	15	4
(c) There are administrative and financial complications in school when buying equipment and materials	27	18	23	25	26	16	5
(d) I do not have sufficient time to produce any teaching aids for my own use	20	36	25	17	30	27	3
(e) I do not know where I can obtain suitable audio-visual materials	18	26	15	18	29	39	6
(f) The Audio-Visual Centre has not made the materials readily available	13	49	12	3	17	51	2

Table 34 : Teachers' Opinions of the Different Problems in Using Audio-Visual Media

It is clear from the above table that problem (a) is the most important, 58 teachers (48.5%) out of the total number of teachers who have problems when using audio-visual media chose (a) 'Audio-visual equipment is often not available' as the

major problem which prevented them from using AV equipment. Another group of teachers (27 or 19.6%) chose problem (c) 'There are administrative and financial complications in school when buying equipment and materials', as their first problem. Obviously, these teachers have selected problems which they themselves can do nothing about, therefore, as a result of the unavailability of equipment they are not using them. A different group of 20 teachers (13.7%) found problem (d) to be their senior problem; i.e. 'I do not have sufficient time to produce any teaching aids for my own use'. A group of 18 teachers (12%) picked (e) 'I do not know where I can obtain suitable AV materials' as their chief problem.

So far, the above stated problems, considered by the teachers as the main problems facing them in their attempt to use AV equipment. As mentioned above, problems (a) and (c) were, in a way, out of their hands; this questionnaire will later reveal the extent to which audio-visual equipment is available in their schools. However, the final rank order showed that problem (a) 'Audio-visual equipment is often not available' was the major problem, then problem (f) 'The AV Centre has not made the materials readily available' is the second major problem. Problem (d) 'I do not have sufficient time to produce any teaching aids for my own use' proved to be the third one, followed by problem (b) 'I do not know how to use AV equipment' as the fourth then problem (c) 'There are administrative and financial complications in school when buying equipment and materials' ranked as fifth. The final problem was (e) 'I do not know where I can obtain suitable AV materials'.

There is a relatively small number of teachers choosing responses other than (a), (d) and (f), and this supports the view that teachers are generally well aware of audio-visual aids. In considering the replies to this question, we should also give thought to the possibility that some teachers may have selected answers where they cannot be 'blamed'.

Question 15 was intended to investigate teachers' opinions as to whether or not it is desirable to establish a centre in every school to supply the teachers with audio-visual hardware and software.

Less than a ninth of the teachers (32) thought it unnecessary to establish a centre in every school to supply teachers with audio-visual materials. The remaining 267 teachers stated that every school should have a centre to supply teachers with their audio-visual needs. The distribution of teachers' opinions, in each type of school, can be seen in the following table.

Variable	Type of School						Total		Total	%
	Primary		Combined		Intermediate					
	M	F	M	F	M	F	M	F		
Yes	47	90	50	31	29	20	126	141	267	89
No	0	8	0	20	1	3	1	31	32	11
Total	47	98	50	51	30	23	127	172	299	100

Table 35 : Teachers' Opinions towards the Necessity of Having Audio-Visual Centres in their Schools

Table 35 above revealed an interesting finding, that almost all male teachers would like to see an audio-visual centre in

every school (with one exception), whilst 31 (18%) of the total number of female teachers were against the idea of establishing a special centre in each school. This finding gives some indication that male teachers in Bahrain are more likely to expect an ideal solution to their problems while female teachers are more realistic and try to find some possible alternative solutions. However, it is not as easy as it sounds to establish a centre in every school; in the first place there is the cost, and there are other difficulties as well.

Question 16 was devised to examine the teachers' opinions of the importance of certain items of hardware. The teachers were asked to indicate ('Yes' or 'No') whether the following equipment was available in their school:

- (a) Computers
- (b) Video Cassette Recorder
- (c) Movie Film Projectors
- (d) Slide Projectors
- (e) Overhead Projectors
- (f) Audio- Tape Recorders
- (g) Opaque Projectors

The teachers' responses are shown in table 36.

Equipment	Male Teachers		Female Teachers		Total	
	Yes	No	Yes	No	Yes	No
(a) Computers	25	112	65	97	90	209
(b) Video Cassette Recorder	97	26	165	20	253	46
(c) Movie Film Projectors	87	21	151	40	238	61
(d) Slide Projectors	92	23	146	38	238	61
(e) Overhead Projectors	100	37	140	22	240	59
(f) Audio Tape Recorders	98	24	119	14	261	38
(g) Opaque Projectors	87	42	145	25	232	67

Table 36 : Teachers' Opinions about the Necessity of Having Different Equipment in their Schools

The most interesting finding in the above table is that 209 teachers (69%) regarded computers as not being necessary equipment for schools. At the same time, 253 teachers (85%) stated that video cassette recorders are necessary. This may sound astonishing, but it probably reflects their familiarity with video tape recorders in their social life, whilst few have any experience of computers.

Generally, 81 percent of the teachers agreed that the rest of the equipment should be available in their schools. Certainly if micro computers are to be introduced a major educational initiative will have to be undertaken to teach them how to use this new item effectively.

Question 17. The main purpose of this question was to investigate the availability of audio-visual media in the schools and to make an estimate for the provision of audio-visual media to teachers which could be justified on the basis of this study.

Teachers were asked to choose only one of the following variables concerning the availability of audio-visual media for their teaching:

- (a) Available for all your lessons
- (b) Available for most of your lessons
- (c) Available for some of your lessons
- (d) Not available at all

Availability	Type of School			Total
	Primary	Combined	Intermediate	
(a) Available for all lessons	13	10	10	33
(b) Available for most lessons	58	40	28	126
(c) Available for some lessons	64	39	15	118
(d) Not available at all	10	12	0	22
Total	145	101	53	299

Table 37 : Teachers' Opinions about the Availability of Audio-Visual Media for their Lessons

The overall results in table 37 show that the majority of teachers (126 or 42%) chose variable (b), which says that audio-visual media are available for most of their lessons. Adding these 126 teachers to the 33 teachers who chose variable (a), which says that audio-visual media are available for all their lessons, and the 118 teachers who chose variable (c), which says that audio-visual media are available for some of their lessons, we come to the conclusion that audio-visual media are mostly available for 92.6% of the total number of teachers in the sample.

Only a few teachers (22 or 7.4%) said that audio-visual media were not available at all. This is the only pessimistic group which, as always, represents the target group to be considered.

Question 18 asked the teachers "Do you use audio-visual media in your teaching?". The teachers with 'Yes' answers were then asked how frequently ('never', 'seldom' or 'once a week') they used the following audio-visual media in their lessons:

- (a) 16mm projectors
- (b) 8mm projectors
- (c) Slide/filmstrip projectors
- (d) Video cassette recorder
- (e) Opaque (Episcope) projector
- (f) Overhead projectors
- (g) Wall charts
- (h) Display boards
- (i) Models

The results showed that 263 teachers (88%) actually use audio-visual media while only 36 teachers (12%) answered that they did not use audio-visual media at all. We note that this finding fits in well with the findings in the previous question that 22% of the teachers said that audio-visual media are not available. However, the teachers' responses to the use of audio-visual media are shown in table 38.

The Media	(1) Never	(2) Seldom	(3) Once a Week	Total (2)+(3)	Users %
(a) 16mm Projectors	133	90	40	130	43
(b) 8mm Projectors	251	10	2	12	4
(c) Slide/Filmstrip Projectors	168	55	40	95	13
(d) Video Cassette Recorder	150	79	34	113	37
(e) Opaque (Episcope) Projector	148	62	53	115	38
(f) Overhead Projector	153	85	25	110	36
(g) Wall Charts	124	94	45	139	46
(h) Display Boards	84	119	60	179	60
(i) Models	69	88	79	167	55

Table 38 : Teachers' Answers to the Use of AV Media

Having examined the total users of each media alone, one notices that the first three items which are widely used were the non-projecting items, such as 'Display Boards' (60%), 'Models' (55%) and 'Wall Charts' (46%). Surprisingly, the fourth most widely used item was the 16mm projector (43%), while the episcope, which is known to be easier to use, proved to be the fifth item (38%). However, the media least used by teachers was the 8mm projector, and of the 12 teachers who answered that they used it, only 2 used it once a week. The reason for such a small number of teachers using the 8mm projector, as official documents show, is that unlike the rest of the audio-visual equipment, 8mm projectors are not supplied by the Ministry of Education and there is also a shortage of suitable films.

Another point which might be mentioned concerning this matter, is that most schools in Bahrain have received almost the maximum types of audio-visual equipment from the Ministry

of Education. In 1983-84, Ministry of Education equipment lists showed that the following equipment was available in 133 primary, intermediate and secondary schools:

- 16mm projectors	104
- slides/filmstrip	134
- overhead projectors	206
- episcope	89
- audio recorders	1,148
- video recorders	40
- televisions	40
- school broadcasting	130

Obviously, the items listed above are not sufficient for 133 schools if audio-visual media are to be used in a systematic manner. For example, except for overhead projectors (206) and audio recorders (1,148), there are not enough to supply one item of each type for every school. Even the total 16mm projectors are not sufficient for distributing 2 items in each school.

However, the next three questions of the questionnaire will reveal the teachers' views on the availability of audio-visual equipment, facilities and software.

Question 19. The intention in this question was simply to gather the teachers' views about which equipment are sufficiently available in their schools and which equipment are not. The results can be seen in table 39.

Equipment	Available	%	Not Available	%
16mm projectors	159	53	140	47
Video recorders	188	63	111	37
Audio recorders	282	94	17	5
8mm loop projectors	9	3	290	97
Slide/Filmstrip projectors	160	53	139	47
Opaque projector (Episcope)	88	29	211	71
35mm photography cameras	126	42	173	58
Display boards	178	60	121	40

Table 39 : Teachers' Views on the Availability/Non-Availability of Audio-Visual Equipment in all Types of School

It is clear from the above table that, generally, most audio-visual equipment (50%) are available to the schools in our sample. However, this percentage (50%) is not sufficient for effective application of AV media. These teachers' views toward the availability of AV equipment agree to a great extent with the official records of equipment in schools.

We notice from table 39 that 8mm projectors are the least available equipment, followed by 35mm photography cameras. As previously mentioned, the Ministry of Education does not supply schools with 8mm projectors, so schools which need to use 8mm projectors must borrow them from the Audio-Visual Centre.

Question 20 aims to investigate the physical facilities of classrooms in order to recommend the most suitable environment for using audio-visual media in the classroom. The teachers were asked to indicate to what extent the following facilities were available in their classrooms:

- (a) Black Out
- (b) Electric Sockets
- (c) Projection Screens

The teachers' responses are shown in table 40 below.

The Facility	All Classrooms	Some Classrooms	Only One Classroom	Not at All
Black out	3	106	51	139
Electric sockets	239	60	--	---
Projection screens	1	110	96	92

Table 40 : Teachers Answers to Question 20

One hundred and sixty teachers (representing 53.5% of the total number of teachers) answered that black out facilities are available in their schools. Projection screens also seemed to be available in most classrooms. Obviously all these facilities, in addition to the availability of electricity sockets, encourage teachers to use different projection equipment in the classroom.

Question 21. As question 20 was about hardware, this question was intended to found out to what extent software is available in classrooms by indicating whether the following software was or was not available:

- (a) Recorded lessons or programmes on audio tapes
- (b) Recorded lessons or programmes on video tapes
- (c) OHP transparencies
- (d) Slide/filmstrip programmes

- (e) 16mm movie films
- (f) 8mm movie films
- (g) Programmed learning materials
- (h) Records
- (i) Reference materials

Teachers' answers are given in table 41 below.

Item	Available	%	Not Available	%
(a) Recorded lessons or programmes on audio tapes	261	87	38	13
(b) Recorded lessons or programmes on video tapes	140	47	159	53
(c) OHP transparencies	107	36	192	64
(d) Slide/filmstrip programmes	59	20	240	80
(e) 16mm movie films	20	7	279	93
(f) 8mm movie films	10	3	289	97
(g) Programmed learning materials	77	26	222	74
(h) Records	156	52	143	48
(i) Reference materials	189	63	110	37

Table 41 : Availability/Non-Availability of Software in all Types of School

The overall result in the above table shows that nearly all software items seem to be less available in all types of school. Except for (a) 'Recorded lessons or programmes on audio tapes' and (i) 'Reference materials', schools lack all other softwares.

The lack of softwares in almost all schools invites an urgent need for these materials in all schools if educational technology courses, and other courses, are to be organised -

especially those practical courses in preparing and producing teaching media.

Question 22 was designed to measure the teachers' background experiences in designing and producing teaching materials in order to consider their needs for training. The teachers were asked indicate whether they had or had not produced the following materials in their teaching:

- (a) Filmstrip or slide programmes
- (b) Maps
- (c) OHP transparencies
- (d) Diagrams, Charts
- (e) Audio tapes
- (f) Video tapes

Teachers' replies are given in table 42 below.

AV Software	Yes	%	No	%
(a) Filmstrip or slide programmes	56	19	243	81
(b) Maps	170	57	129	43
(c) OHP transpaencies	134	45	165	55
(d) Diagrams, charts	151	51	148	49
(e) Audio tapes	180	60	119	40
(f) Video tapes	55	18	244	82

Table 42 : Teachers' Yes/No Answers about Producing Audio-Visual Materials

The results in the above table once again confirm that there is an urgent need for in-service training courses for teachers, as the majority of teachers had not practiced the task of producing their own teaching material needs.

Question 23. This was the final question of the questionnaire and aimed to find out which sources teachers depended on to obtain their teaching materials. Teachers were asked to indicate which of the following sources they depended on:

- (a) Audio-Visual Centre run by the Ministry of Education
- (b) School administrator
- (c) Local environment
- (d) Other teachers in my school

Table 43 indicates the results obtained from the teachers' answers.

Source	Male Teachers	Female Teachers	Total
(a) Audio-Visual Centre	67	111	178
(b) School administrator	68	125	193
(c) Local environment	72	138	210
(d) Other teachers in my school	39	48	87

Table 43 : Teachers' Sources for Obtaining Audio-Visual Materials

In spite of the fact that the Audio-Visual Centre is responsible for supplying schools with their teaching material needs, the teachers' replies indicate that they obtain their teaching material from various sources. These results provide evidence that teachers are highly motivated and their attitude towards improving their teaching are on solid ground.

CHAPTER 5

CONCLUSION (RECOMMENDATIONS AND SUGGESTIONS)

CONCLUSION

The primary aim of this study was to assess teachers' views about some general problems connected with responsibility for promoting modern educational methods and techniques in Bahrain. Further it was designed to gain information for the elaboration of a strategy aimed at establishing a systematic approach to educational technology, both for in-service and pre-service teacher education and training.

A great deal has been written about the role of teacher education and training in educational development in Bahrain and its current problems. In the following suggestions the discussion is limited to major points.

The development of education and training of primary and intermediate teachers in Bahrain, necessitates a review of the in-service and pre-service training of these teachers, the content and duration of the in-service teacher training programme and, in particular, the development of educational technology components in this programme.

There is evidence throughout this study that the system of in-service education and training is no longer adequate to fulfil its purpose. However, the following is a summary of the present study and the findings derived from analysing the questionnaire.

The study started with a general description of the State of Bahrain, which included its geographical situation, human and natural resources, and economy. It introduced Bahrain as a group of 35 small islands. Manama is the capital of Bahrain. Nearly all of the population lives on the three main islands of Bahrain, Manama, Muharraq and Sitra.

The study further explains that Bahrain's economy is heavily dependent on oil, even though the quantity is small in comparison with other neighbouring Gulf States.

Chapter one was devoted to the history of education in Bahrain. The first private primary school for males opened in 1928; State education started in 1930. From 1950 onward, rapid changes have been taking place in education, both in schools and in teacher training.

The current pattern of schooling in Bahrain begins with six years of primary education, followed by three years of intermediate education and three years of secondary education. The primary and intermediate stages are compulsory in Bahrain.

Chapter two discussed the education and training of teachers in Bahrain, both in-service and pre-service. It began with the history of initial teacher education and training in Bahrain, from the late 1940's up to the early 1980's.

Initial teacher training started as a subdivision of secondary education in 1948, and continued as such until 1957. In 1966, the men's teacher training college took over responsibility for educating and training teachers for the primary and intermediate stages. This was followed by a women's teacher training college in 1967. Both colleges were the only institutions responsible for training teachers until 1978. From 1978 onward the University College of Art, Science and Education has been the sole organisation for initial teacher training in Bahrain.

The chapter further discussed the in-service teacher training programme and the institutions responsible for this kind of training.

The in-service training of teachers started in Bahrain as a 'complementary evening study'; it was initiated for male teachers in 1950-51 and for female teachers in 1958-59. This kind of teacher training was aimed at

- (1) Teachers with a primary school certificate and
- (2) Teachers without a primary school certificate.

Both types of training lasted for two years; the training for primary school teachers ended in 1963-64.

In September 1973, another in-service project was initiated for primary and intermediate school teachers. This was run by the Ministry of Education with the co-operation of the UNRWA/UNESCO Institute of Education. This in-service training (INSTT) continued until 1979.

The University College of Art, Science and Education began offering some in-service training for Ministry of Education teachers soon after its establishment in 1978. Different levels of in-service courses have been offered by UCB, such as certificate courses for the re-training of subject teachers, postgraduate diplomas in education for those untrained graduate secondary school teachers.

Chapter three of the present study starts with a review of earlier practice in teacher training and highlights the lack of educational technology in those practices. The first appearance of educational technology in the curriculum of the teacher training colleges was in 1966-67, as a part of educational theory.

Educational technology courses were introduced into the curriculum of the in-service teacher training programme in 1973 as one of its multi-media approaches to the training of primary and intermediate teachers. And lastly, educational technology as a totally systematic approach was introduced by the University College of Art, Science and Education 1978, through courses ED 311 and Ed 511.

Later in chapter three the issues of educational technology and its definitions were discussed. The chapter ended with the introduction of the systems approach to educational technology, which, it is felt, should underpin future teaching in this field.

The ten elements for a systematic approach, suggested by Gerlach, were explained. They were:

- (1) Specification of content;
- (2) Specification of objectives;
- (3) Measurement of entering behaviour;
- (4) Determination of strategy;
- (5) Allocation of time;
- (6) Allocation of space;
- (7) Selection of resources.
- (8) Evaluation of performance;
- (10) Analysis of feedback.

Chapter four of the study explains how the present study has been implemented: teachers' questionnaire, introduction, aims and objectives, the questionnaire's limitation, the design of the questionnaire, the distribution process of the questionnaire and, lastly, scoring and analysing the questionnaire.

The questionnaire was designed for primary, combined (primary/intermediate) and intermediate school teachers in Bahrain. Its purpose was to elicit information related to the present practice of educational technology in in-service teacher training and in action in the schools.

A sample of 320 Bahraini teachers, representing approximately 13% of the total Bahraini teachers, was chosen. A sample of 14 schools, representing 13% of the total number of schools, was chosen. The total number of teachers who answered the questionnaire was 299 (93%); of these 172 were female teachers and 127 were male teachers. A major factor in the good response was the helpful support of the Ministry of Education.

The questionnaire consisted of four parts. Part One sought general information about the teachers. Part Two comprised eight multiple response questions designed to probe their attitudes towards the training courses they had received. Part Three was designed to investigate the teachers' attitudes towards some teaching methods and Part Four was dedicated to the study of Educational Technology.

The distribution and collection of the questionnaire was done officially through the Ministry of Education in Bahrain.

The main part of chapter four attempted to analyse the findings obtained from the questionnaire. However, the following is a summary of the findings traced from analysing the teachers' responses.

Because of the Ministry of Education's official support of the questionnaire, these findings must be treated with some caution.

PART I

- Part one of the questionnaire indicated that the male/female breakdown of responses was 42.5% male and 57.5% female, showing a predominance of female teachers in this sector. Moreover, it indicated that there were 20 female teachers working in male primary schools; this finding underlines the fact that there is a shortage of male Bahraini teachers in primary schools.

However, it was noticed that only 47 Bahraini male teachers answered the questionnaire in the 5 primary schools sampled, whilst 98 Bahraini female teachers participated in answering the questionnaire from only 3 primary schools.

- Another finding derived from part one is that female teachers are, in general, younger than their male colleagues. For example, among those 179 teachers who categorised themselves in the 21-30 age group, there were 127 (70.9%) female teachers. There is general agreement that most married female primary teachers in Bahrain leave their teaching careers after having children. Some of the female teachers return to teaching after a while but others resign forever.
- Most of the teachers in the sample (138 or 48%), graduated from teacher training colleges; 90 (30%) have University Degrees, 64 (21.5%) have the secondary school certificate and 7 (2.15%) only have pre-secondary level.

PART II

- The second part signified that the majority of the teachers (223 or 74.6%) have been attending in-service courses, of whom 126 (56.5%) attended 1-3 courses and 97 (43.5%) attended more than 3 courses.
- More female teachers (133 or 77.3%) attended in-service courses than males (90 or 70.8%) in all three types of schools.

- Generally, most teachers in all types of schools were experienced in attending in-service teacher training courses.
- More than half of the courses' attenders (54%) had attended recently (within the last two years) and 46% of the teachers had attended courses a long time ago (more than two years ago).
- In total, 153 (69%) teachers attended long duration courses (more than a week + 1-2 years), while 70 (31%) teachers attended only short duration courses (1-5 days).
- Most of those teachers who attended long duration courses (145 or 65.2%) had not been involved in any short courses. Therefore, another important target group for refresher training courses.
- Most of the teachers (169 or 56.5%) agreed that 'Teaching Methods' is the most important subject in any training course.
- Teachers chose 'Educational Technology' as the second most important subject, in their opinion, to be involved in any training course.
- 'Teaching Practice' was the third most important subject, in their opinion, followed by 'Syllabuses', 'Psychological Studies' with 'Sociological Studies' as the last subject in importance. It is clear that teachers preferred those subjects which had some practical aspects to their content, rather than those seen as more academic subjects.

This fact was confirmed in the findings of another question, where "Learning new teaching methods" gained the highest order of importance, followed by "Training the teachers how to teach new syllabuses", then "Training the teachers how to prepare audio-visual materials" and "Developing technical skills in writing questions". Those subjects which require some academic studies, such as "Training the teachers problem-solving skills", "Changing

teachers' attitudes towards some wrong performances in teaching" and "Training the teachers how to write learning objectives", have been given the lowest order of importance.

- Generally, most of the teachers felt that they had been given adequate practice and guidance in different classroom teaching skills, such as 'lesson preparation', 'selecting teaching objectives', 'writing objectives', 'evaluating teaching methods' and 'writing good questions'.
- Approximately 86% (256) of all teachers expressed high interest in attending in-service courses. Only 14% (42) of the teachers appeared to have no interest in attending in-service courses.

PART III

- Most of the teachers (253 or 84.6%) received systematic and adequate supervision and guidance in their teaching, while 46 (15.5%) of the teachers seem to be deprived of this opportunity.
- Most of the teachers received their guidance from two main sources, namely, 'Headmasters' and 'Government Inspectors'. Only 14 teachers mentioned 'Others' as offering guidance.
- The majority of the teachers ranked "Lecturing method plus the use of audio-visual media" as the best method for teaching their subject.
- The second preferred method was the "Seminar method plus the use of audio-visual media".

It is clear that the teachers selected these methods as audio-visual materials could be well integrated into them.

- Teachers categorised "Lecturing methods all the time" as the least important method in their teaching.

PART IV

- The majority of teachers (225 or 75.3%) use pre-prepared audio-visual aids and make some audio-visual aids themselves.
- Only 30 (10%) teachers preferred to use only the pre-prepared audio-visual aids.
- Some teachers (29 or 9.7%) said that they would use audio-visual aids but rooms were unsuitable.
- Another 15 (5%) teachers said that they did not see the relevance of audio-visual aids for the subject they taught.
- Most of the teachers preferred, in the first instance, those courses which would include "Training teachers how to make audio-visual materials".
- Teachers preferred, secondly, those courses which would include "Training teachers how to use audio-visual materials".
- Their third choice was for "Training teachers how to operate audio-visual projectors".
- The last choice designated by the teachers was "Training teachers how to select audio-visual materials" - which is somewhat discomfoting.
- Most of the teachers believed that audio-visual aids should be used for some topics, when they accomplish the objectives of certain lessons. Teachers ranked this statement as first in importance.
- Another significant group of teachers believed that audio-visual aids should be used for topics when software and hardware are available. Teachers ranked this statement as second in importance.

- An overwhelming majority of the teachers classified "Audio-visual aids should be used for all topics in the course textbook" as third and last statement.
- Slightly more than half of the teachers (154 or 51.5%), did not report any difficulty in using audio-visual materials in their lessons, whilst 145 (48.5%) teachers stated that they had some difficulty in applying audio-visual media in their lessons.
- The major problem was reported to be that "Audio-visual equipment are often not available".
- The second problem was that "The Audio-Visual Centre has not made the materials readily available".
- The third problem, in the teachers' opinion, was "I do not have sufficient time to make any teaching aids".
- Teachers categorised "I do not know how to use AV equipment" as the fourth problem in order of importance.
- The school administration problem was ranked as fifth in importance. The statement that "There are administrative and financial complications in school when purchasing equipment and materials" did not attract much support.
- The least important problem, in the teachers' opinion, was "I do not know where I can obtain suitable audio-visual materials".
- Most of the teachers (267 or 89%) agreed that every school should have a centre to supply them with their needs for audio-visual materials.
- Most of the teachers expressed the importance of the availability of most audio-visual equipment, such as audio-tape recorders, video-cassette recorders, overhead projectors, 16mm and 8mm movie projectors and opaque projectors.

- Although "Computer", in the opinion of some people, is potentially the most important type of audio-visual instructional material, the majority of teachers (209 or 70%) indicated that it was not necessary to have it in their schools. The main reason for this attitude towards the computer, in their written view, was that the majority of the teachers, if not all, have no idea about how computers can be used in different teaching/learning situations. This is simply because the computer has not yet been introduced into the curriculum of primary and intermediate schools, or even into the curriculum of teacher education in Bahrain.
- Nearly half the teachers (159 or 53%) declared that audio-visual media are readily available, while the other half (140 or 47%) stated that audio-visual media are not readily available.
- Some 263 (88%) teachers use audio-visual media in their lessons.
- Most of the teachers showed that they used non-projected media, such as models, display boards and wall charts, more than projected media, such as overhead projectors, episcopes, video recorders, slide and filmstrip projectors and 8mm and 16mm projectors. Clearly more training involved with projected media would have an useful effect.
- Generally, most audio-visual equipment are sufficiently available for 50% of all teachers.
- Some black-out facilities are available for more than half of the teachers.
- Electricity sockets are available for all the teachers without exception.
- Projection screens are available for 207 (69%) of the teachers and not available for 92 (31%) teachers.

- Most of the teachers reported that the availability of software, especially 8mm and 16mm films, filmstrips and slides, OHP transparencies, video tape programmes and programmed learning materials, was deficient.
- The only readily available items of software are audio tapes, records and reference material.
- Most of the teachers showed that they had no experience in producing software such as filmstrips, slides, OHP transparencies and video tapes. This links with the findings on media usage above.
- The majority of the teachers considered "Local environment" as the major source for obtaining their visual aids, followed by the school administrator, the Audio-Visual Aids Centre and, lastly, other teachers in their schools.

The following is a summary of the problems obtained from the conclusion of the questionnaire.

- Lack of male teachers in primary schools.
- Some unqualified or low qualified teachers in primary, combined and intermediate schools.
- Some primary male teachers not attending courses.
- Most teachers lack training in subjects such as 'Teaching methods' and 'Educational Technology'.
- Teachers prefer subjects with a practical side rather than academic subjects.
- Some teachers lack rooms suitable for using audio-visual materials.
- Teachers showed their need for courses which would teach them how to produce audio-visual aids.

- Teachers expressed their need for courses which would teach them how to use audio-visual materials.
- There is a need for courses which would teach how to select audio-visual materials.
- Nearly half of the teachers stated that they had some difficulty in applying audio-visual media.
- Teachers complained that the Audio-Visual Aids Centre in the Ministry of Education had not made the materials readily available.
- Some teachers did not know where to obtain suitable audio-visual materials.
- Most of the teachers found no necessity for having computers in their schools.
- A good proportion of teachers declared that audio-visual media are not readily available.
- Most of the teachers showed that they lacked an availability of software.
- Some teachers expressed a lack of some facilities for using audio-visual aids, such as blackouts for projecting films and projection screens.
- A greater number of teachers lacked experience in producing software.

In short, the above inadequacies and problems arise from the lack of a systematic training strategy, lack of teaching/learning materials (software) and equipment (hardware). We also see that teachers lack experience in media selection and preparation, and improvement in these areas could be expected to result from suitable in-service courses.

A crucial factor here is the dependence upon in-service training schemes, which run for a transitory period (e.g. the Ministry of Education and UNRWA in-service training scheme, 1973), and the need for a more long-term strategy. However, the following are some of the writer's recommendations and suggestions for improving in-service courses and educational technology.

RECOMMENDATIONS AND SUGGESTIONS

Changes must be made if the needs of teachers, and schools, in Bahrain are to be met both now and in the future. What is needed is firm action by the Ministry of Education, with the co-operation of some specialised institutions such as the University College of Art, Science and Education, Bahrain (UCB).

- (1) Teachers, whose profession is demanding not only of personal qualities but also of knowledge and skill, must have access during their teaching careers to a series of opportunities for in-service education and training. To be effective, a pattern of opportunities would have to bring into a working relationship the individual teacher, school administration, Ministry of Education and the agencies providing higher education and training (UCB).

In this respect, a first recommendation may be a need for the establishment of an in-service unit in the University College of Art, Science and Education (UCB). It would be the responsibility of this unit to undertake a wide spectrum of activities, at one end of which are short-term courses with limited and specific objectives

(such as using overhead projectors, producing OHP transparencies, methods of teaching, etc.). At the other end are long-term courses leading to higher degrees or advanced qualifications in education (e.g. BEd). In the latter category it would be necessary to release teachers for full-time attendance at UCB.

To avoid interference in responsibilities, the UCB unit should be the only agency for the initial and in-service education and training of Bahraini teachers.

- (2) A great weight of evidence, collected throughout this study, suggests the failure of many teachers to attend courses. All teachers should have the opportunity to acquire a better understanding of the principle and methods of educational technology, especially if educational technology was not imparted to them in initial training (as in the case of most Bahraini teachers).

"All teachers need to keep abreast of the results of educational research and experiment, and to be informed about the use of new books, materials and equipment."
HMSO (1972: 7)

To this end, the Ministry of Education should introduce a compulsory in-service training for all non-graduate primary, combined and intermediate teachers, and for all graduate teachers who have had no professional qualifications and training.

Most in-service entrants in Bahrain consist of teachers from the married female category, who have many responsibilities which left them out of practice and not in touch with developments in teaching methods and

curriculum. Re-training these teachers after an absence of several years, is a substantial problem, and should have a high claim on in-service training facilities, preferably soon after re-starting their careers. A period of part-time training can do a great deal to help such a teacher.

Part-time training can be at least as valuable as, and often more convenient for a particular target group than, full-time training courses. However, the Ministry of Education should compensate these teachers, both part- and full-time entrants, by giving them an extra salary as a means of encouragement. Every school should regard the continued training of its staff as an essential part of its task.

Headmasters should be concerned to encourage teachers to take full advantage of the opportunities offered for in-service education and training. Although all teachers should be strongly encouraged to take up their entitlement, there is no doubt that if the in-service training was voluntary, some teachers would choose not to attend. Therefore, in-service training should be made compulsory for all teachers.

- (3) There is some agreement that many in-service courses is no more than a wasteful duplication of effort; that many existing in-service courses are not clearly related to defined objectives and needs or to the teachers' foundation of initial training. The inadequacy of the present arrangements for in-service training courses in Bahrain cannot be denied. To overcome this inadequacy we

need to: (1) discover areas for courses and (2) evaluate their success.

It is of great importance here to establish wider opportunities for the research unit responsible to undertake a thorough and systematic investigation of in-service education and training of practising teachers. The unit should conduct a great deal of educational research to make use of direct observation of school situations and the experience of teachers.

The research unit could also be responsible for the evaluation of the achievements of schools and the determining of their weaknesses together with the needs of individual teachers. It is very important that the organisers of in-service courses establish a close relationship with the research unit and with the schools. In doing so, it would be in a better position to examine the output of schools and to relate the in-service courses to the needs and experience of the teachers in respect of curriculum reform and the type of training required. At the same time headmasters should be concerned with assessing the needs both of their schools and of teachers.

- (4) It is apparent that there is a shortage of in-service courses in the subject of Educational Technology. This problem could be attacked by:

- (a) Designing a strategy to establish an in-service training course in the field of educational technology, methods and techniques.

- (b) Framing a strategy which would develop exchange and co-operation mechanisms between in-service training institutions, the research unit, schools and the Ministry of Education's Audio-Visual Aids Centre.
- (c) Specific technical assistance problems concerning the contents, methods and techniques for teaching named subjects.
- (d) Promotion of modern educational technology related to the whole of the practising teachers in schools and not just the teachers of certain subjects.
- (e) Training in the use of media (slides, films, tape recorders, video-tape recorders, computers, etc.) should, therefore, not be divorced from general in-service teacher training programmes.

- (5) It is also apparent that there is a shortage of materials (software) and equipment (hardware) in primary and intermediate schools. It would be unrealistic to expect teachers to take on additional responsibilities without an increase in equipment and materials in schools.

However, it is fortunate that there is at present a real effort from the Ministry of Education to increase the number of equipments and materials in each school. Nevertheless, a higher priority should be given to improving equipment ratios so that schools would be able to play their full role in raising the status and standard of the teaching profession as a whole. Schools should have a sufficient quantity of equipment which is easy to operate,

in other words, they should not call for over-complicated equipment. The equipment should be relevant to the software available in the schools.

Therefore, schools should make materials and equipment accessible to every teacher and, as far as possible, at all times.

- (6) It was noticed that there were a number of teachers who lacked the talent and experience to produce audio-visual materials for their teaching.

Training teachers in the production of media should be encouraged. Instead of sending teachers to a training centre for short courses in the production of media, it seems preferable to bring the training to the teachers in their schools. In this way the marginal cost could be reduced and the benefits of training would be extended to a larger number of teachers in the school and not simply be restricted to the more enthusiastic members of staff.

Thus, by initiating teachers into the principles governing the production of media, it is hoped to make them capable of adjusting to produce different types of materials, and to select, on their own, the most suitable materials for the particular teaching situation in which they find themselves.

- (7) Computers are not only capable of playing a useful role in mass instruction; their most important potential role in education is their extensive capacity to store and manipulate information and its unmatched ability to serve many individual students. Computers are becoming

more and more widely used as an aid to learning and teaching. Unfortunately, the majority of Bahraini teachers showed no interest in computers.

"Here they probably constitute the most powerful delivery system yet developed and, in the opinion of many commentators, seem likely to bring about change in education and training that can only be described as revolutionary."

Ellington (1985: 183)

"The computer has the ability to control and manage a wide variety of learning material, films, filmstrips, random access slides, audio tapes, and printed information."

Heinich, Molenda, Russel
(1982: 310)

Computers have been shown to have special qualities in teaching and learning situations. Therefore, the writer would like to suggest that the proposed institution responsible for teacher education and training in Bahrain, should introduce courses in computers, in both its in-service and pre-service training programmes.

Simple courses must first be introduced to the teachers to allow them to adapt themselves to the possibilities of computers in many teaching/learning situations. They must also become familiar with the basic elements of a computer system, such as input keyboard, central processing unit, memory, control and output.

The Ministry of Education should encourage the school to use computers in their different activities and, gradually, schools should employ computers in its instructional methods and curriculum. At the same time, the Ministry of Education should supply schools with sufficient numbers of computers and related software.

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APPENDIX 1

CURRICULA PLAN FOR
SCIENCES SECTION AND LITERARY SECTION
OF GENERAL SECONDARY EDUCATION

**Curricula plan for Sciences Section of General Secondary
Education 1982/83**

Assigned Subjects Compulsory For All Branches	الصف الثالث 3rd Grade	الصف الثاني 2nd Grade	الصف الأول 1st Grade	المواد الدراسية المشتركة المقررة على جميع الطلبة
Religious Education	2	2	2	التربية الدينية
Arabic Language	5	5	7	اللغة العربية
English Language	7	8	9	اللغة الانجليزية
Social Subjects	—	—	2	المواد الاجتماعية
Mathematics	6	6	6	الرياضيات
Physics	2	2	2	الفيزياء
Chemistry	2	2	2	الكيمياء
Biology	2	2	2	التاريخ الطبيعي
Physical Education	2	2	2	التربية الرياضية
Total	28	29	34	المجموع

Branch Subjects

مواد التشعب

Branches	Subjects	الصف الثالث 3rd Grade	الصف الثاني 2nd Grade	المواد الدراسية	الشعبة
Mathematics & Physics	Mathematics	3	2	الرياضيات	الرياضيات والفيزياء
	Physics	3	3	الفيزياء	
Chemistry & Biology	Chemistry	3	3	الكيمياء	الكيمياء والتاريخ الطبيعي
	Biology	3	2	التاريخ الطبيعي	

Optional Subjects

المواد الاختيارية

Subjects	الصف الثالث 3rd Grade	الصف الثاني 2nd Grade	الصف الأول 1st Grade	المواد الدراسية
Typing	3	3	3	الآلة الكاتبة
Vocational Activities	3	3	3	الأنشطة المهنية
Home Economics	3	3	3	الاقتصاد المنزلي
Fine Arts	3	3	3	التربية الفنية
Music	3	3	3	الموسيقى
French Language	3	3	3	اللغة الفرنسية
Social Subjects	3	3	3	المواد الاجتماعية

Total number of Compulsory periods per week	34	34	34	مجموع عدد حصص المواد الاجبارية اسبوعيا
Total number of Optional periods per week	3	3	3	مجموع عدد حصص المواد الاختيارية اسبوعيا

Curricula Plan for Literary Section of General Secondary Education: 1982/83

Assigned Subjects Compulsory For All Branches	الصف الثالث 3rd Grade	الصف الثاني 2nd Grade	الصف الاول 1st Grade	المواد الدراسية المشتركة المقررة على جميع الطلبة
Religious Education	2	2	2	التربية الدينية
Arabic Language	8	8	7	اللغة العربية
English Language	8	9	9	اللغة الانجليزية
Social Subjects	8	7	6	المواد الاجتماعية
Mathematics	—	—	3	الرياضيات
General Sciences	—	—	2	العلوم العامة
Physical Education	2	2	2	التربية الرياضية
Statistics and Probability or French Language	—	—	3	الاحصاء والاحتمال او اللغة الفرنسية
Total	28	28	34	المجموع

Branch subjects

مواد التشعب

Branches	Subjects	الصف الثالث 3rd Grade	الصف الثاني 2nd Grade	المواد الدراسية	التشعب
Languages	English Language	2	2	اللغة الانجليزية	اللغات
	French Language	4	4	اللغة الفرنسية	
Home Economics	Home Economics	6	6	الاقتصاد المنزلي	الاقتصاد المنزلي
Fine Arts	Fine Arts	6	6	الفنون الجميلة	الفنون الجميلة
Economics and Office Practice	Economics	3	3	الاقتصاد	الاقتصاد والاعمال المكتبية
	Office Practice	3	3	الاعمال المكتبية	
Total		6	6	المجموع	

Optional Subjects

المواد الاختيارية

Common Subjects	الصف الثالث 3rd Grade	الصف الثاني 2nd Grade	الصف الاول 1st Grade	المواد المشتركة
Typing	3	3	3	الالة الكاتبة
Vocational Activities	3	3	3	الانشطة المهنية
Home Economics	3	3	3	الاقتصاد المنزلي
Fine Arts	3	3	3	الفنون الجميلة
General Sciences	3	3	3	العلوم العامة
Mathematics	3	3	3	الرياضيات
Music	3	3	3	الموسيقى
French Language	3	3	3	اللغة الفرنسية

APPENDIX 2

CURRICULA PLAN FOR
HEALTH SCIENCES SECTION OF
GENERAL SECONDARY EDUCATION

Curricular Plan for Health Sciences Section of General Secondary Education: 1982/83

Subjects	الصف الثالث 3rd Grade	الصف الثاني 2nd Grade	الصف الاول 1st Grade	المواد
Religious Education	2	2	2	التربية الدينية
Arabic Language	4	5	7	اللغة العربية
English Language	5	8	8	اللغة الانجليزية
Humanities (Sociology & Psychology)	—	—	4	الدراسات الانسانية (اجتماع ، علم نفس)
Mathematics	—	2	2	الرياضيات
Physics	—	—	2	الفيزياء
Chemistry	—	—	2	الكيمياء
Biology	—	—	2	احياء
Physical Education	2	2	2	التربية الرياضية
Health Sciences & Nursing	24	18	6	العلوم الصحية والتعريض
Total	37	37	37	المجموع

APPENDIX 3

CURRICULA PLAN FOR
COMMERCIAL SECONDARY EDUCATION

Curricula Plan for Commercial Secondary Education 1982/83

Subjects in Common

المواد المشتركة

Subjects	الصف الثالث			الصف الثاني	الصف الأول	المواد الدراسية
	شعبة العامة General Branch	شعبة السكرتارية Secretarial Branch	شعبة المحاسبة Accounting Branch			
Religious Education	2	2	2	2	2	التربية الدينية
Arabic Language	5	5	5	5	6	اللغة العربية
English Language	6	6	6	8	8	اللغة الانجليزية
Arabic Typing	4	4	—	3	4	الالة الكاتبة العربية
English Typing	3	4	—	4	—	الالة الكاتبة الانجليزية
Economics	2	2	2	—	—	الاقتصاد
Labour Law and Commercial Law	1	1	1	—	—	قانون عمل وقانون تجاري
Bank Accounting	—	—	4	—	—	محاسبة بنك
Secretarial Practice in English	—	4	—	—	—	سكرتارية باللغة الانجليزية
Secretarial Practice in Arabic	2	—	—	—	—	سكرتارية باللغة العربية
English for special purposes	—	3	3	2	—	اللغة الانجليزية الخاصة
Financial Mathematics	3	1	3	—	—	الرياضة المالية
Accounting in English	—	—	4	2	—	المحاسبة باللغة الانجليزية
Accounting in Arabic	4	—	2	—	—	المحاسبة باللغة العربية
Physical Education	2	2	2	2	2	التربية الرياضية
Total	34	34	34	26	22	المجموع

General Optional Subjects

المواد الاختيارية العامة

Subjects	الصف الثالث			الصف الثاني	الصف الأول	المواد الدراسية
	شعبة العامة General Branch	شعبة السكرتارية Secretarial Branch	شعبة المحاسبة Accounting Branch			
Art Education	3	3	3	3	3	التربية الفنية
Music	3	3	3	3	3	الموسيقى
French Language	3	3	3	3	3	اللغة الفرنسية
Social Subjects	3	3	3	3	3	المواد الاجتماعية
Mathematics	3	3	3	3	3	الرياضيات
Home Economics	3	3	3	3	3	الاقتصاد المنزلي
Arabic Typing	3	3	3	3	—	الالة الكاتبة العربية
English Typing	3	3	3	3	—	الالة الكاتبة الانجليزية
Vocational Activities	3	3	3	3	3	الانشطة المهنية

المواد المشتركة التي تدرس خلال نصف عام دراسي فقط

Assigned Subjects Compulsory at one term only of the year

Subjects	الصف الثالث 3rd Grade	الصف الثاني 2nd Grade	الصف الأول 1st Grade	المواد الدراسية
Financial Mathematics	—	5	5	الرياضة المالية
Elementary of Commerce	—	—	4	مبادئ التجارة
Social subjects	—	3	3	المواد الاجتماعية
Accounting & Book-keeping	—	5	5	الحاسبة وأمسك الدفاتر
Applied Secretary	—	3	4	السكرتارية التطبيقية
General Sciences	—	—	3	العلوم العامة

Commercial Optional Subjects

المواد الاختيارية التجارية

Subjects	الصف الثالث 3rd Grade			الصف الثاني 2nd Grade	الصف الأول 1st Grade	المواد الدراسية
	الشعبة العامة General Branch	شعبة السكرتارية Secretarial Branch	شعبة المحاسبة Accounting Branch			
Salesmanship	2	2	2	2	—	فن البيع
Store-keeping & Purchasing	2	2	2	2	—	مخازن ومشتريات
Insurance	2	2	2	2	—	التأمين
Accounting & Costing	2	2	2	2	—	محاسبة وتكاليف
Governmental Accounting	2	2	2	2	—	المحاسبة الحكومية
Shorthand	2	2	2	2	—	الاختزال
Commerce	2	2	2	2	—	طرق تجارة
Travel Agency	2	2	2	2	—	مكاتب السفريات

APPENDIX 4

CURRICULA PLAN FOR
INDUSTRIAL SECONDARY EDUCATION

الخطة الدراسية للمرحلة الثانوية الصناعية : ١٩٨٣/٨٢ م (بنين فقط)

Curricula plan for Industrial Secondary Education '1982/83 (Boys only)

Subject	الجموع Total	التربية الرياضية Physical Education	العمل الورشي * Workshop	علم أصل الصناعة Technology	الميكانيكا التطبيقية Applied Mechanics	الرسم الهندسي والمصنعي Machine Drawing	الرياضيات Mathematics	العلوم Sciences	اللغة الإنجليزية English Language	اللغة العربية والدين Arabic Language and Islamic Religion	المادة
First year	42	1	21	4	—	2	4	3	5	2	السنة الأولى
Second Year	42	1	21	4	2	3	3	3	5	—	السنة الثانية
Third Year	42	1	21	4	2	3	3	3	5	—	السنة الثالثة

★ Three days a week

• ثلاثة أيام اسبوعيا

APPENDIX 5

NUMBER OF TEACHING STAFF AT ALL
SCHOOLS BY TYPE OF SCHOOL,
NATIONALITY AND SEX, 1982-83

No. of Teaching staff at all Schools by kind of School, Nationality and sex: 1982/83

Nationality Type of School	Sex	Total	Others	French	American	Pakistani	British	Indian	Other Arabs	Syrian	Saudi	Lebanese	Palestinian	Jordanian	Egyptian	Bahraini	الجنسية	نوع المدرسة
Primary	Male	734	—	—	—	—	—	—	—	—	—	—	7	2	102	623	ذكور	ابتدائية
	Female	970*	—	—	—	4	—	—	2	2	1	—	8	10	109	834	إناث	ابتدائية
Primary/Intermediate	Male	661	—	—	—	2	—	5	2	—	9	—	10	3	175	455	ذكور	ابتدائية/الاعدادية
	Female	371	—	—	—	—	—	2	4	1	2	—	7	3	62	290	إناث	ابتدائية/الاعدادية
Intermediate	Male	156	—	—	—	—	—	1	—	—	4	2	4	7	46	92	ذكور	الاعدادية
	Female	185	—	—	—	—	—	1	1	—	1	—	2	3	27	150	إناث	الاعدادية
Intermediate/Sec.	Male	74	—	—	—	—	—	1	—	4	1	—	5	9	22	32	ذكور	الاعدادية/ثانوية
	Female	176	—	1	—	1	—	2	1	—	—	—	4	—	25	142	إناث	الاعدادية/ثانوية
Secondary General, Commercial & Health Sc	Male	261	—	2	—	—	2	5	—	5	2	2	32	27	115	69	ذكور	ثانوية (عام وتجارى وعلوم صحية)
	Female	324	—	1	—	1	2	20	3	3	2	1	19	7	76	189	إناث	ثانوية (عام وتجارى وعلوم صحية)
Commercial Secondary	Male	108	—	—	—	—	2	10	—	—	—	—	3	6	68	19	ذكور	ثانوية تجارية
	Female	132	—	—	—	—	1	14	—	1	—	—	2	5	25	84	إناث	ثانوية تجارية
Industrial Secondary	Male	240	4	—	—	2	10	6	1	—	—	3	2	4	173	35	ذكور	ثانوية صناعية
	Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	إناث	ثانوية صناعية
Religious Institute	Male	17	—	—	—	—	—	—	2	1	—	—	4	1	2	7	ذكور	المعهد الدينى
	Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	إناث	المعهد الدينى
Total	Male	2251	4	2	—	4	14	28	5	10	16	7	67	59	703	1332	ذكور	المجموع
	Female	2158	—	2	—	6	3	39	11	7	6	1	42	28	324	1689	إناث	المجموع
Total	Total	4409	4	4	—	10	17	67	16	17	22	8	109	87	1027	3021	مجموع	المجموع

* Data include (151) Female teachers in Boy Schools

يشتمل العدد على (١٥١) مدرسة يدرسون في مدارس البنين.

APPENDIX 6

NUMBER OF NON-BAHRAINI TEACHERS AT
ALL PUBLIC SCHOOLS BY LENGTH OF
SERVICE, TYPE OF SCHOOL AND SEX,
1982 - 83

No. of Non-Bahraini Teachers at all Public Schools by Length of Service, Type of School & Sex: 1982/83

Length of Service Type of School	Sex	Non-Bahraini									غير بحرانيين			الجنس	سنوات الخدمة
		Total	40 years & over	35 - 39	30 - 34	25 - 29	20 - 24	15 - 19	10 - 14	5 - 9	Less than 5 years				
Primary	Male	111	—	—	—	—	—	—	—	11	100	ذكور	نوع المدرسة		
	Female	136	—	—	—	—	1	—	3	7	125	اناث	ابتدائية		
Primary / Intermediate.	Male	206	—	—	—	4	3	2	4	28	165	ذكور	ابتدائية اعدادية		
	Female	81	—	—	—	—	—	3	3	11	64	اناث	اعدادية		
Intermediate	Male	64	—	—	1	4	2	2	—	5	50	ذكور	اعدادية		
	Female	35	—	—	—	—	—	2	—	8	25	اناث	اعدادية		
Intermediate Secondary	Male	42	—	—	—	1	—	3	7	7	24	ذكور	اعدادية ثانوية		
	Female	34	—	—	—	—	2	4	4	9	15	اناث	اعدادية ثانوية		
General Commercial Health Sciences Sr.	Male	192	—	—	1	4	1	19	28	37	102	ذكور	ثانوية عام ، تجاري ، علوم صحية		
	Female	135	—	—	—	—	2	9	14	33	77	اناث	ثانوية تجارية		
Commercial Secondary	Male	89	—	—	—	2	2	1	5	7	72	ذكور	ثانوية صناعية		
	Female	48	—	—	—	—	1	1	3	10	33	اناث	ثانوية صناعية		
Industrial Secondary	Male	205	—	—	2	2	2	1	14	30	154	ذكور	ثانوية صناعية		
	Female	—	—	—	—	—	—	—	—	—	—	اناث	ثانوية صناعية		
Religious Institute	Male	10	—	—	—	2	—	2	—	1	5	ذكور	المعهد الديني		
	Female	—	—	—	—	—	—	—	—	—	—	اناث	المعهد الديني		
Total	Male	919	—	—	4	19	10	30	58	126	672	ذكور	المجموع		
	Female	469	—	—	—	—	6	19	27	78	339	اناث	المجموع		

APPENDIX 7

TEACHERS' QUESTIONNAIRE
AND ITS ACCOMPANYING LETTER
(ARABIC VERSION)

استبيان لمعلمي ومعلمات المدارس الابتدائية والاعدادية بالبحرين

زميلي المعلم / زميلتي المعلمة . . .

لقد صممت هذا الاستبيان لاستطلاع آراءكم من خلال تجاربكم وخبرتكم في مجال تدريس طلاب المرحلة الابتدائية والاعدادية وللإستفادة منها في مجال دراستي عن الوسائل التعليمية وتدريب معلمي المدارس الابتدائية والاعدادية في البحرين .

ان المعلومات التي ستتدلى بها زميلي المعلم / زميلتي المعلمة سوف تكون ذات فائدة كبيرة لي في دراستي وكذلك عند اعادة تخطيط دورات تدريسية خاصة لمعلمي المدارس الابتدائية والاعدادية في المستقبل .

ان ثقتي كبيرة في أن تعطى هذا الاستبيان اهتماما خاصا ، وأود أن أؤكد ان المدارس سوف لن يرد ذكرها بالاسم في التقرير النهائي للدراسة .

مع خالص التقدير وشكري على تعاونك ،

محمد الموسوي
كلية البحرين الجامعية
ابريل ١٩٨٥

القسم الأول : معلومات عامة

- الجنس : ذكر ☐ أنثى ☐
- فئة العمر : من ٢٠ - ٣٠ ☐
- من ٣١ - ٤٠ ☐
- من ٤١ - ٥٠ ☐
- من ٥٠ فأكثر ☐

اسم المدرسة :

- ابتدائية ☐
- اعدادية ☐
- ابتدائية / اعدادية ☐

- المؤهلات ثانوية عامة + تأهيل تدريسي ☐
- معهد المعلمين / المعلمات ☐
- شهادة جامعية ☐
- مؤهلات أخرى ☐

ماهي المواد التي تدرسها هذه السنة ؟ وماهي المواد الرئيسية والمواد الثانوية ؟
مثال (لغة عربية + قصص ، يعني ان مادة اللغة العربية مادة رئيسية ومادة اللغة
مادة ثانوية)

- المواد التي تدرسها :
- المواد الرئيسية :
- المواد الثانوية :

القسم الثاني : معلومات عن الدورات التدريبية

- ١ - هل حضرت دورات تدريبية أثناء الخدمة من قبل ؟ نعم ☐ لا ☐
- إذا كانت الإجابة " بنعم " ماهي عددها ؟

- من ١ - ٣ ☐
- من ٤ - ٦ ☐
- أكثر من ٦ ☐

٢ - متى كانت آخر الدورات التي حضرتها ؟

- ☐ - السنة الدراسية الحالية
- ☐ - السنة الدراسية الماضية
- ☐ - قبل أكثر من سنتين

- ☐ ٣ - هل كانت الدورة : قصيرة لمدة يوم واحد ؟
- ☐ " " " قصيرة لمدة يومين حتى ٥ أيام ؟
- ☐ " " " طويلة أكثر من اسبوع ؟
- ☐ " " " تأهيلية سنة الى سنتين ؟

٤ - اذا كنت قد حضرت دوره تأهيلية مثلا لمدة طويلة هل حضرت أيضا دورات أخرى قصيرة من قبل أو بعد الدورة التأهيلية ؟

☐ نعم ☐ لا

٥ - أى من فروع المواد التالية في تدريب المعلمين تعطيها الأفضلية في تخطيط وتصميم الدورات التدريبية أثناء الخدمة لمعلمين المدارس الابتدائية والاعدادية ؟

- ☐ - أساليب وطرق تدريس
- ☐ - دراسة منهج
- ☐ - تكنولوجيا التعليم (وسائل تعليمية)
- ☐ - دراسات في علم النفس
- ☐ - دراسات اجتماعية
- ☐ - التربية العملية
- ☐ - دراسة المقررات الدراسية

٦ - اليك بعض الوظائف العامة للدورات التدريبية أثناء الخدمة . الرجاء ترتيبها من (١-٧) حسب أهميتها في اعتقادك

- ☐ - تعليم أساليب جديدة في التدريس
- ☐ - تنمية مهارات فنية لدى المعلم في صياغة الأسئلة
- ☐ - تدريب المعلمين على مهارة حل المشكلات
- ☐ - تدريب المعلمين على تدريس الموضوعات المستجدة
- ☐ - تغيير اتجاهات المعلمين بالنسبة لبعض الممارسات الخاطئة في التدريس
- ☐ - تدريب المعلمين على صياغة الأسئلة التعليمية
- ☐ - تدريب المعلمين على اعداد الوسائل التعليمية واستخدامها

٧ - هل حصلت على تدريب وإرشاد كاف في المجالات التالية :

لا	نعم
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

- اعداد وتخطيط الدروس
- اختيار الأهداف التعليمية
- صياغة الأهداف وتطويرها بحيث يمكنك استخدامها في تدريسك
- تقويم طريقة التدريس
- اختيار الأنشطة التعليمية
- صياغة الأسئلة

٨ - ما مدى أهمية حصول المدرس على فرصة حضور دورات أثناء الخدمة في اعتقادك ؟

ضع إشارة (✓) أمام الرأي الذي يتفق مع رأيك .

☐
☐
☐
☐

- مهم جداً
- مهم بعض الشيء
- قليلة الأهمية
- ليست مهمة

اشرح بوضوح سبب اختيارك أحد الآراء دون سواها .

.....

.....

القسم الثالث : طريقة التدريس

٩ - هل هناك إشراف نظامي وتوجيه كاف على طريقة تدريسك في الفصل ؟ نعم ☐ لا ☐

إذا كانت الإجابة " بنعم " من الذي قام بها .

الرجاء وضع إشارة (✓) أمام المربع أو المربعات المناسبة :

☐
☐
☐

- مدير المدرسة
- المدرس الأول
- الموجه التربوي
- آخرون اذكرهم من فضلك

١٠ - أى من أساليب التدريس التالية تعتبرها أكثر ملاءمة في تحقيق أهداف دروسك ؟

الرجاء ترقيمها من (١ - ٥) حسب أفضليتها بالنسبة لك .

- أسلوب المحاضرة كل الوقت باستخدام السبورة فقط
- أسلوب المحاضرة باستخدام السبورة ووسائل تعليمية أخرى
- أسلوب الحلقات الدراسية (التفاعل بين الطالب والمعلم) فقط
- أسلوب الحلقات الدراسية باستخدام الوسائل التعليمية
- أسلوب التدريس العملي (ورش عمل ، تجارب)

القسم الرابع : الوسائل التعليمية عامة

١١ - أى من الآراء التالية تمثل وجهة نظرك في الوسائل التعليمية الرجاء اختيار

رأى واحد فقط .

- لا أجد أنها ملائمة للمواد التي أدرسها
- كنت أود استخدامها إلا أن الفصول غير ملائمة
- استخدم تلك الوسائل الجاهزة فقط
- استخدم الوسائل الجاهزة إلا أنني أصنع بعض الوسائل بنفسى
- وأستخدمها .

١٢ - ان العناوين الثلاث التالية مقترحة لدورات تدريبية في مجال الوسائل التعليمية

فأرجو ترتيبها من (١ - ٤) حسب أهميتها من وجهة نظرك .

- تدريب المعلمين على تشغيل الأجهزة
- تدريب المعلمين على اختيار تعميم المواد التعليمية (الشفافيات ، الأفلام ، الأشرطة الصوتية . . . الخ)
- تدريب المعلمين على إعداد الوسائل التعليمية
- تدريب المعلمين على استخدام وتوظيف الوسائل التعليمية

١٣ - رتب الآراء التالية حول استخدام الوسائل التعليمية من (١ - ٣) حسب

أهميتها في رأيك .

- ☐ - ان الوسائل التعليمية يجب استخدامها لجميع موضوعات الدروس
- ☐ - ان الوسائل التعليمية يجب استخدامها لبعض موضوعات الدروس حسب تحقيقها لأهداف تلك الدروس
- ☐ - ان الوسائل التعليمية يجب استخدامها لبعض موضوعات الدروس حسب توفر الأجهزة والمواد التعليمية في المدرسة

١٤ - هل تواجهك أى مشكلات في استخدام الوسائل التعليمية في الفصل ؟ نعم ☐ لا ☐ إذا كانت الأجابه بنعم فارجو ترتيب المشكلات التالية (١-٦) حسب أهميتها في نشرها

- ☐ - ان الوسائل التعليمية غير متوفرة عادة
- ☐ - انني لا أعرف كيف استخدم أجهزة الوسائل التعليمية
- ☐ - هناك مشاكل ومعيقات إدارية عند شراء الأجهزة والمواد التعليمية في المدرسة
- ☐ - ان مركز الوسائل التعليمية لا يوفر الأجهزة والمواد التعليمية بما فيه الكفاية
- ☐ - ليس عندى الوقت الكافي لانتاج أى وسائل تعليمية لاستخدامها
- ☐ - لا أعرف من أين أحصل على مواد تعليمية مناسبة

١٥ - هل ترى ضرورة انشاء وحدة في المدرسة تكون مسئوله عن توفير الأجهزة والمواد التعليمية للمدرسين ؟ نعم ☐ لا ☐

١٦ - هل تعتقد ان هناك حاجة ماسه الى وجود الأجهزة التالية في مدرستك ؟

- | لا | نعم | |
|--------------------------|--------------------------|-------------------------------------|
| ☐ | ☐ | - الحقل الإلكتروني (الكمبيوتر) |
| ☐ | ☐ | - أجهزة الفيديو كاسيت |
| ☐ | ☐ | - آلات عرض سينمائية ١٦ ملم |
| ☐ | ☐ | - آلات عرض الشرائح والأفلام الثابتة |
| ☐ | ☐ | - أجهزة عرض رأسية (أوفر هيد) |
| ☐ | ☐ | - مسجلات كاسيت صوتية |
| ☐ | ☐ | - أجهزة تكبير الصور المعتمة |

١٧ - ما مدى توفر الوسائل التعليمية التالية لدروسك ؟ ارجو وضع إشارة (✓) امام الجملة المناسبة

- ☐ - متوفره لجميع دروسي
- ☐ - متوفره لمعظم دروسي

- ١٧ - متوفره لبعض دروسى
- ليست متوفره على الاطلاق

- ١٨ - هل تستخدم وسائل تعليمية في دروسك ؟
نعم ☐ لا ☐
اذا كانت الاجابة "بنعم" مامدى استخدامك لهذه الوسائل التالية :

بانتظام (مرة كل أسبوع على الا	أحيانا	لا أستخدمة أبدا	
☐	☐	☐	- جهاز عرض الأفلام السينمائية ١٦ ملم
☐	☐	☐	- جهاز عرض الأفلام الملقية ٨ ملم
☐	☐	☐	- جهاز عرض الشرائح والأفلام الثابتة (سلايدز)
☐	☐	☐	- جهاز الفيديو كاسيت
☐	☐	☐	- الجهاز العارض الرأسى (افرهيد)
☐	☐	☐	- جهاز تكبير الصور المعتمه
☐	☐	☐	- المسجلات الصوتية
☐	☐	☐	- المقروءات
☐	☐	☐	- اللوحات التعليمية المختلفة
☐	☐	☐	- النماذج

- ١٩ - أن من الأجهزة التالية متوفرة في مدرستك ؟

غير متوفرة	متوفرة	
☐	☐	- جهاز عرض الأفلام السينمائية ١٦ ملم
☐	☐	- أجهزة الفيديو كاسيت
☐	☐	- المسجلات الصوتية
☐	☐	- أجهزة الأفلام الحلقية ٨ ملم
☐	☐	- جهاز عرض الشرائح والأفلام الثابتة
☐	☐	- جهاز تكبير الصور المعتمه
☐	☐	- كاميره فوتوغرافية
☐	☐	- اللوحات التعليمية (لوحة كهربائية ، لوحة معلومات)

٢٠ - هل الفصول الدراسية في المدرسة مجهزة بالآتي :

لا يوجد أبد	تعمل واحد فقط	بعضها	كلها	
☐	☐	☐	☐	- وسائل تعليم الفصل
☐	☐	☐	☐	- فينر الكهربياء (بلك)
☐	☐	☐	☐	- شاشات عرض الأفلام

٢١ - في الوسائل التعليمية يختلف مفهوم المواد التعليمية عن الأجهزة التعليمية فجهاز السينما أو جهاز العارض الرأسي تعتبر أجهزة تعليمية في حين ان الشفافيات والأفلام أو الكتب أو التسجيلات التي على الأشرطة الصوتية والفيديو تعتبر مواد تعليمية .

مامدى توفر المواد التعليمية التالية في مدرستك ؟

متوفرة	غير متوفرة	
☐	☐	- مواد مسجلة على أشرطة صوتية
☐	☐	- مواد مسجلة على أشرطة فيديو
☐	☐	- شفافيات جهاز العرض الرأسي
☐	☐	- أفلام ثابتة وشرائح تعليمية
☐	☐	- أفلام سينمائية ١٦ ملم
☐	☐	- أفلام حلقية
☐	☐	- الرزم أو الحقائق التعليمية
☐	☐	- الأسطوانات التعليمية
☐	☐	- مواد مرجعية

٢٢ - هل سبق وأن انتجت المواد التعليمية التالية لاستخدامها في المدرسة ؟

لا	نعم	
☐	☐	- أفلام شرائح
☐	☐	- شفافيات
☐	☐	- مصورات
☐	☐	- أشرطة صوتية
☐	☐	- أشرطة فيديو
☐	☐	- خرائط

٢٣ - ما هي المصادر التي تعتمد عليها للحصول على مواد تعليمية ؟

- مركز الوسائط التعليمية

- إدارة المدرسة

- الخامات البيئية

- زملاء في المدرسين

انتهت الأسئلة شكرا على تعاونك معي ،

محمد الموسوي

ابريل ١٩٨٥

APPENDIX 8

TEACHERS' QUESTIONNAIRE
AND ITS ACCOMPANYING LETTER
(ENGLISH VERSION)

A questionnaire for primary and
intermediate school teachers
in Bahrain

Dear Teacher,

This questionnaire has been designed to help me to incorporate your ideas and experience in a study of educational technology and teacher training courses for primary and intermediate schools in Bahrain. I hope that you will be able to provide this information in order to ensure that meaningful revision of in-service courses for teachers will take place in the future.

I trust that you will give serious thought to your answers and I assure you that no teacher or school will be identified by name in the final report.

With deepest appreciation and gratitude for your co-operation,

I remain, yours faithfully,

Mohammed Jaffar Al-Moosawi

SECTION I : Background Information about the TeachersSex: Male ☐ Female ☐

Age Group: 20 - 30 ☐

31 - 40 ☐

41 - 50 ☐

50 → ☐

Name of School: _____

Type of School: Primary ☐

Intermediate ☐

Combined ☐

Qualification: Secondary + In-Service Training ☐

Teacher Training College ☐

University Degree ☐

Others ☐

What subjects are you teaching this year? Please list in order of importance(e.g. Arabic Language, Stories, means I teach more Arabic Language lessons than Stories, so Arabic Language is the main subject and Stories is the supplementary subject).

(a) Subjects I teach: _____

(b) Main subjects: _____

(c) Supplementary subjects: _____

SECTION II : General Information about In-Service Courses

1. Have you attended any in-service teacher training courses?

Yes ☐ No ☐

If 'Yes', how many times?

1 - 3 times ☐

4 - 6 times ☐

More than 6 ☐

2. When was the last course you attended?

This academic year ☐

Last academic year ☐

More than two years ago ☐

3. Was the course you attended:

(a) One-day course ☐

(b) Two-four day course ☐

(c) More than a week ☐

(d) One-two year course ☐

4. If you have attended long courses, have you also been involved in any short courses either before or after the long course?

Yes ☐ No ☐

5. Which two of the following subdivisions of teacher education subjects should, in your view, have the highest priority in planning and designing in-service courses for teachers in primary and intermediate schools?

- | | |
|----------------------------|----------------------|
| (a) Teaching Methods | <input type="text"/> |
| (b) Curriculum Studies | <input type="text"/> |
| (c) Educational Technology | <input type="text"/> |
| (d) Psychological Studies | <input type="text"/> |
| (e) Sociological Studies | <input type="text"/> |
| (f) Teaching Practice | <input type="text"/> |
| (g) Syllabuses | <input type="text"/> |

6. What are your expectations of any training programme for teachers?
Indicate your response by numbering your choice in order of importance.

- | | |
|--|----------------------|
| (a) Learning new teaching methods | <input type="text"/> |
| (b) Developing technical skills in writing questions | <input type="text"/> |
| (c) Training the teachers in problem-solving skills | <input type="text"/> |
| (d) Training the teachers how to teach new syllabuses | <input type="text"/> |
| (e) Changing teachers' attitudes towards some wrong performances | <input type="text"/> |
| (f) Training the teachers how to write learning objectives | <input type="text"/> |
| (g) Training the teachers how to prepare AV materials | <input type="text"/> |

7. Have you been given adequate practice and guidance in the following?

- | | | |
|---|----------------------|----------------------|
| | Yes | No |
| (a) Lesson preparation | <input type="text"/> | <input type="text"/> |
| (b) Selecting teaching objectives | <input type="text"/> | <input type="text"/> |
| (c) Writing objectives in a way that you can use them | <input type="text"/> | <input type="text"/> |
| (d) Evaluating teaching methods | <input type="text"/> | <input type="text"/> |
| (e) Selecting teaching activities | <input type="text"/> | <input type="text"/> |
| (f) Writing good questions | <input type="text"/> | <input type="text"/> |

8. To what extent are you interested in attending in-service courses for teachers? Please ✓ the appropriate box.

- (a) High interest ☐
- (b) Low interest ☐
- (c) No interest ☐

SECTION III : Teaching Methods

9. Is there a systematic and adequate supervision and guidance for you in your classroom teaching?

Yes ☐ No ☐

If 'Yes', who offers you this?

- (a) Head Master ☐
- (b) Head of Subject ☐
- (c) Government Inspector ☐
- (d) Other ☐

If 'Other', please name: _____

10. Which of the following methods do you consider most appropriate in achieving your teaching objectives? Please number in order of importance.

- (a) Lecturing method all the time ☐
- (b) Lecturing method + use of AV media ☐
- (c) Seminar method only ☐
- (d) Seminar + use of AV media ☐
- (e) Practical workshops and equipment ☐

SECTION IV : Audio-Visual (AV) Media

11. Which of the following statements reflects your opinion of AV media?
Please ✓ one only.

- | | |
|--|--------------------------|
| (a) I do not see the relevance of AV materials for the subject I teach | ☐ |
| (b) I would use them, but rooms are unsuitable | ☐ |
| (c) I use AV materials which are already prepared | ☐ |
| (d) I use the already prepared ones and make some myself | ☐ |

12. Which of the following topics have the highest priority for a proposed teacher training course? Please number in order of importance.

- | | |
|---|--------------------------|
| (a) Training teachers how to operate AV projectors | ☐ |
| (b) Training teachers how to select AV material | ☐ |
| (c) Training teachers how to make AV material | ☐ |
| (d) Training teachers how to use AV materials effectively | ☐ |

13. Please number the following in order of importance.

- | | |
|---|--------------------------|
| (a) AV media should be used for all topics in the course textbook | ☐ |
| (b) AV media should be used for some topics only when they accomplish the objectives of certain lessons | ☐ |
| (c) AV media should be used for some topics when software and hardware are available | ☐ |

14. Is there any difficulty in using AV media in your classroom?

Yes ☐ No ☐

If 'Yes', please number them in order of importance.

- (a) Audio-visual equipment is often not available ☐
- (b) I do not know how to use audio-visual equipment ☐
- (c) There are administrative and financial complications in school when buying equipment and materials ☐
- (d) I do not have sufficient time to produce any teaching aids for my own use ☐
- (e) I do not know where I can obtain suitable AV materials ☐
- (f) The AV Centre has not made the materials readily available ☐

15. Is it necessary to establish a centre in every school to supply AV hardware and software for the teachers?

Yes ☐ No ☐

16. Is it necessary to have the following equipment in your school?

- | | Yes | No |
|-----------------------------|--------------------------|--------------------------|
| (a) Computers | ☐ | ☐ |
| (b) Video-Cassette Recorder | ☐ | ☐ |
| (c) Movie Film Projectors | ☐ | ☐ |
| (d) Slide Projectors | ☐ | ☐ |
| (e) Overhead Projectors | ☐ | ☐ |
| (f) Audio Tape Recorders | ☐ | ☐ |
| (g) Opaque projectors | ☐ | ☐ |

17. To what extent are audio-visual media available for your teaching?
Please ✓ one only.

- (a) Available for all your lessons ☐
- (b) Available for most of your lessons ☐

(c) Available for some of your lessons

☐

(d) Not available at all

☐

18. Do you use audio-visual media in your teaching?

Yes

☐

No

☐

If 'Yes', how frequently do you use the following audio-visual media in your lessons?

	Never	Seldom	Once a Week
(a) 16mm Projectors	☐	☐	☐
(b) 8mm Projectors	☐	☐	☐
(c) Slide/Filmstrip Projectors	☐	☐	☐
(d) Video Cassette Recorder	☐	☐	☐
(e) Opaque (Episcope) Projectors	☐	☐	☐
(f) Overhead Projectors	☐	☐	☐
(g) Wall Charts	☐	☐	☐
(h) Display Boards	☐	☐	☐
(i) Models	☐	☐	☐

19. Which of the following hardware are sufficiently available in your school?

	Available	Not Available
(a) 16mm Projectors	☐	☐
(b) Video Cassette Recorders	☐	☐
(c) Audio Recorders	☐	☐
(d) 8mm Loop Projectors	☐	☐
(e) Slide/Filmstrip Projectors	☐	☐
(f) Opaque (Episcope) Projectors	☐	☐

	Available	Not Available
(g) 35mm Photography Camera	☐	☐
(h) Display Boards	☐	☐

20. To what extent are the following facilities sufficiently available in the classrooms of your schools?

	All	Some	One Only	Not At All
(a) Black-Out	☐	☐	☐	☐
(b) Electric Sockets	☐	☐	☐	☐
(c) Projection Screens	☐	☐	☐	☐

21. Software are the tangible stimulus item, e.g. recorded lessons on tapes is software, whereas a tape recorder playback unit is considered hardware. To what extent are the following software sufficiently available in your school?

	Available	Not Available
(a) Recorded lessons or programmes on audio tapes	☐	☐
(b) Recorded lessons or programmes on video tapes	☐	☐
(c) OHP transparencies	☐	☐
(d) Slide/Filmstrip programmes	☐	☐
(e) 16mm movie films	☐	☐
(f) 8mm movie films	☐	☐
(g) Programmed learning materials	☐	☐
(h) Recorded discs	☐	☐
(i) Reference materials	☐	☐

22. Have you ever produced the following materials?

	Yes	No
(a) Filmstrip or Slide Programmes	☐	☐

	Yes	No
(b) Maps	☐	☐
(c) OHP Transparencies	☐	☐
(d) Diagrams, Charts	☐	☐
(e) Audio Tapes	☐	☐
(f) Video Tapes	☐	☐

23. From where do you obtain your teaching materials?

(a) Audio-Visual Centre	☐
(b) School Administrator	☐
(c) Local environment	☐
(d) Other teachers in my school	☐

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M. Al-Moosawi

April 1985

	Yes	No
(b) Maps	☐	☐
(c) OHP Transparencies	☐	☐
(d) Diagrams, Charts	☐	☐
(e) Audio Tapes	☐	☐
(f) Video Tapes	☐	☐

23. From where do you obtain your teaching materials?

(a) Audio-Visual Centre	☐
(b) School Administrator	☐
(c) Local environment	☐
(d) Other teachers in my school	☐

The questions are over, thank you for your co-operation.

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