

A STUDY OF THE DEVELOPMENT OF
EDUCATIONAL TECHNOLOGY AT THE
UNIVERSITY COLLEGE OF ARTS, SCIENCE AND EDUCATION, BAHRAIN /



(NABEELA QASIM ZUBARI)

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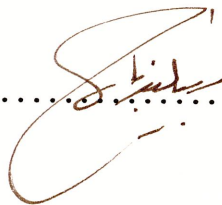
Submitted in partial fulfilment of the
regulations for the Degree of
Master in Education of the University of Wales

March 1985

TO MY FAMILY

I certify that this work 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:

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

Signed:

A handwritten signature in brown ink, appearing to be 'S. K. S.', written over a dotted line.

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SUMMARY

The present study deals with educational technology at the University College of Bahrain (UCB) in general, and with the Educational Technology Section in particular.

Educational Technology in Bahrain is a relatively new field of study. It is, therefore, very important to attempt to clarify the role and place of educational technology at the UCB.

The first chapter introduces the present work and deals with current definitions of educational technology.

The second chapter attempts to trace the development of the Educational Technology Section of the University College of Bahrain since its establishment within the College.

The third chapter is an analysis of the replies by UCB staff to a questionnaire on the current role of educational technology at the College.

The fourth chapter presents the UCB staff suggestions about what they consider should be the future development of educational technology within the Educational Technology Section, within the College departments as well as within the Loan Section of the College.

The fifth chapter studies and discusses the replies by UCB students to a further questionnaire. It also reveals their opinions and suggestions about the future development of educational technology at the UCB.

The final chapter of the present study attempts to provide some suggestions which, it is hoped, may encourage the future development of educational technology at the UCB.

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Chapter I

INTRODUCTION AND DEFINITIONS OF EDUCATIONAL TECHNOLOGY

A STUDY OF THE DEVELOPMENT OF EDUCATIONAL TECHNOLOGY AT THE
UNIVERSITY COLLEGE OF ARTS, SCIENCE AND EDUCATION, BAHRAIN

INTRODUCTION

Educational technology at the University College of Bahrain (UCB) started right from the establishment of the College in 1978.

At the beginning, educational technology occupied a small section of the College since it was set up just as a service department. Later on, the section started to develop gradually when it was decided that educational technology courses should be offered to the undergraduate College students as well as to the Postgraduate Diploma students (PGDE) in order to train them all in the technology of teaching.

Hence, the Educational Technology Section at the UCB was progressively modernised to enhance the teaching quality and also to keep pace with the advances of educational technology in the world.

This present study has been undertaken mainly to investigate the development of educational technology at the UCB. Its major aims are:

- To clarify the concept of educational technology.
- To look at the historical background of the development of the Educational Technology Section at the UCB and the problems encountered in its development.

- To investigate the relationship between the Educational Technology Section and the other Departments of the College.
- To find out the opinions of the College staff on the present situation of educational technology in the College.
- To find out what suggestions are made by the College staff for the future development of educational technology at the College.
- To investigate the opinions and suggestions of a sample of the College students who attended some types of courses in educational technology.
- On the basis of the evidence collected, to make suggestions and recommendations for improving the facilities and effectiveness of educational technology at the UCB.

EDUCATIONAL TECHNOLOGY - WHAT DOES IT MEAN?

The term 'educational technology' is widely misinterpreted, even in educational circles today. This confusion is due to a number of reasons, and Conway (1975) suggests that the following are important:

- (i) "Educational technology is a relatively new and developing field and thus it is difficult to define its expanding limits with any true precision. Educational technology has developed so rapidly in the last fifteen years that educational technologists do not agree among themselves about the nature of the subject."
- (ii) "Another source of confusion about educational technology is the word "technology" itself. 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 electric gadgets."
- (iii) "The word "technology" has given rise to so much misunderstanding in this field that it is worth looking at the meaning of this word more closely. J.K. Galbraith (1967) has proposed a useful definition, stating that:

"Technology means the systematic application of scientific or other organised knowledge to practical tasks. Its most important consequence ... is in forcing the division and sub-division of any such task into its component parts. Thus, and only thus, can organized knowledge be brought to bear on performance."

"This definition of technology (although proposed by an economist) is the way in which the word is used today in educational technology. The educational technologist believes that it is possible to bring organised knowledge to bear on learning situations. By systematically applying this knowledge to learning problems and especially through the subdivision of the learning task into its component parts, it is possible to improve learning."

Therefore, it is worth taking a closer look at the definitions of educational technology, and also to study the roles of educational technology, or instructional technology, in the educational process.

Nickson (1971) pointed out that

"... educational technology is viewed as the application of the many areas of science to the educative process. The need for such a technology arises from a concern for the quality as well as the quantity of information and resources which now crowd the educational scene."

Another point of view, put forward by Hartley and Davies (1978), is that educational technology is

"... characterised by its disciplined approach to a creative organisation of resources for learning."

They add,

"In order to make this contribution to the "health" of an educational institution, curriculum, programme, course or lesson, an educational technologist uses a body of established principles, know-how and procedures."

Romiszowski (1981) acknowledges the vital importance of educational technology when he states:

"Technology is a process of creatively applying certain known and tested principles (science) to a given practical purpose (or problem). (Thus technology is the use of the scientific method in a practical situation.)"

Fyfe and Richardson (1979) illustrate the definition of educational technology as something like

"... a systematic linking together of objectives, content/method and assessment so that content/method and assessment reflect the objectives as precisely as possible."

Another definition, by Leedham (1973), states:

"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."

Moreover, the Association for Educational Communications and Technology (AECT) (1977) looks at educational technology as being

"... a complex integrated process involving people, procedures, ideas, devices, and organization, for analysing problems and devising, implementing, evaluating and managing solutions to those problems, involved in all aspects of human learning."

On the other hand, it must be underlined that AECT provides three perspectives of educational technology: as a theoretical construct, as a field, and as a profession:

- (1) As a theoretical construct, educational technology is thought to be a theory about how problems in human learning are identified and solved.
- (2) Educational technology is also regarded as a field of endeavour, the application of the theoretical ideas and principles to solve actual problems in education and instruction. The field includes the techniques applied, the activities performed, and the information and resources used by practitioners in the field.
- (3) In addition to this, educational technology is seen to be a profession made up of an organised effort to fulfil the theory.

Another valuable definition of educational technology was put forward by Tickton (1970). He states that educational technology 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."

Tickton also provided another definition of educational technology as being the

"... media born of the communications revolution which can be used for instructional purposes alongside the teacher, textbook, and blackboard."

Tucker (1979) considers educational technology methods and systems as "change agents" when he stated that

"... educational technology should encompass a wide range of "systems" both intellectual and physical, which individually and collectively act as change agents within education."

Furthermore, Rowntree (1982) believes that educational technology is a very broad field, stating

"... 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."

Moreover, Heinich (1982) defines educational technology as

"A technology of instruction 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."

Thus, the above definitions of educational technology are not so much concerned with equipment, but are very concerned with the improvement of learning. To this end, emphasis is given to the importance of specific learning objectives, designing relevant learning experiences (which may involve non-human resources) and evaluating the effectiveness of these learning experiences so that they may be improved further.

Rowntree (1982) has summarised the four basic phases of educational technology that a teacher can use in his teaching strategy:

- (1) Identifying purposes, particularly in terms of objectives.
- (2) Developing the necessary learning experiences.
- (3) Evaluating the effectiveness of those learning experiences in achieving the purposes.
- (4) Improving the learning experience, in the light of evaluation, so as to better achieve the purposes.

These four phases of educational technology are shown in a diagram by Rowntree (Figure 1-1) which indicates the kinds of task that need to be performed within each phase of course development. This cyclical view of educational technology would be accepted by most educational technologists today.

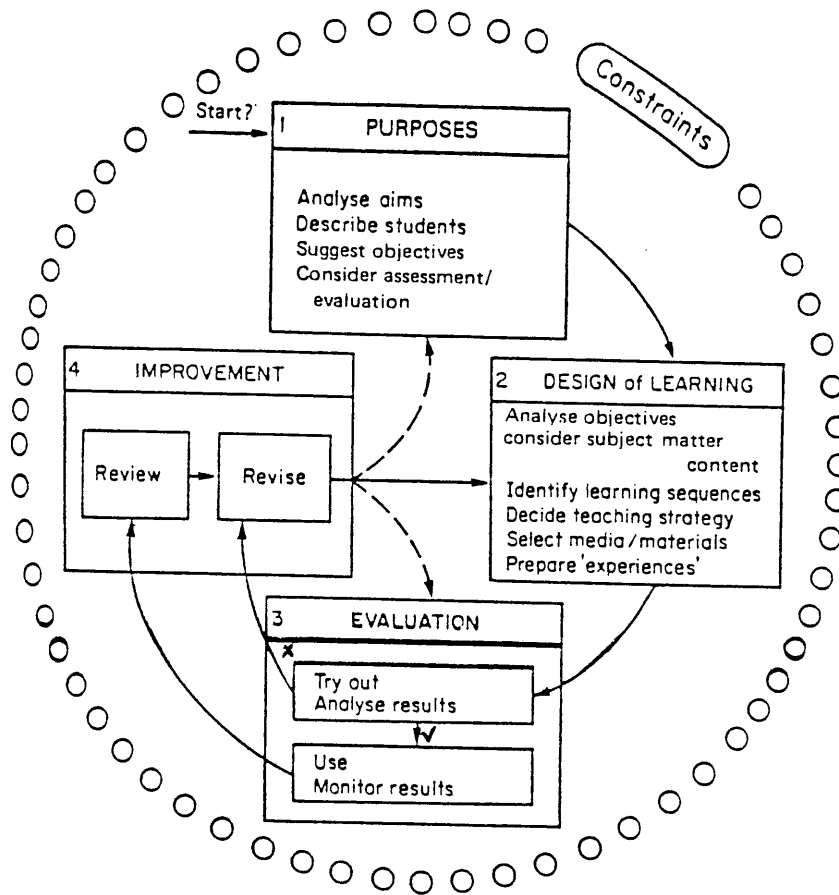


Figure 1-1

Kinds of Task of Educational Technology in Curriculum Development

Source: Rowntree, D.
Educational Technology in Curriculum Development
P.21

Chapter II

**UNIVERSITY COLLEGE OF BAHRAIN (BACKGROUND)
THE EDUCATIONAL TECHNOLOGY SECTION AT UCB**

THE UNIVERSITY COLLEGE OF ARTS, SCIENCE AND EDUCATION, BAHRAIN

BACKGROUND

The University College of Bahrain (UCB) was established in 1978 by Amiri Decree Number 11 issued by the Amir of the State of Bahrain. Since it was established, the University College has occupied the buildings of the former Teacher Training College which one year after the establishment of the University College of Bahrain merged with that institution. This merger happened because the University College will carry on the teacher training functions of the former College but at university level by means of its Educational Department.

The aims of the University College of Bahrain have been clearly stated in the College Bulletin (1983-84) that

"The College is dedicated to the development of human resources, dissemination of scientific, literary, and artistic culture, the advancement of society, and the preservation of those traditions which constitute man's heritage and civilization."

There are three broad areas of research and human knowledge in which the College tries to develop interest and promote growth. They are: Arts, Science and Education. Nine types of programmes in the University College lead to certain degrees:

- (1) Undergraduate programmes of study in the humanities and social sciences leading to the Bachelor of Arts degree.

- (2) Programmes in the natural sciences leading to a Bachelor of Science (BSc). Mathematics can be studied either for a BA or a BSc degree.
- (3) Programmes in Education leading to a Bachelor of Education (Bed).
- (4) Programmes in Physical Education leading leading to a Bachelor of Physical Education (BPE).
- (5) Programmes in Education at the postgraduate level in Education leading to a diploma or degree.
- (6) A two-year Pre-Medical programme for students intending to enrol for clinical studies at the Arabian Gulf University.
- (7) A programme in Population and Statistical Studies for training middle-level professionals in different ministries of the Bahrain Government.
- (8) A Masters degree programme (MEd) offered to students of either an approved science degree and a graduate certificate or diploma in education, or of a BEd majoring in science, and who must normally have had at least two years teaching experience or other approved experience in education.
- (9) Pre-Service and In-Service programmes of training for primary school teachers. It is also concerned with the re-training of subject-teachers at the upper elementary or intermediate and lower secondary level.

According to the semester system, which is applied in the University College of Bahrain, the academic year is divided into two semesters, each extending over nearly 16 weeks. One credit is given for each hour of lectures per week or for each 2-3 hours of laboratory or studio work per week over a period of one semester. Usually, a student is expected to spend two hours every week in study and preparation for each credit. Therefore, on average, a student enrolled for 16 credits in a semester is expected to spend not less than 48 hours in class, study and preparation per week.⁽¹⁾

A minimum of 128 credits is required to be earned by the student in order to fulfil degree requirements for a BA, BSc, BPE, or BEd degree from the University College.

(1) UCB (1982-83) Bulletin, Bahrain.

PROBLEMS OF ESTABLISHING HIGHER EDUCATION

Establishing a new educational system always involves problems and the establishment of the University College of Bahrain in 1978 was no exception to this rule. One of the main problems was the lack of space, mainly because the existing buildings of the former Teacher Training College were not adequate to accommodate all the University College departments and administration requirements. But because the number of students enrolled at the College at that time was rather small (204), there was no serious lack of space. However, when the number of students and staff started to increase every year, the problem of lack of space became very obvious. Thus, carefully planned schedules of lectures were needed in order to make the maximum use of the available lecture rooms.

Nevertheless, there is currently a big project to construct new buildings in order to face the expected increase in the number of students, faculties, and activities.

The first phase of the project was the construction of a large building for Arts. The new Arts building was completed in September 1981.⁽¹⁾ Besides the offices of the Rector and the Co-ordinator of Academic Affairs, this building accommodates the Department of Education - which includes the Educational Technology Section - as well as the Departments of General Studies (which consists of the French Language section, the Social Studies section, and the Fine Arts section), Mathematics, Physical Education, and Psychology. Temporary facilities were also provided for the Department of English. Also, there are many

(1) UCB (1982-83) Bulletin, Bahrain.

classrooms, and a large auditorium which is sufficient for approximately 200 persons. In addition, a Conference Room is available for meetings of the Board of Trustees, Executive Committee, Academic Council, and other important bodies of the University College of Bahrain.

The second phase of the University project was the new Science Block, which was completed in September 1982.⁽¹⁾ The Departments of Biology, Chemistry and Physics are located in this building. However, more buildings will be constructed in order to solve the accommodation problem and to fulfil the University College's requirements.

Another problem which occurred with the establishment of the University College was concerned with the students. They faced a sudden transition from school life where they, for instance, depended upon textbooks, to university life where they would use numerous different references. In addition, the students were accustomed to learning through the medium of the Arabic language in most lessons, except in language lessons such as English or French. However, at the University College the students learn through the medium of Arabic and English, especially the Science and Mathematics students. As a result, the University College has tried to solve this problem by offering preparatory courses for each student intending to enter the College. These courses are designed to provide concentrated preparation in Arabic, English, Mathematics, and the Sciences, to enable the student to make a smooth transition from secondary school to college.

(1) UCB (1982-83) Bulletin, Bahrain.

THE EDUCATIONAL TECHNOLOGY SECTION AT THE
UNIVERSITY COLLEGE OF BAHRAIN

THE DEVELOPMENT OF THE EDUCATIONAL TECHNOLOGY SECTION AT THE COLLEGE

The Educational Technology Section is only seven years old, having been set up in 1978 in one of the former Teacher Training College buildings. It has occupied one big room which is used for storing audio-visual equipment as well as being used for film projection. Another big room was kept as a workshop. At the beginning, the College Administration decided to specify this section as a service department with only one employee in order to offer services such as film projection and some graphic work, and so on to the other College departments. Consequently, no lectures were actually offered in Educational Technology. That was in 1978 when the Section was called "Teaching Aids Section" (in Arabic "قسم الوسائل التعليمية").

When one looks at the overall development of the Educational Technology Section, it becomes apparent that this development occurred in three stages: it was not so much that the three phases formed part of a planned strategy, but they occurred as a result of various changes such as the personnel involved, policies in course planning, and so forth.

FIRST STAGE OF DEVELOPMENT, 1978-1981

The first changes in the Educational Technology Section occurred at this period. Late in 1978, a Unesco expert in Educational Technology and Communication visited the College in order to improve the section's situation. He proposed the expansion of the "Teaching Aids Section": courses could then be offered in educational technology and communication, and more staff could be employed. Thus, two teaching assistants, (one male and one female), became the first two employees in the Section. At the beginning of 1979, the name of the Section was changed. It became the "Centre for Communication". The Centre for Communication was, in fact, the Centre *for* Educational Technology. "Centre for Communication" was the term agreed upon by the Academic Council in 1979. The period from 1979-1981 could be considered as an active one because it involved several activities besides the teaching of the theoretical and practical aspects of educational technology.

The expert believed that

"...better communication means people learn more, faster, better, and are more convinced because the information is presented to them in the best way which matches the objectives of the presentation." (Arrasjid [1980])

OBJECTIVES OF THE CENTRE FOR COMMUNICATION

The objectives of the Centre for Communication (Educational Technology Section) since 1979 have been:

- (1) To improve the instructional and learning processes through the use of media technology applied with the principles of effective and persuasive communication.
- (2) To offer assistance to staff, students, and faculty, in the application of the communication process and learning effectiveness, as well as to work with the faculty members of departments, as individuals or groups, in order to develop units, models, or complete educational materials using most types of media, such as Closed-Circuit Television (CCTV), slides, audio tapes, graphics, films and transparencies.
- (3) To provide in-service training in the area of educational technology and communication skills.
- (4) To emphasise research in communication and educational technology fields, especially in designing learning packages for teaching requirements.
- (5) To provide guidance in media characteristics in determining media selection with special reference to the University College of Bahrain.

By mid 1980, the staff in the Centre for Communication had increased and consisted of: a co-ordinator (who was the Unesco expert), three academic staff members, a communication assistant, and an audio-visual technician.

When the Arts building was completed in September 1981, the Centre for Communication moved from the building of the former Teacher Training College to the Arts building, where reasonably more suitable space was provided. The facilities, therefore, included a small television studio, a loan section, a small media library, a workshop-classroom, a darkroom, and duplication area, in addition to four offices for the staff. These facilities are still the same at the present time (late 1984). However, additional space is needed to deal with the continuing growth in the number of students.

ACTIVITIES OFFERED BY THE CENTRE FOR COMMUNICATION

The Centre for Communication provided the following activities for all staff members of the University College:

- (1) Supported University College educational programmes and promoted the use of educational technology by producing, supplying, and co-ordinating instructional media, materials, and facilities.
- (2) Provided advice and planned, developed, and produced educational media packages, materials, and instructional systems whenever it has been requested by any faculty member.
- (3) Identified resources such as 16mm film from the media library and other sources.
- (4) Assisted in the evaluation of systems and materials which include television, and various media approaches such as multi-media.
- (5) Produced and duplicated a variety of media, including charts, models, photographs, slides, overhead transparencies, audio and video tapes for use in teaching at the University College whenever requested.
- (6) Documented lectures, events, and activities at the University College by filming, audio- or video-taping, and photographing for research.

- (7) Provided photographs, illustrations and designs for the University College Bulletin and records.
- (8) Delivered, set up, and operated educational equipment for lectures, meetings, or conferences.
- (9) Offered a projection-viewing service for pre-view or instruction such as 16mm and 8mm films and also video-tapes.
- (10) Broadcasted television, music, or Holy Qurran to the students' lounge.
- (11) Provided 16mm and 8mm films, loop films, audio- and video cassettes, slides and media kits for loan.
- (12) Provided a microteaching service to staff and students, consisting of video-taping of teaching and presentations for evaluation and improvement of presentation style.
- (13) Maintained most of the educational equipment, such as film projectors.
- (14) Provided workshops on production and use of instructional resources.
- (15) Organised panel discussions on learning and communication during the academic year, where all staff were invited to exchange ideas and experiences.

Furthermore, the Centre for Communication, or the Centre for Educational Technology, from its initial establishment, allocated various activities to its staff. The instructor and the two teaching assistants, (the three members appointed) besides assisting the Head of the Centre in his teaching, all had additional responsibilities such as graphics production, filming, and video-taping the microteaching programmes. There were also two technicians appointed to the Centre, one for television work such as playback, dubbing, and some production, while the other was in charge of audio recording, equipment maintenance and the equipment loan service. These two technicians were appointed in 1980.

SOME ILLUSTRATIONS OF THE CENTRE'S ACTIVITIES

- (1) The production of a "Newsletter" by the Centre for Communication was approved, and the first issue appeared on January 1st 1981.⁽¹⁾ This "Newsletter" was concerned with news of the various activities of the Centre, proposed events (e.g. workshop announcements) and information about new ideas and developments in the field of communication and educational technology. But, unfortunately, after approximately half a dozen issues had been produced (one issue every one or two months), the publication of the "Newsletter" was cancelled in 1982 due to a change in the Centre's policy and the appointment of a new co-ordinator.
- (2) Moreover, the Centre organised a "Film Committee" which has a representative from each of the College departments, and their work was co-ordinated by three members of the Centre's staff. The aim of the committee was to enable all the College departments to discuss, choose and order appropriate 16mm films from various Arab, British and American educational film companies (e.g. Encyclopaedia Britannica Educational Corporation) according to the particular teaching needs of the departments concerned. It is unfortunate that this committee did not continue its work, for several reasons. First, it was a good idea to gather representatives from different College departments in order to discuss what was needed in the audio-visual field, also to discuss the quality of the films, and

(1) University College of Bahrain. Centre for Communication meetings minutes, 7th January 1981.

then to evaluate them. Secondly, this committee could probably have been expanded to include discussion and selection of more visual aids such as slides and filmstrips etc. Thirdly, it tended to strengthen the relationships between the College departments, and also avoided any kind of clashing and duplication in the film orders.

The present writer, who was a member of this film committee from its establishment, recalls how useful this committee was and hopes that something like it may be established again in the future.

STAFF IN THE CENTRE FOR COMMUNICATION (1980 - 82)

The staff in the Centre consisted of:

- A professor (co-ordinator of the Centre)
- An instructor
- Two teaching assistants
- Two technicians
- A secretary

Although all the members of staff work as a team, every single member of staff is fully in charge of a given section within the Centre.

SECTIONS OF THE CENTRE FOR COMMUNICATION, 1980-1982

The sections which existed in the period 1980-82 were:

(1) Teaching Section

This section was concerned with teaching, designing course outlines, instructional materials, course guides and evaluation. Courses offered in this section were of two main kinds:

(a) Educational Technology Courses:

These were required for all education majors at the UCB and include Course No.311 in Educational Technology, which is still offered to the third year level students. Similarly, Course No. 511, which is still being offered to postgraduate diploma students, ~~was~~ a required course too.

(b) Minor in Communication:

This consisted of optional courses for Education majors and other majors, such as "Film Making" and "Television Production".

At the beginning of the academic year 1980-81, the Centre approached the Departments of Arabic, Islamic Studies and English with regard to the communication programme. The three departments, together with the Centre, agreed in principle to the following proposed programmes:

- (1) A major in Arabic and a minor in Communication.

A major in Islamic Studies and a minor in Communication.

A major in English and a minor in Communication.⁽¹⁾

("A major is an area of concentration or specialisation. Each student must select a major before the end of the second year. In addition, the student must select a minor from an area complementary to that in which the student plans to major."⁽²⁾

- (2) The Mathematics Department agreed to offer a course in

"Elementary Statistics" as a requirement for the communication programme. This course *was*

"... designed for students who have little or no secondary school algebra, but who hope to be able to use statistics in their field of study. Topics covered are population and sample, data collection and presentation; measures of central tendency and dispersion; probability as a measure of uncertainty; addition and multiplication theorems, binomial and normal probability distributions, central limit theorem and sampling; estimation of mean from small and large samples; tests of hypotheses, correlation and regression."⁽³⁾

Also the Psychology Department agreed to offer the course

"Independent Research" as a required course for the communication programme. The objective of this course *was*

(1) University College of Bahrain (1981). Centre for Communication / to Academic Council members. (A Report).

(2) UCB (1983-84) Bulletin, Bahrain.

(3) UCB (1982-83) Bulletin, Bahrain.

"... to give the student an opportunity to choose a defined problem for his investigation, find the best methodology of research, make use of contemporary theories and develop his own intelligent guesses to deal with the problem."(1)

With that proposal, there would be more opportunities open to the College graduates in their future careers; such careers would enable them to take up suitable posts in business, industry, institutions of higher education, television and radio stations, and government employment, both in Bahrain and in other countries.

But, unfortunately, that proposal was cancelled in 1982 due to changed circumstances which will be described in the second stage of the Centre's development (see pp.42-43).

(2) In-Service Training Section

This section was concerned with the organisation of workshops for the staff of the University College from all departments; with designing and producing workshop materials as well as instructional materials.

The activities of this section ceased late in 1982 but there is a plan to reconstruct this section again sometime in the future.

(3) Graphics and Production Section

This section was concerned with the production of instructional materials, charts, graphs, three-dimensional (3-D) models, illustrations, overhead transparencies, posters, cartoons, etc., for all the College

(1) UCB (1982-83) Bulletin, Bahrain.

departments according to their requirements; it also produced such materials for the Educational Technology courses in addition to producing the Centre's "Newsletter" and other campus communications.

In this context, it should be mentioned that there have been no full-time or part-time graphic artists appointed to this particular job. All the work has been done by the Centre's staff themselves in addition to other responsibilities such as assisting in the teaching of Educational Technology courses.

(4) Media Library Section

This section, when it was first set up, was concerned with the provision of motion picture films (16mm, 8mm, film loops, and video cassettes) according to the teaching needs of the College. It was also run by members of the Centre's staff for the benefit of all the College departments. But later, in 1982, the Media Library services section's activities became confined to the needs of the Education Department alone. Hence, the organisation of film loans became one of the College Library's responsibilities.

(5) Equipment Loan Section

Similarly, this section was part of the Centre for Communication during the years 1979-82, but its duties have now been taken over by the College Library. This section was concerned with the loan of audio-visual equipment such as film projectors, audio-tape recorders and overhead projectors. It was also concerned with the dispensing of supplies such as audio tapes and overhead transparencies.

Besides, this section acted as a presentation support, this meant it dealt with audio-visual equipment such as a Public Address (PA) system, motion films, or multi-media presentations for staff at any location on campus whenever they were needed, by making appointments and filling in reservation forms showing the time, department and location for receiving such services.

(6) Documentation, Audio Recording and Duplication Section

This section was concerned with photographing, audio recording and video-taping College events as well as providing photography for the College Bulletins, brochures and dealt with the College's Public Relations requirements. Its duties included recording the Board of Trustees meetings, guest speakers, classroom teaching, panel discussions, and duplicating any required audio recording as well as providing music in the student lounge. It also produced heat transparencies and stencils from typing, illustrations and books.

Late in 1982, responsibility for the above-mentioned duties was divided between the Centre and the College Library. The Centre retained responsibility for the production of still pictures, slides, 8mm filming, television recording, duplication and playback of videotapes, in addition to video taping students teaching on the microteaching programme of the Education Department. However, the other duties, such as recording meetings and guest speakers etc., became part of the College Library's responsibilities.

The work of all the above sections of the Centre was done by the previously mentioned seven staff of the Centre for Communication. The overall pattern of the sections and sub-sections are shown in Figure 2-1.

But, as has been pointed out, in 1982 the duties of many of the various sections were divided between the Centre's staff and the College Library. The Teaching Section, Documentation and Video-Recording Sections were still part of the Educational Technology Centre's responsibilities, and also it was intended to resurrect the In-Service training programme again. The rest of the Section's duties were shifted to the College Library as will be indicated when dealing with the second stage of the Centre's development.

In addition to the duties of the various sections of the Centre for Communication, one should mention some other tasks which were also tackled by the Centre in the period 1980-82:

(1) Consultancy

Consulting with staff of all departments at their request and advising on designing instructional systems and materials and authorising the production of their instructional materials by the communication Centre's sections.

(2) Panel Discussion:

Organising panel discussions for staff on instructional communication and learning. These consisted of a body of College lecturers and experts assembled for discussion or consultation under the co-ordination of the Head of the Centre for Communication.

(3) Research Support:

Supporting researches in the field of communication and educational technology by means of providing relevant information, books, photographs, etc.

The responsibilities allocated to the Centre's staff are shown in Figure 2-1. In addition to the teaching of Communication and Educational Technology courses, there were many duties involved in running the sections which were tackled by the seven members of staff. For example, the present writer, besides assisting in teaching the Educational Technology courses, had the responsibility of

- (a) Supervising the Self-Instruction/Production Laboratory.
- (b) Contributing to the Graphics and Production Section.
- (c) Sharing the responsibility of the Media Library.
- (d) Sharing the job of consultation and advising.
- (e) Assisting in the In-Service Training courses.

Another member of the Centre's staff had the responsibilities of:

- (a) Sharing the responsibility of the television production which included playback, dubbing and video-taping the microteaching programmes.
- (b) Assisting in the In-Service Training programmes.

- (c) Contributing to the consultation and the academic instruction.
- (d) Supervising the documentation section.

Hence, the Centre's many duties were apportioned to the small number of its staff who, thus, became overloaded, and the need to employ additional staff emerged.

To summarise then, one can say that the Centre for Communication, or the Centre for Educational Technology as it is now known, was, and still is, responsible for carrying out three main functions which were fully accepted:

- The first function was the teaching of educational technology courses such as "Introduction to Educational Technology", which is a pre-requisite for the Major in Education
- The second function was the Communication programme, which leads to the Minor in Communication.
- The Centre's third function was its service and production role, which included the supplementing and loan of equipment, and graphics production as well as documentation.

At that time, the three functions were under one Head with inadequate staffing. Subsequently, the Centre continuously asked for additional teaching and paraprofessional staff.

CENTRE FOR COMMUNICATION (EDUCATIONAL TECHNOLOGY CENTRE)

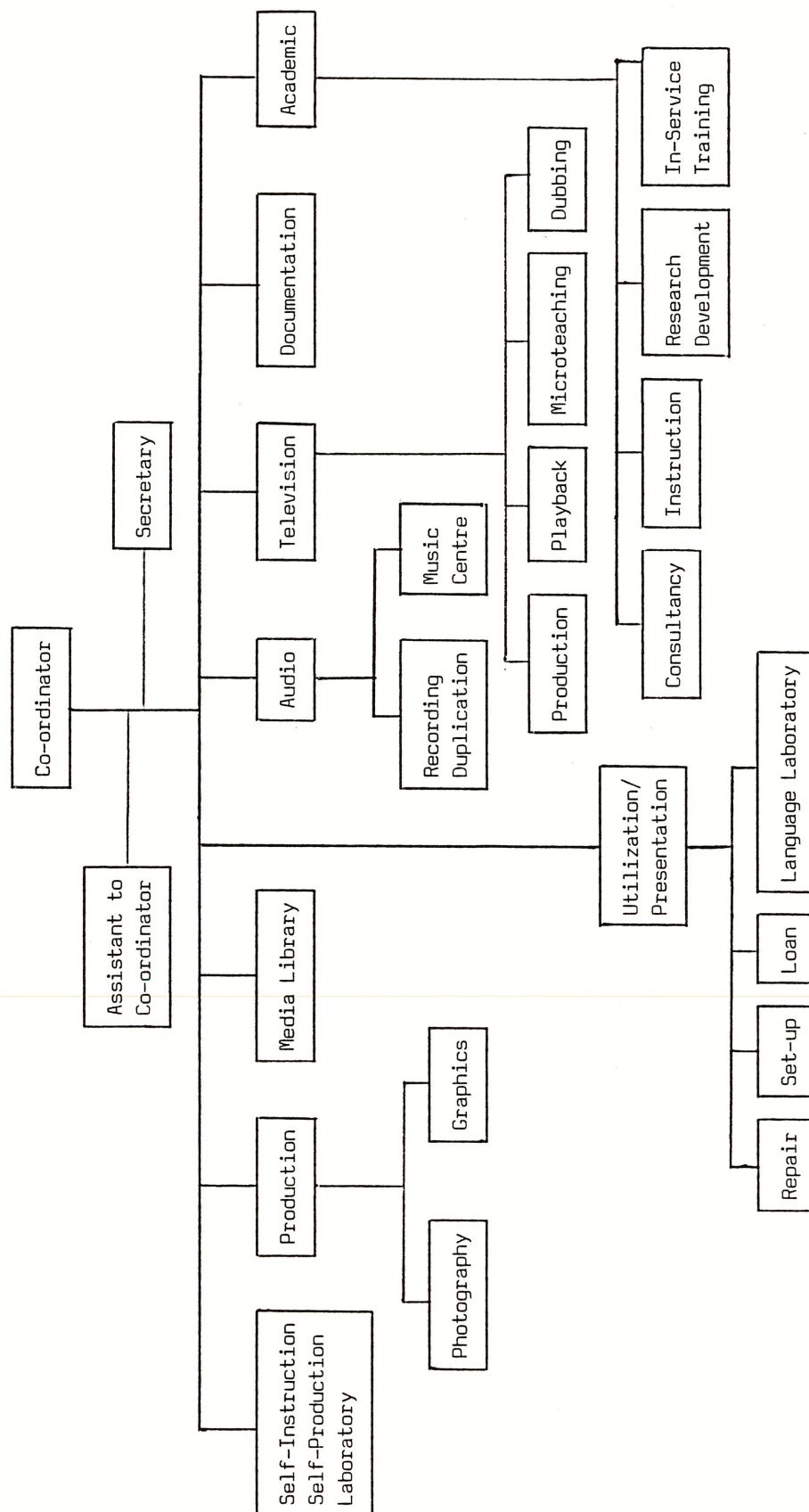


Figure 2-1

Duties of the Centre for Communication in the Period 1979-82

Source : Centre for Communication, UCB.

Hence, the Centre started with the establishment of the organisational structure, so that any additional staff added to the organisation could be assigned to the proper tasks and responsibilities. The Centre also trained its staff with an on-the-job⁽¹⁾ type training scheme.

(1) Arrasjid, H. (30.12.1981). "Clarification of the Centre for Communication's Status". Bahrain: UCB.

THE CENTRE'S SET-UP

As far as the set-up of the Centre was concerned, it was basically an organisation equipped with media hardware (e.g. projectors) and software (e.g. films), which was able to accommodate the important needs of the College staff and students, and also to fulfil the media needs of the College departments.

In 1981, these facilities were divided between the Centre and the College Library, whereby some media hardware and software was retained in the Centre for its particular needs, such as use in the teaching of educational technology courses. Some other media, such as projectors and films, became part of the College Library's responsibilities.

COURSES OFFERED IN THE CENTRE FOR COMMUNICATION, 1979-1981

At its establishment, the Centre made one of its priorities the teaching of educational technology courses at the different levels in the University College. ~~At UCB~~ all courses for the first year students are numbered 100. Second year courses are labelled 200, and so on. The postgraduate courses are numbered 500, etc. These courses were:

- (1) Educational technology course for the Postgraduate Diploma in Education students (PGDE) at the 500 level, which is:

Ed.511 -> "Introduction to Educational Technology"

- (2) Educational technology course for PGDE students at the 500 level:

Ed.512 -> "Systems Approach to Instruction"

- (3) Educational technology course for third year College students (Junior) at the 300 level:

Ed.311 -> "Introduction to Educational Technology"

- (4) Educational technology course also for third year College students at the 300 level:

Ed.351 -> "Programmed Instruction"

- (5) Educational technology course for second year College students (Sophomore) at the 200 level:

Ed.211 -> "Production of Inexpensive Teaching Materials"

- (6) Communication course, offered as part of the Communication programme, for second year students at the 200 level:

Com.202 -> "Film Making"

Two of the above-mentioned courses are still offered at the present time. They are: Ed.511 and Ed.311. One course - Ed.512 - has been discontinued since the academic year 1980-81. The course Ed.351 was also discontinued in 1980-81, but it is likely that it will be offered again in the near future.

The course Ed.211 was offered in 1980-81^{and} then stopped. Nevertheless, it was decided that it should be provided again later on. The course Com.202 was offered only in the academic years 1979-80 and 1980-81, after those years it was abolished because of the cancellation of the Minor in Communication and the Communication programme. Let us now look at these courses in more detail:

Ed.511 - Introduction to Educational Technology

This course was, and still is, offered as part of the Postgraduate Diploma course (PGDE). Three credits are given to this course. (A student of the PGDE programme is expected to register for thirty-three [33] credits in order to fulfil the needs of the Diploma course.) Two credits are given to the two-hour theoretical lecture per week. The third credit is given to the two, or three, hours of laboratory or studio work per week over a period of one semester (approximately 16 weeks).

This course stresses the application of educational technology to instruction and learning. It requires 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."(1)

The course includes implementation of communication research in the design and production of an instructional media package. The package (designed by the student) would be field tested under the supervision of staff from the Centre.

Ed.311 - Introduction to Educational Technology

This course is similar to course Ed.511. It was, and still is, offered to the third year level students, as a pre-requisite course to the Double Major with Education. Three credits are awarded on completion of the course. It is also

"... an introduction to the selection, utilization, and production of instructional materials for a specific subject. Laboratory and field assignments are an integral part of the course."(2)

As mentioned above, this course is similar to Ed.511; however, it differs in certain respects:

- (a) The Ed.311 course is offered to undergraduate students, whereas the 511 is offered to postgraduate students.

(1) UCB (1983-84) Bulletin, Bahrain.

(2) UCB (1980). Department of Education. "Description of the Courses", Bahrain.

- (b) The 311 students - undergraduates - do not have any teaching experience, whilst almost all the 511 students are teachers who have had considerable teaching experience.
- (c) The 511 students would be able to derive the topics of the Media Package, for example, from the actual curriculum which they had taught in schools, to solve any educational problem they might encounter in their teaching process, whereas the 311 students would prepare more general topics such as those concerning industries or local customs and so on.

Although the following two courses have not been offered since 1981, it has been decided to re-introduce them in the near future, depending on the number of teaching staff available, and their teaching loads.

Ed.351 - Programmed Instruction

This course was offered in the second semester of the third year level as an elective course of three credits. It was

"... an examination of the history, theory and researches relevant to the design and development of programmed instruction. This course also included an analysis of the linear and branching systems with their different means of application. Each student prepared an instructional programme beginning with a statement of objectives and progressing through each stage, to include a formative evaluation and subsequent revision."(1)

(1) UCB (1981-82). Department of Education, "Description of the Courses", Bahrain.

Ed.211 - The Production of Inexpensive Teaching Material

This course was offered in the first semester of the second year level. It was an elective course of three credit hours. This course helped the students acquire the necessary techniques and skills required for the production of various types of inexpensive teaching materials such as models, display and demonstration boards, dioramas, puppets, and graphics.

The value of this particular course is essentially a practical one; it can be applied to the school situation where the students may need a variety of inexpensive teaching aids. For this reason, it would seem advantageous to re-introduce this course in the immediate future.

Moreover, there were two other courses which operated for only a short period, 1979-81, and then were discontinued for various reasons, such as inadequate staff to meet the increasing number of students, and also changes in the Educational Technology Section's policy and course priorities:

Ed.512 - Systems Approach to Instruction (Discontinued in 1981)

This course was designed and offered as an elective course for the PGDE students who were doing the Postgraduate Diploma in Education. On completion of this course, three credit hours were awarded.

"This course was designed to examine and demonstrate the use of the systems approach in the development of instructional systems."(1)

(1) UCB (1980). "Communication Programme", Bahrain: Centre for Communication.

The development design was concentrated on the structure and strategies for making instructional decisions. The students had to:

- "(a) Analyse and formulate objectives and learning tasks;
- (b) develop the design system;
- (c) examine the implementation and quality control; and
- (d) analyse the system feedback."⁽¹⁾

In the present writer's view, this course had much to offer in the way of training students how to apply the systems approach in their own teaching. It would certainly be beneficial if this course were introduced again at some time in the future.

Com.202 - Film Making (Discontinued in 1981)

This course was offered to the second year level as an elective one. On completion of this course, three credit hours were awarded. The course dealt with the techniques of making super 8 films, mainly on educational topics. The students produced the film sessions themselves, under the supervision of the Centre's staff, and these films were then discussed and evaluated in workshops. Primary emphasis was placed on the production techniques suitable for documentary film production. Emphasis was placed on informative programming; the entertainment role of films took a subordinate position. Students planned, shot, edited and narrated their own production.⁽²⁾

(1) UCB (1980). "Communication Programme". Bahrain: Centre for Communication.

(2) Arrasjid, H. (June 29 1979). "Film Making". Bahrain: Centre for Communication. UCB (A Proposal).

The course provided an opportunity to work in motion picture direction, animation, sound editing, and other areas of film design and production activities.

Despite the expenses involved in running such a course, the skills obtained by students were of immense benefit. Students, in this case, would be able to produce films for their own future teaching purposes which might not otherwise be available, and which would probably be less expensive.

In 1980, the Centre for Communication had plans for offering a further eleven courses at different university levels. They ranged from courses in Television production, Mass Communication, and Media Management.

These communication courses, which were at the initial planning stage, were never offered in the Centre since the proposed Communication Programme was cancelled in 1981.

SECOND STAGE (1981-1982)

The communication courses (e.g. Television Production) which were previously mentioned in the first stage of the Centre's development, could not be offered at the Centre for Communication and later on at the Educational Technology Section due to several factors, which can be summarised as follows:

- In 1981 the College policy was changed with regard to some of the College departments, especially to the status of the Centre for Communication and the Communication Programme.
- Consequently the Centre for Communication was split up. Its responsibilities were confined to academic functions, while responsibility for production and services was moved to the College Library.
- The new policy of the College was not in favour of offering Communication courses (such as Film Making and Television Production) which led to the Minor in Communication. This was because it was thought (September 1981) that the Gulf University, which would officially open in 1986, would be offering such a course and that duplication might therefore occur. Therefore it was decided to confine the teaching at the Centre to educational technology courses such as "Introduction to Educational Technology" (Ed.311, Ed.511) and "Programmed Instruction" (Ed.351).

- There was also insufficient staff at the Centre for Communication to undertake the teaching load for the various courses at different university levels.

Hence, the Centre's activities were reduced because of the change in the Centre's role in the field of educational technology and communication. Also, the equipment which had been provided for the Centre had to be allocated in two ways: i.e. some was retained by the Centre for Communication, while some equipment was transferred to the Loan Section of the College Library. While most members of staff remained in the Centre, just one technician joined the Library division.

Many problems occurred then, because of this splitting of facilities and equipment, despite the fact that the co-ordinator and staff of the Centre had tried to clarify the situation to other departments and staff members of the University College. The major problem was the confusion which occurred among the general College staff over the responsibilities and services which were offered by the Centre. For example, since its establishment in 1979, many of them were used to consulting certain members of the Centre's staff about particular productions and services, such as producing overhead transparencies. Therefore, they were no longer able to receive such services from the same staff members after the transfer of the service and production section from the Centre.

As a result, there were no staff who could offer the production services to staff members of the other College departments. As mentioned previously, only one member of staff occupied the Loan Section of the Library from 1982 until the present. This section is a type of media library, where members of staff can borrow and utilise the available

types of media hardware and software, such as film projectors, tape recorders, films, tapes, etc. This type of service is no longer being offered by the Centre for Communication.

Furthermore, the title of the Centre for Communication changed when the Unesco expert completed his contract and left the University College of Bahrain in August 1982. It then became the "Educational Technology Section" which is one branch of the Department of Education, which does not deal with the Communication Programme.

THIRD STAGE (1982-1984)

The third stage of the Educational Technology Section started late in 1982. In October 1982, a new co-ordinator of the Educational Technology Section was appointed to the University College of Bahrain. During his period of office, two courses were offered in the academic years 1982-83 and 1983-84:

"Introduction to Educational Technology" 311
for undergraduate students,

and

"Introduction to Educational Technology" 511
for Postgraduate Diploma students.

The latter is a full-time course of two sessions per week in the morning, and a part-time group which attends two sessions per week in the afternoon.

Another lecturer was appointed to the Educational Technology Section during the academic year 1982-83. His responsibilities, in addition to contributing in the planning of a resource centre, were to teach educational technology courses.

In addition, a third lecturer (qualified abroad) joined the Educational Technology Section in September 1984. His job consists of teaching educational technology courses and, in addition, contributing to the setting up and re-organisation of the Educational Technology Section.

Of the three teaching assistants, one still helps in teaching courses, especially the practical part, while the other two left to study abroad. A fourth teaching assistant was appointed to the Educational Technology Section in 1983.

In addition, one technician looks after photographic production in the Educational Technology Section, as well as the video-tape filming.

There is still only one secretary doing the Section's work.

Chapter III

STAFF QUESTIONNAIRE

STAFF QUESTIONNAIRE

INTRODUCTION

The subject of educational technology is of recent development compared with other fields, *eg.* History and Languages. Also, one can consider the University College of Bahrain as a very recent institution since it was established only in 1978.

Hence, in this present work I have investigated the role of educational technology at the University College of Bahrain and aimed to:

- Investigate the influence of educational technology in the College departments.
- Study the trends towards the application of educational technology in various College departments.
- Find out whether the training courses in educational technology are significantly beneficial in changing staff beliefs and attitudes towards learning methods.
- Discover the needs of the College departments in the educational technology field.
- Find the most popular media which can be used in teaching different subjects at the College.
- Find which are the least used types of media in the College.

- Discover how often the College staff use the various types of media in their teaching.
- Find out how far the College staff are involved in the selection and purchase of the educational equipment and materials.
- Trace the problems which confront the College staff in the production and utilisation of teaching aids.
- Invite the College staff to suggest the future development of educational technology at the UCB from their particular point of view.

In order to investigate the above stated objectives, the present writer designed a questionnaire which was to be completed by the College staff of the various departments in order to obtain as many different opinions and views as possible.

However, it is possible that in some respects the questionnaire might not give a very accurate picture of the educational technology situation at the UCB, due to the newness of the subject and inadequate knowledge of the field of educational technology by some of the staff. However, it was considered that the questionnaire method was the most appropriate method to use in such a study, in order to investigate the needs of the staff, and also to use this evidence to propose solutions and recommendations towards the improvement of instructional methods, as well as the improvement of the Educational Technology Section at the UCB.

Further, the questionnaire was produced in both languages, Arabic and English, as some members of the College staff came from other countries, e.g. from Britain, the USA, and from India. Therefore, it was necessary to distribute the questionnaire in both languages to enable the staff to complete it without the need for translation.

A hundred and thirty nine copies of the questionnaire were distributed to staff in all the College departments late in December 1983. Only seventy members of staff filled in the questionnaire and returned it. This represents 50.4% of the staff.

A copy of the questionnaire and its accompanying letter is given in Appendix I (Arabic) and Appendix II (English).

ANALYSIS OF THE STAFF QUESTIONNAIRE

The completed questionnaires from the seventy members of staff represent various opinions from different departments of the College. It will be seen in Figure 3-1 that the majority of staff who responded to the questionnaire were Egyptians (40%), whereas the Bahrainis represent 21.5% of the replies. The American staff members contributed 14.3% of the replies, then the British and the Jordanians (5.7% each group). Following these are two Canadians, and two Pakistanis who each represent 2.8% of the replies. One French member of staff, one German, one Iraqi, one New Zealander, and one Saudi Arabian (1.4% each) also completed the questionnaire.

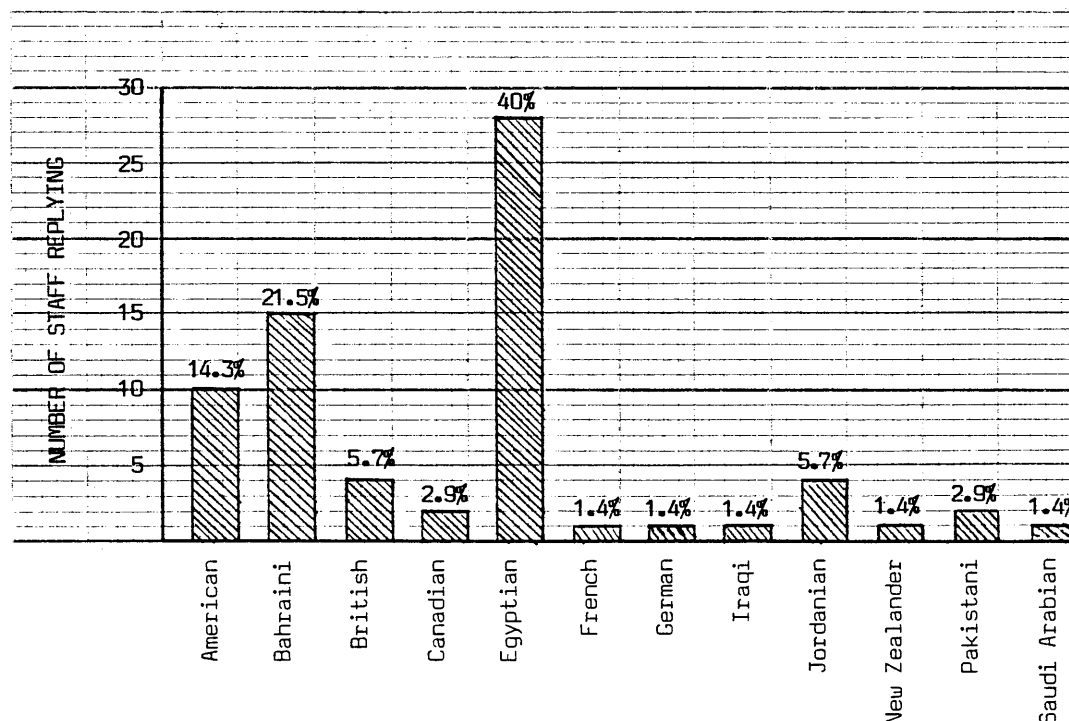


Figure 3-1

Distribution of Nationalities of the UCB Staff
Replying to the Questionnaire

Further, Table 3-1 shows that the majority of the staff who responded to the questionnaire are male (51 - 72.9%).

Sex	Number Responding	%
Male	51	72.9
Female	19	27.1
Total	70	100

Table 3-1

Male/Female UCB Staff who Responded to the Questionnaire

In fact, the small number of female staff who responded to the questionnaire is probably due to the smaller number of female members of staff employed by the College (approximately 53 including the ones on leave for study abroad). Thirty eight female members of staff received the questionnaire, of which 19 (50%) were filled in and returned. On the other hand, the male staff members who responded to the questionnaire (51) represented 50.5% of the total male staff who received the questionnaire (101). This means that the percentage of both male and female staff members who responded to the questionnaire is almost identical, and thus male and female members of staff would appear to be equally interested in filling in this particular questionnaire on educational technology.

The seventy staff members who completed the questionnaire came from ten departments of the University College. Table 3-2 shows the number of copies distributed in each of the College departments, plus the Library, and also the number of completed questionnaires returned.

Department	Number of Questionnaires Distributed	Number of Questionnaires Returned	%
Arabic & Islamic Studies	19	7	36.8
Biology	11	6	54.5
Chemistry	9	3	33.3
Education	21	16	76.2
English	28	12	42.8
General Studies	10	5	50
Library	2	–	0
Mathematics	17	11	64.7
Physical Education	10	4	40
Physics	8	3	37.5
Psychology	4	3	75
Total	139	70	
%	100	50.4	

Table 3-2

Departments of Staff Replying to Questionnaire

Members of staff from all the College departments contributed in filling in the questionnaire, but there were no replies from the Library (possibly because of the small number of academic staff [2]).

It was apparent that most of the replies came from the Education Department (16), which represented 76.2% of the number of staff who received copies of the questionnaire. Next came the Department of Psychology, where three out of four lecturers (75%) sent in their

replies. Third is the Mathematics Department, where eleven lecturers (64.7% of the total of 17 Lecturers) contributed to filling in the questionnaire. Then the Biology Department (6 lecturers out of 11, which is 54.5%), followed by the General Studies Department (5 - 50%), the English Department (12 - 42.8%), the Physical Education Department (4 - 40%), the Physics Department (3 - 37.5%), the Department of Arabic and Islamic Studies (7 - 36.8%), and finally the Chemistry Department (3 - 33.3%). Therefore it will be observed that a considerable number of replies were obtained from the Departments of Education, English and Mathematics (16, 12 and 11 respectively).

Furthermore, if the seventy UCB staff who filled in the questionnaire are classified according to their ages, the following picture emerges:

Age Group	Number of Staff	%
23 - 29	8	11.4
30 - 39	27	38.6
40 - 49	28	40
50 - 58	7	10
Total	70	100

Table 3-3

Age Group of the Staff Responding to the Questionnaire

Obviously the great majority of the replies are from the age groups 30-49 (78.6%). Replies were only received from eight staff (11.4%) in

the age group 23-29, whilst seven replies (10%) were received from the 50-58 age group. This probably merely reflects the age structure of the staff at UCB.

A closer look at the replies shows the number of replying staff who have a Teacher Training Certificate or Diploma and those who have no such qualification.

Department	Number of Staff Replying	With Teaching Qualification	No Teacher Training
Arabic & Islamic Studies	7	2	5
Biology	6	4	2
Chemistry	3	1	2
Education	16	9	7
English	12	5	7
General Studies	5	5	-
Mathematics	11	3	8
Physical Education	4	3	1
Physics	3	2	1
Psychology	3	2	1
Total	70	36	34
%	100	51.5	48.5

Table 3-4

Number of Staff with/without Teaching Qualifications

The members of staff who have a Teacher Training Certificate or Diploma (36) and those without such training (34) are approximately equal. It should be noted that all five staff replying from the General Studies Department hold a teaching qualification.

It will also be seen that most of the Mathematics Department staff who replied to the questionnaire have no teacher training qualification. Similarly most of the staff replying from the Arabic and Islamic Studies Department also have no teacher training.

In addition to investigating whether the staff had received any professional training in Education, the questionnaire also asked whether individuals had attended any special training or course work in the use of teaching aids. The results of this particular investigation is shown below in Table 3-5.

Group (N.70)	Male	Female	Total	%
Members <u>with</u> special training in AVA	25	10	35	50
Members <u>without</u> any training in AVA	26	9	35	50
Total	51	19	70	100

Table 3-5

Number of Staff Replying with/without Special
Training in the Use of Teaching Aids

It will be seen that exactly half of the staff replying had attended special training or course work in the use of teaching aids, i.e. audio visual aids (AVA), and the other half had no such training.

Also, one notices that the number of male staff who attended special training in AVA (25) is approximately equal to the number of staff without such a training (25). Similarly, the two groups of female staff are almost equal in number, ten with special training and nine with no training.

A closer look at the type of AVA training received by the 35 members of staff above, indicates that two members of staff only have taken courses as part of the teacher training course at the University College of Bahrain. Eight members attended In-Service AV training courses or workshops, whilst twenty five members attended different types of training which are listed below according to what they have indicated in their replies to the questionnaire.

- (a) "Required courses besides other courses in the subject of Education during University study."
- (b) "Part of the teacher training programme."
- (c) "One or two semester courses among a university study at undergraduate level, Diploma or Masters level."
- (d) "Special training in the production of some teaching aids such as puppets and educational games for kindergartens."
- (e) "Training in the operation of some educational equipment such as overhead projectors, film projectors, etc."

- (f) "Training in a normal medical school teaching such as using models in order to explain the external and internal details of human bodies and animals."
- (g) "Training for Physical Education programmes to use audio-visual aids such as models, slides, and motion pictures, in order to show body movement."

Thus, the members of staff replying had a considerable variety of background training in AV media. It is interesting to note, however, that half of the staff who were sufficiently interested to reply to the questionnaire had received no formal training in audio-visual teaching methods.

Moreover, members of UCB staff possess various qualifications (i.e. Doctoral degree, Masters, etc.) and Table 3-6 shows the qualifications of the seventy staff who filled in the questionnaire.

	Male	Female	Total	%
Doctoral Degree (PhD)	40	9	49	70
Masters Degree	5	7	12	17.2
Bachelor Degree	5	3	8	11.4
Advanced Diploma	1	-	1	1.4
Total	51	19	70	100

Table 3-6

Qualifications of Staff Replying

Obviously, most of the staff who responded to the questionnaire hold a Doctoral Degree (49 - 70%). Forty of them are male and nine are females. (This represents approximately 53% of UCB staff with Doctoral Degrees.) Seven female members of staff have the qualification of a Masters Degree whereas only five males possess such a qualification. Both represent 17.2% of replying staff. Other groups of five males and three females have a Bachelors Degree (11.4%). Only one male member of staff has the qualification of an Advanced Diploma.

The first question in the UCB staff questionnaire asked whether educational technology should be used in teaching all subject matter. Three alternative answers were provided. The first alternative was "I agree", the second was "I do not agree", and the third was "I do not know". The replies obtained are summarised in Table 3-7.

Table 3-7 reveals that most of the male staff members, 34 out of 51 (67%), agreed that educational technology should be used in teaching all subject matters. Also 10 female members out of 19 (53%) agreed, although six of them did not have any training in the use of teaching aids. On the other hand, seventeen members (24.3%) both males (13) and females (4), did not agree that educational technology should be used in teaching all subject matter. ^{Of this group} apparently, eight male members out of thirteen did not attend training courses in the field of teaching aids, whereas two females in each group, with training and without training, did not agree. Five members, three males and two females, representing 7.1% of the total staff, said that they did not know (possibly due to inadequate information about educational technology). It should, however, be noted that three of the "don't know" staff had followed training courses in AV aids. This may indicate that some AV training courses are not sufficient

No.	Group	Agree		Do Not Agree		Do Not Know		No Reply		Additional Comment Made		Total	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	Staff with Training Courses in Teaching Aids	20	4	5	2	2	1	1	-	-	1		
2	Staff without Training Courses in Teaching Aids	14	6	8	2	1	1	-	2	-	-		
Total		34	10	13	4	3	2	1	2	-	1	51	19
Total		44		17		5		3		1		70	
%		62.9		24.3		7.1		4.3		1.4		100%	

Table 3-7

Range of Staff Opinion about the Use of Educational Technology in all Subject Matter

to convince people of the important role which educational technology can play in learning.

Further, no replies were received from three members (4.3%), one male and two females. Only one female member of staff (1.4%) with some kind of training in AVA commented that "it depends on the subject itself as to whether educational technology can be used".

The second statement asked in the questionnaire was: "Educational technology is concerned only with Audio-Visual equipment". The staff reaction to this statement is shown in Table 3-8:

Question 2	Sex	Agree	Do not Agree	Do not Know	No Reply	Total
"Educational Technology is concerned only with Audio-Visual equipment"	Male	8	38	3	2	51
	Female	1	17	-	1	19
Total		9	55	3	3	70
%		12.9	78.5	4.3	4.3	100

Table 3-8

Staff Opinion about Question 2

Obviously, the majority of staff members (78.5%), both males and females, disagreed that educational technology is concerned only with audio-visual equipment. Even so, there are still some lecturers (12.9%) who think that educational technology is only the matter of operating audio visual equipment such as film projectors and audio tape recorders.

Three male lecturers did not know whether educational technology is concerned only with AV equipment or not. Three other members, two males and one female, left the question unanswered. By looking further at the sex of the groups who disagreed with the idea of the second question, one notices that 74.5% of the total males disagreed with the idea, whilst a high percentage (89.5%) of the total females did not agree with such inadequate ideas about the content of educational technology.

It is very important to find out whether staff members realise that educational technology deals with a systematic approach to teaching; that is the whole idea in question 3, the results of which are given in Table 3-9:

Question 3	Agree	Disagree	Do not Know	No Reply	Total
"Educational technology deals with the systematic approach in teaching."	36	8	19	7	70
%	51.5	11.5	27	10	100

Table 3-9

Staff Opinion about Question 3

Just over half of the staff group (36 staff or 51.5%) agreed that educational technology deals with the systematic approach in teaching, whereas 19 of them (27%) clearly said that they did not know. Whilst comparing the results of Table 3-9 with the previous ones in Table 3-8, one notices that a similar number of lecturers (38) disagreed with the idea that educational technology is concerned only with audio-visual

equipment, and is nearly equal to the number of lecturers (36) who agreed that educational technology deals with a systematic approach in teaching. This probably means that the people who have a relatively clear idea about the concept and role of educational technology at the UCB, represent half of the total number of staff. Only eight lecturers (11.5%) indicated that they disagreed with the idea of question 3. Similarly, nine staff members only (12.9%) (in Table 3-8) think that educational technology is concerned merely with audio-visual equipment. Therefore, there is a small number of staff who have a vague idea of the content and role of educational technology and who, perhaps, need to be more acquainted with the subject matter of educational technology in order to improve the teaching of their own subjects.

Question 4 was devised in order to investigate the attitudes of the UCB staff towards their acceptance of educational technology. They were asked to state their agreement or rejection of the idea which says that "all teachers in different subjects should have a basic training course in educational technology" - their reactions are shown in Table 3-10.

Question 4	Agree	Disagree	Do not Know	No Reply	Total
"All teachers in different subjects ^{should} have a basic training course in educational technology."	53	13	1	3	70
%	75.7	18.6	1.4	4.3	100

Table 3-10

Staff Opinion about Question 4

Nearly three quarters of the total number of staff (75.7%) agreed that every teacher should have a basic training course in educational technology. Therefore, we can still be optimistic about the present situation of educational technology at the University College of Bahrain.

A more detailed breakdown of the replies is shown in Table 3-11. It will be seen that five lecturers out of seven from the Arabic and Islamic Studies Department supported such an idea. The other two rejected the idea of an educational technology course. Actually, one lecturer from this department mentioned (orally to the writer) that educational technology has nothing to do with his subject. He is convinced that Arabic Literature, for instance, does not need equipment and films, it needs lecturing and explanation which could be done by the lecturer himself, and not by a projector.

Similarly, four out of six members of staff of the Biology Department were in agreement with the statement on training courses, whilst the other two disagreed.

Out of a total of three Chemistry staff who answered the questionnaire, two agreed on the idea of receiving training courses in educational technology, and one disagreed with the idea.

Further examination of the replies reveal that the majority of the Education Department, 14 out of 16 members (87.5%) agreed with the idea. Of the remaining two members of the Education Department staff, one disagreed with the idea of question 4, the other left the question unanswered.

Department	Agree	Disagree	Do not Know	No Reply	Total
Arabic & Islamic Studies	5	2	-	-	7
Biology	4	2	-	-	6
Chemistry	2	1	-	-	3
Education	14	1	-	1	16
English	7	4	1	-	12
General Studies	3	1	-	1	5
Mathematics	9	1	-	1	11
Physical Education	4	-	-	-	4
Physics	2	1	-	-	3
Psychology	3	-	-	-	3
Total	53	13	1	3	70
%	75.7	18.6	1.4	4.3	100

Table 3-11

Range of Replying Staff Opinion about
Educational Technology Training Courses

With regard to the English Department, from which twelve replies were received, seven members of staff (58%) agreed with educational technology training courses for teachers, whilst four did not.

Three out of five members (60%) of the General Studies Department agreed upon the idea of training courses. The fourth did not agree, and no reply was obtained from the fifth.

The opinion of staff in the Departments of Mathematics, Physical Education and Psychology, was overwhelmingly in favour of educational technology training courses.

On the other hand, one could ask, to what extent do the College staff think that only the teachers who teach subjects which include practical work, should have training courses in educational technology (e.g. science subjects). This was the core of the statement in question 5, which says: "Only the teachers who teach subjects which include practical work should have training courses in educational technology, e.g. science." So, do the various specialisations in different fields affect the opinions of the College staff towards such matters? See Table 3-12.

Specialisation of Department	Agree	Disagree	Do not Know	No Reply	Total
Arabic & Islamic Studies	2	5	-	-	7
Biology	-	5	1	-	6
Chemistry	-	3	-	-	3
Education	-	16	-	-	16
English	2	9	1	-	12
General Studies	1	4	-	-	5
Mathematics	2	8	-	1	11
Physical Education	1	3	-	-	4
Physics	-	3	-	-	3
Psychology	-	3	-	-	3
Total	8	59	2	1	70
%	11.5	84.3	2.8	1.4	100

Table 3-12

Staff Opinion about Question 5

In fact, educational technology is not concerned solely with practical based subjects. Table 3-12 gives the overall majority.

84.3% from all the College departments did not approve of question 5, but, on the other hand, eight members (11.5%) still think that educational technology courses should be taught to those who teach practical subjects only. Two people (2.8%) indicated that they do not know, and only one person did not answer the question.

Looking at the overall pattern of Table 3-12, one sees that members of four departments unanimously disagreed with the idea of question 5. Namely, the three lecturers from the Chemistry Department, all the sixteen members of the Education Department, and the three members in each of the Physics and Psychology Departments.

Comparing the results of questions 4 and 5, it is apparent that the majority of the staff are aware of the role of educational technology in teaching except for some, who, most probably, have insufficient awareness about the significance of educational technology.

Furthermore, to what extent did the College staff agree to construct behavioural objectives which clarify the performance, conditions and standard in achieving the objectives in their teaching? Question 6 deals with this matter. Table 3-13 reveals the various responses to this statement: "Every teacher should construct the behavioural objectives which clarify the performance, conditions, and standard in achieving the objectives in his teaching."

Question 6	Agree	Disagree	Do not Know	No Reply	Total
"Every teacher should construct the behavioural objectives ..."	57	9	3	1	70
%	81.4	12.9	4.3	1.4	100

Table 3-13

Staff Opinion about Question 6

Gagné and Briggs (1979) say that, typically,

"... descriptions of objectives are descriptions of what must be observed in order to verify that the desired learning has taken place. Also, the systematic design of lessons making up a topic or course will result in the development of a sizeable collection of statements of objectives."

Thus, 57 lecturers (81.4%) agreed upon the importance of constructing behavioural objectives. They represent the majority of the staff. Nevertheless, nine lecturers (12.9%) are against constructing these objectives.

Question 7 of the questionnaire asked whether the teacher should give his students the opportunity to know the objectives of his teaching course before starting it. Table 3-14 reveals that 56 lecturers (80%) agreed with the statement in question 7, while eleven of them (15.8%) did not agree. However, many modern educators believe that the objectives of teaching should not be something secret that must be kept to oneself, but rather should be shared with the students. They believe that the more the students know the objectives of the lesson and what

sort of outcome is expected from them, the more they get involved in the lesson itself.

"Instructors simply function in a fog of their own making unless they know what they want their students to accomplish as a result of their instruction." (Mager [1975])

	Agree	Disagree	Do not Know	No Reply	Comment only	Total
"The teacher should give his students the opportunity to know the objectives"	56	11	1	1	1	70
%	80	15.8	1.4	1.4	1.4	100

Table 3-14

Staff Agreement/Disagreement about the Students having
the opportunity to know the course objectives

According to Table 3-14, only one lecturer (1.4%) did not know whether that is true or not. Similarly, only one lecturer left the answering space empty. One lecturer commented "not for all subjects". We might ask: Why not? Are there special subjects in which we give our students the opportunity to know our teaching objectives, whereas in other subjects such a thing should not occur?

If behavioural objectives are used, the students know what they are to do, the teacher knows what he has to teach, and both know when success has been achieved. Hence, 80% of the staff were convinced about such a matter, whereas 15.8% of the staff did not agree yet.

Besides, to what extent does the College staff agree upon whether the assessment of the students' work should reflect the course objectives? The range of agreement is shown in Table 3-15.

Question 8	Agree	Disagree	Do not Know	No Reply	Total
"Students' assessment should reflect the course objectives"	65	2	2	1	70
%	93	2.8	2.8	1.4	100

Table 3-15

Range of Staff Opinion about Students' Assessment and Course Objectives

The majority of staff (65 : 93%) agreed that students' assessment should reflect the course objectives. Indeed, an important value of objectives, as Rowntree (1982) indicated, is that

"... they help you decide on appropriate means of evaluation and assessment: on ways of monitoring the effects and effectiveness of your course and finding out what and how well your students are learning."

He added,

"Unless you have some means of realistically testing the strengths and weaknesses of your course, and what students do and do not get out of it, you will be in no position to make rational improvements to it."

Question 9 put forward the following statement: "The teacher should use as many audio-visual aids as he can in one lesson." Table 3-16 shows the range of opinions of both male and female members of staff regarding this idea.

Opinions about Question 9	Male	Female	Total	%
Agree	12	3	15	21.4
Disagree	34	15	49	70
Do not know	3	-	3	4.3
No reply	2	1	3	4.3
Total	51	19	70	100

Table 3-16

Range of Staff Opinion about Question 9

It is quite obvious that most staff members (70%) disagreed with the idea of using as many AV aids as possible in one lesson. The majority of male staff replying (34), and also the majority of female staff (15) indicated their disagreement of question 9. They presumably think that the success of many lessons should not be measured by the quantity of AV aids used in teaching the lesson. But, on the other hand, there is a considerable number of lecturers (15 : 21.4%) who agreed upon using as much audio-visual aids as possible in one lesson. Twelve of them are males and three are females.

Not one female member of staff who replied indicated that she did not know about this idea, while three males (4.3%) did not know whether this matter should be approved or not. No replies were obtained from three members of staff (two males, and one female).

The purpose of question 10 was to see how far the UCB staff believe that a lesson could be useful and understood by using only one type of

audio-visual aid, since the statement of question 10 said: "A lesson could be useful and understandable by using only one type of audio-visual aid (i.e. tape recorder ...)." Table 3-17 reveals the range of opinions about such a matter.

Male and Female Staff Replying	Agree	Disagree	Do not Know	No Reply	Total
Male	26	19	3	3	51
Female	12	5	1	1	19
Total	38	24	4	4	70
%	54.3	34.3	5.7	5.7	100

Table 3-17

Staff Opinion About Using One Type of AVA in a Lesson

Only 38 lecturers out of seventy (54.3%) agreed upon the idea of the possible success of a lesson using only one type of AV aid. Twenty six male staff and twelve females are convinced about this matter, whilst 24 (34.3%) (19 males and 15 females) disagreed with the possibility of a lesson being worthwhile by using only one AV aid.

Question 11 indicates the following statement: "The teacher should know the basic use and application of teaching aids (i.e. overhead projector, slide projector etc.)." One notices that the vast majority of UCB staff members who replied are convinced about the value of such an idea. Sixty five lecturers, males (47) and females (18), representing 92.8%, indicated their positive attitude towards knowing,

at least the basic use and application of the teaching aids. A negative attitude came only from two members of staff, one male and one female, which represented 2.9% of the total staff responding to the questionnaire. Only one male (1.4%) indicated that he did not know, and no reply was given by two male members of staff (2.9%). It is apparent, therefore, that apart from one female staff member, all the replying females (18) agreed upon the statement of question 11. Except for four male staff members, forty seven male members agreed that *teachers should know how to use AV aids*. Table 3-18 shows the overall pattern of opinions of this context.

Staff Replying to Question 11	Agree	Disagree	Do not Know	No Reply	Total
Male	47	1	1	2	51
Female	18	1	-	-	19
Total	65	2	1	2	70
%	92.8	2.9	1.4	2.9	100

Table 3-18

Staff Opinion about Question 11

Moving on to question 12, this stated that, "The teacher is not required to know about operating AV equipment, and the University should provide technicians for this job." The UCB staff reaction to the above statement is shown in Table 3-19, listed according to the different departments.

Department	Agree	Disagree	Do not Know	No Reply	Total
Arabic & Islamic Studies	2	3	1	1	7
Biology	-	6	-	-	6
Chemistry	-	3	-	-	3
Education	3	12	1	-	16
English	2	9	-	1	12
General Studies	1	3	-	1	5
Mathematics	1	9	1	-	11
Physical Education	1	3	-	-	4
Physics	-	3	-	-	3
Psychology	-	3	-	-	3
Total	10	54	3	3	70
%	14.3	77.1	4.3	4.3	100

Table 3-19

Staff Opinion about the Technician's role in Operating AVA Equipment

Apparently, all the staff members replying from the Science Departments (Biology, Chemistry and Physics) as well as the Psychology Department, disagree with the statement made in question 12. In addition, most members of the Departments of Education (12), English (9), General Studies (3), Mathematics (9), and Physical Education (3), also disagree with the statement. Three members of the Arabic and Islamic Studies Department disagreed with the idea in question 12, whilst two members agreed that the teacher should not be required to know how to

operate AV equipment and that the University should provide technicians for this kind of job. Three members of staff from the Education Department, two from the English Department, and one each from the Departments of General Studies, Mathematics and Physical Education, also made similar replies.

Hence, the great majority of staff members (54), representing 77.1%, disagreed with the statement that the University College should provide technicians to use the AV equipment in their lectures. It is likely that the ten members of staff (14.3%) who approved the statement made in question 12, know very little about operating AV equipment, and probably agreed to have a technician for this purpose.

Comparing the results of question 12 with the results of question 11, one can notice that the majority of replying staff (65 : 92.8%) agreed with the idea of question 11 that the teacher should know the basic use and application of teaching aids (e.g. overhead projector). In question 12 those who disagreed with the idea that the teacher is not required to know about operating AV equipment, are fewer in number but still represent 77.1% of the total replies, while only 10 (14.3%) members of staff agreed with the idea. This compares with only two members (2.9%) who disagreed with the idea in question 11.

Regarding the production of teaching aids, question 13 stated that "It is desirable for the teacher to master some skills in producing some of the teaching aids in order to use them in his/her teaching." The replies from various UCB departments are given in Table 3-20.

Department	Agree	Disagree	Do not Know	No Reply	Total
Arabic & Islamic Studies	6	-	-	1	7
Biology	6	-	-	-	6
Chemistry	2	1	-	-	3
Education	15	1	-	-	16
English	11	-	-	1	12
General Studies	4	-	-	1	5
Mathematics	11	-	-	-	11
Physical Education	3	1	-	-	4
Physics	2	1	-	-	3
Psychology	3	-	-	-	3
Total	63	4	-	3	70
%	90	5.7	0	7.3	100

Table 3-20

Replies Regarding Teachers' Production of Teaching Aids

Table 3-20 indicates that all the replying staff from the Departments of Biology, Mathematics and Psychology agree with question 13, as do the majority of staff from all other departments. Therefore, it is obvious that the majority of staff (63 : 90%) agreed that it is desirable for a teacher to produce some of the teaching aids needed for his/her teaching.

Question 14 tried to investigate staff opinion on whether "It is a waste of the teacher's time for him/her to prepare teaching aids for his/her courses." The different opinions which were obtained from the replying staff are summarised in Table 3-21.

Apparently, all the replying staff from the Biology Department again disagreed with the given statement, together with the staff from the Departments of Chemistry, English, and Physical Education.

In the four Departments of Education, General Studies, Physics and Psychology, one member of staff in each department agreed with the statement, but all the rest in these four departments did not agree that preparing teaching aids is wasting a teacher's time. Two members out of seven from the Arabic and Islamic Studies Department's staff agreed with the statement.

Department	Agree	Disagree	Do not Know	No Reply	Total
Arabic & Islamic Studies	2	4	-	1	7
Biology	-	6	-	-	6
Chemistry	-	3	-	-	3
Education	1	15	-	-	16
English	-	12	-	-	12
General Studies	1	3	-	1	5
Mathematics	-	10	1	-	11
Physical Education	-	4	-	-	4
Physics	1	2	-	-	3
Psychology	1	2	-	-	3
Total	6	61	1	2	70
%	8.6	87.1	1.4	2.9	100

Table 3-21

Staff Opinion on "It is a waste of the teacher's time for him to prepare teaching aids for his courses."

Therefore, the majority from all the College departments (61 : 87.1%) did not support the idea in question 14. Only six of them agreed (8.6%). One did not know (1.4%) and two (2.9%) did not answer the question.

In question 15 the College staff were asked if they agreed that the University College should provide a number of technicians and graphics people to produce materials for all the departments when needed. The staff opinions about this idea are given in Table 3-22.

Department	Agree	Disagree	Do not Know	No Reply	Comment Only	Total
Arabic & Islamic Studies	6	-	-	1	-	7
Biology	2	2	2	-	-	6
Chemistry	1	1	1	-	-	3
Education	16	-	-	-	-	16
English	7	2	2	-	1	12
General Studies	4	-	-	1	-	5
Mathematics	7	-	3	1	-	11
Physical Education	2	-	1	-	1	4
Physics	2	1	-	-	-	3
Psychology	3	-	-	-	-	3
Total	50	6	9	3	2	70
%	71.4	8.6	12.8	4.3	2.9	100

Table 3-22

Staff Opinions about the Provision of Technician Support at the UCB

A closer examination of Table 3-22 reveals that everyone replying from the Education Department (16), as well as the Psychology Department (3), agreed that such support staff should be provided. A total of 50 members of staff from all the College departments (representing 71.4%) agreed with the statement given in question 15, whereas a group of six members of staff (representing 8.6%) disagreed - two from each of the Biology and English Departments, and one from each of the Chemistry and Physics Departments. Two lecturers (2.9%) wrote additional comments in replying to question 15. One English Department lecturer said that it is not always necessary to provide technicians in order to produce teaching materials, however it depends on the type of lesson and needs.

The other comment, from a lecturer in the Physical Education Department, indicated that "some teaching materials should be provided, but people can produce some of their own as well".

The Media Resource Centre is a new part of the Educational Technology Section. It was set up only in 1983 during the third stage of the Section's development. At the second stage there was a Media Library, as mentioned previously, which provided both hardware (e.g. projectors) and software (e.g. films) for loan and retrieval by the College staff. Now, the Media Resource Centre is concerned with providing printed materials, such as handouts and AV brochures as well as educational kits, 16mm films, video tapes, etc. Hence, question 16 stated that the Media Resource Centre at the UCB lacked space and staff. In analysing the replies to this question, therefore, it is probably helpful to look at the number of years for which the staff have been employed at the UCB. The overall pattern of those staff replying to the questionnaire is given in Table 3-23.

No.	Number of Years Employed at UCB	Number of Staff	%
1	0 - 1 year	29	41.4
2	2 - 3 years	32	45.7
3	4 - 5 years	9	12.9
4	6 - 7 years	-	0
Total		70	100

Table 3-23

Number of Employment Years of Staff at the UCB

Hence, replies were obtained from 32 members of staff (45.7%) who had been employed between 2 and 3 years at the UCB, and 29 (41.4%) from those in their first year of employment. However, only 9 of the third group - 4 - 5 years - had replied, while no replies at all were received from the group with more than five years service.

Consequently, one can look at the replies to question 16 in order to see whether there is any relation between what the staff know about the Educational Technology Section and the length of their employment at the UCB.

The various responses as to whether the staff agreed or disagreed that there was a lack of space and staff in the Media Resource Centre, are given in Table 3-24.

	Number of Years Employed at UCB	Agree	Disagree	Do not Know	No Reply	Total
1	0 - 1 year	8	5	15	1	29
2	2 - 3 years	14	1	16	1	32
3	4 - 5 years	5	2	2	-	9
	Total	27	8	33	2	70
	%	38.6	11.4	47.1	2.9	100

Table 3-24

Opinions about Space and Staff at the Media Resource Centre

A total of thirty three lecturers (47.1%) from the three groups did not know about the space and staff of the Media Resource Centre, and it is possible that they did not even ~~know~~ about its existence. If this is the case then this may indicate a lack of communication between the Educational Technology Section and the other departments. Nevertheless, there are twenty seven members of staff (38.6%) who were aware of the inadequacy of space and staff at the Media Resource Centre, therefore they agreed with question 16. Most of these (14) were from the second group (2-3 years service). Only two (2.9%) (one from the first group and the other from the second group) have left the question unanswered.

Question 17 stated that "There is a lack of technicians for equipment maintenance in the Media Resource Centre at the UCB". The staff responses to this question are shown in Table 3-25.

	Number of Years Employed at UCB	Agree	Disagree	Do not Know	No Reply	Total
1	0 - 1 year	5	2	21	1	29
2	2 - 3 years	13	-	18	1	32
3	4 - 5 years	4	-	5	-	9
	Total	22	2	44	2	70
	%	31.4	2.9	62.8	2.9	100

Table 3-25

Opinions on the Adequacy of Equipment Maintenance
at the Media Resource Centre

Table 3-25 clearly indicates that the biggest number from the three groups (44 : 62.8%) did not know whether there is a lack of technicians in the Media Resource Centre. Only 22 out of 70 members of staff (31.4%) stated that there were inadequate numbers of technicians. Two persons (2.9%) from the first year of employment group disagreed with the statement of question 17.

These replies indicate that a considerable number of staff lack detailed knowledge of the maintenance problems being encountered by the Media Resource Centre. There has been no maintenance technician since 1981, and equipment is now sent to outside agencies for repair.

Question 18 asked whether the College staff support the idea of constructing a large media resource centre at the UCB. The various responses are shown in Table 3-26.

	Number of Years Employed at UCB	Agree	Disagree	Do not Know	No Reply	Total
1	0 - 1 year	20	4	3	2	29
2	2 - 3 years	28	1	3	-	32
3	4 - 5 years	7	1	1	-	9
	Total	55	6	7	2	70
	%	78.6	8.5	10	2.9	100

Table 3-26

Staff Opinions about Constructing a big Media Resource Centre at UCB

Thus, the majority of the three groups of staff (78.6%) are in favour of the idea of a large media resource centre. Twenty out of twenty nine from the first group, twenty eight out of thirty from the second group, and seven out of nine from the third group are in favour.

TEACHING AIDS AND THE TEACHER

Questions 19-25 investigated staff views on the effect of using teaching aids. Question 19 put forward the idea that there is a considerable influence on students (i.e. it attracts their attention) when the teacher uses teaching aids in teaching his subject. So, to what extent do the UCB staff think that this is true? The replies are given in Table 3-27. Indeed, Table 3-27 shows that, in addition to the Chemistry and Psychology staff who totally agreed with the statement in question 19, all the other departments similarly supported the statement (either to a great extent [48.6%] or to a lesser extent [47.1%]). However, one member of the General Studies Department argued that teaching aids have no influence whatsoever on the achievements of students; two lecturers did not reply to this question.

Department	A Great Deal	To Some Extent	Not at All	No Reply	Total
Arabic & Islamic Studies	2	4	-	1	7
Biology	2	4	-	-	6
Chemistry	3	-	-	-	3
Education	12	4	-	-	16
English	2	10	-	-	12
General Studies	2	1	1	1	5
Mathematics	4	7	-	-	11
Physical Education	3	1	-	-	4
Physics	1	2	-	-	3
Psychology	3	-	-	-	3
Total	34	33	1	2	70
%	48.4	47.1	1.4	2.9	100

Table 3-27

Opinions about the Influence of Teaching Aids in Subject Teaching

On the whole, therefore, it seems that the UCB staff agree on the primary role that teaching aids play in the teaching process.

Table 3-28 shows what the College staff think about the statement in question 20, namely: "Using teaching aids in the classroom increases the students' interaction."

Department	A Great Deal	To Some Extent	Not at All	No Reply	Total
Arabic & Islamic Studies	2	4	-	1	7
Biology	4	2	-	-	6
Chemistry	3	-	-	-	3
Education	12	4	-	-	16
English	1	9	1	1	12
General Studies	3	1	-	1	5
Mathematics	5	6	-	-	11
Physical Education	2	2	-	-	4
Physics	2	1	-	-	3
Psychology	2	1	-	-	3
Total	36	30	1	3	70
%	51.5	42.8	1.4	4.3	100

Table 3-28

Opinions about "Using teaching aids increases the students' interaction"

One notices that, apart from one lecturer from the English Department who rejected the idea of question 20, and three members of staff who did

not reply, all the rest from the ten departments showed positive attitudes towards the role of teaching aids in increasing the students' interaction. Thirty six lecturers (51.5%) thought the statement of question 20 to be true to a great extent, while thirty other lecturers (42.8%) supported the statement only to some extent.

Question 21 stated that "Using teaching aids in my subject leads the student to become idle, and limits their imagination and creativity." The responses of the staff to this statement are given in Table 3-29.

Staff	A Great Deal	To Some Extent	Not at All	No Reply	Total
Male	-	14	35	2	51
Female	-	-	19	-	19
Total	-	14	54	2	70
%	0	20	77.1	2.9	100

Table 3-29

Staff Opinions Concerning Question 21

It is interesting to note that there is some divergence of opinion by male and female staff on this statement. All 19 female members of staff did not accept the statement. However, 14 male members of staff thought that the statement was true "to some extent", although 35 male members of staff agreed with their female colleagues.

One female lecturer made an additional comment that teaching aids do not lead the student to become idle at all, unless the teaching aids are over-used and become boring to the student.

To further investigate UCB staff opinions, one may ask "Does the lecturer's age affect his acceptance and use of the various teaching aids?" As previously mentioned, the age of the UCB staff replying ranges from 23 to 58 years. Therefore, what are the opinions of the staff in respect of question 22 according to their age groups? The question put forward the following statement: "While using teaching aids, the students pay more attention to them than to the actual lesson (subject)."

Table 3-30 shows the replies.

Age Group	A Great Deal	To Some Extent	Not at All	No Reply	Comment Only	Total
(1) 23 - 29	1	1	5	-	1	8
(2) 30 - 39	-	11	15	-	1	27
(3) 40 - 49	3	14	8	2	1	28
(4) 50 - 58	-	3	4	-	-	7
Total	4	29	32	2	3	70
%	5.7	41.4	45.7	2.9	4.3	100

Table 3-30

Staff Opinions about Question 22

Although the numbers are not large, it is clear that there is some difference of opinion with the age of the lecturers. Three out of seven staff in the 50-58 year age group (43%) think that the statement in question 22 is true to some extent. Seventeen out of twenty eight staff in the 40-49 year age group (61%) think that the statement is true either to some extent (14) or to a great deal (3). In the 30-39 year age group

eleven out of twenty seven staff (41%) think that the statement is true to some extent, while in the 23-29 age group only two out of eight staff (25%) think that it is either true to a great extent (1), or to some extent (1).

Question 23 was concerned with investigating views on whether using teaching aids created difficulties for the teacher in class-management. That is what question 23 introduces in order to find out the staff reaction concerning this matter. The pattern of their opinions is shown in Table 3-31 according to their age groups.

No.	Age Group	A Great Deal	To Some Extent	Not at All	No Reply	Comment Only	Total
(1)	23 - 29	1	1	5	-	1	8
(2)	30 - 39	1	4	21	1	-	27
(3)	40 - 49	-	11	16	1	-	28
(4)	50 - 58	-	2	5	-	-	7
Total		2	18	47	2	1	70
%		2.9	25.7	67.1	2.9	1.4	100

Table 3-31

Staff Opinions Regarding Class Management Difficulties

It seems that there are some differences in the four groups' opinions about the statement related to question 23. Five out of seven (72%) in the 50-58 year age group did not agree with the statement, whilst only two lecturers (28%) of the same group considered the

statement to be true to some extent. Sixteen lecturers (57%) out of twenty eight in the 40-49 year age group rejected the idea related to question 23, while eleven (39.3%) thought that it is true to some extent. In the 30-39 year age group, the majority (21) - representing 77.8% - did not approve of the statement, and only five lecturers of this group (18.5%) thought the statement to be true to a great extent (1) or to some extent (4).

Besides, in the younger age group (23-29) 62.5% of the staff were against the statement, whereas two out of eight (25%) supported it. In addition, one member of this latter group pointed out that everything depends on the teacher himself/herself and the way he/she monitors the class while using any type of teaching aid.

Question 24 attempted to find out whether or not the staff think that "AV aids may substitute for the teacher and reduce his/her effectiveness in the classroom." The various responses obtained from the staff members are summarised in Table 3-32.

No.	Age Group	A Great Deal	To Some Extent	Not at All	No Reply	Comment Only	Total
(1)	23 - 29	-	-	8	-	-	8
(2)	30 - 39	1	2	24	-	-	27
(3)	40 - 49	-	2	24	1	1	28
(4)	50 - 58	-	1	6	-	-	7
Total		1	5	62	1	1	70
%		1.4	7.2	88.6	1.4	1.4	100

Table 3-32

Staff Opinions Regarding Question 24

Clearly, the vast majority of staff (88.6%) from all the four age groups indicated that AV aids do not substitute for the teacher and thereby reduce his/her effectiveness in the classroom at all. One comment was received from a member of staff who stated that there is no value in AV aids for the classroom without the existence of the teacher.

It is sometimes claimed that the use of AV aids is time consuming. Thus, question 25 asked to what extent the College staff believed that "Using AV aids in the classroom requires more time than that allocated for the lesson period." The replies summarised in Table 3-33 are also grouped according to the staff age group.

No.	Age Group	A Great Deal	To Some Extent	Not at All	No Reply	Comment Only	Total
(1)	23 - 29	-	1	7	-	-	8
(2)	30 - 39	1	8	18	-	-	27
(3)	40 - 49	2	13	10	2	1	28
(4)	50 - 58	1	3	3	-	-	7
Total		4	25	38	2	1	70
%		5.7	35.7	54.3	2.9	1.4	100

Table 3-33

Staff Opinions on AVA being Time Consuming

More than half of the replying staff (38) from the four age groups, representing 54.3%, indicated that what was stated in question 25 is not true because using AV aids in the classroom does not require more time than the time allocated for the lesson period. However, the divergence

of opinion is related, more or less, to the age of the staff members. For example, four out of seven lecturers in the 50-58 year age group think that the statement of question 25 is true to a great extent (1) or to some extent (3). Whereas, in the 40-49 year age group, thirteen out of twenty eight thought the statement to be true to some extent, and only two of the same age group completely favoured it.

Moreover, only nine lecturers out of twenty seven in the 30-39 year age group considered the statement to be true to some extent (8), or to a greater extent (1), while only one out of eight in the 23-29 year age group supported the statement.

The Media Loan Section at the University College is concerned with the provision of instructional equipment for the College departments. As previously mentioned in Chapter II, this section was part of the Centre for Communication until 1982 when it was split from the Centre to become part of the College Library. At the present time, there is only one technician in the Loan Section who was appointed to look after the provision of both hardware (e.g. projectors and tape recorders) and software (e.g. OHP transparencies and audio tapes).

The next three questions (26-28) investigated staff views about the Media Loan Section. An important question to ask is "by whom is the Loan Section mostly used?" and "what are the departments which utilise media for their teaching purposes?". Replies to question 26 are given in Table 3-34.

Department	A Great Deal	To Some Extent	Not at All	No Reply	Comment Only	Total
Arabic & Islamic Studies	2	2	2	1	-	7
Biology	-	2	3	1	-	6
Chemistry	-	3	-	-	-	3
Education	5	7	1	1	2	16
English	-	4	6	-	2	12
General Studies	2	1	1	1	-	5
Mathematics	1	6	4	-	-	11
Physical Education	-	3	1	-	-	4
Physics	-	1	2	-	-	3
Psychology	1	1	1	-	-	3
Total	11	30	21	4	4	70
%	15.7	42.9	30	5.7	5.7	100

Table 3-34

UCB Departments and the Use of the Media Loan Section

Apparently, not many people from the College departments use the Loan Section a great deal. The maximum of five members of staff out of 16 from the Education Department are using it "a great deal", in addition to two people from the Arabic and Islamic Studies Department, similarly two from the Department of General Studies, and one from the Mathematics Department. It is also obvious that members from all ten departments are using the Loan Section to some extent, especially all the three members of the Chemistry Department. Therefore, a total of 41 members of staff out

of 70 (58.6%) use the Loan Section either a great deal or to some extent. On the other hand, there are some members of staff who do not use this section at all. Apart from the Chemistry Department, they come from all the other departments, and represent 30% of the total number of replying staff.

To investigate the adequacy of equipment at the Loan Section, question 27 tried to find out to what extent the College staff think that there is a lack of equipment in the section. Their replies are given in Table 3-35, arranged according to the department from which they came.

Department	A Great Deal	To some Extent	Not at All	No Reply	Comment Only	Total
Arabic & Islamic Studies	-	4	-	2	1	7
Biology	2	2	2	2	-	6
Chemistry	1	1	-	-	1	3
Education	4	7	2	-	3	16
English	1	3	2	2	4	12
General Studies	-	1	1	1	2	5
Mathematics	1	3	3	2	2	11
Physical Education	-	2	-	-	2	4
Physics	2	-	-	1	-	3
Psychology	-	2	1	-	-	3
Total	11	25	9	10	15	70
%	15.7	35.7	12.9	14.3	21.4	100

Table 3-35

Staff Opinions about the Lack of Equipment at the Loan Section

Nine members of staff (12.9%) indicated that there is no lack of equipment in the Loan Section at all, but eleven members of staff (15.7%) pointed out that there is a great deal of inadequacy in equipment provision in the section. However, twenty five members of staff (35.7%) from all the College departments, except Physics, indicated that there is a lack of equipment to some extent. Ten members of staff (14.3%) left the question unanswered, probably because they were not sure about this matter. Fifteen members of staff (21.4%) commented that they did not know whether there was a lack of equipment in the Loan Section or not. Therefore, the picture of the Loan Section seems to be unclear for twenty five members of staff (35.4%) who did not reply, or who commented that they did not know enough to answer the question.

Question 28 stated that "There is a lack of staff in the Loan Section" in order to find out to what extent the College staff agreed or disagreed with this statement. The replies are shown in Table 3-36.

Department	A Great Deal	To Some Extent	Not at All	No Reply	Comment Only	Total
Arabic & Islamic Studies	2	1	1	2	1	7
Biology	3	1	-	2	-	6
Chemistry	-	1	-	-	2	3
Education	5	4	3	1	3	16
English	2	-	3	3	4	12
General Studies	-	2	-	1	2	5
Mathematics	1	3	3	2	2	11
Physical Education	-	2	-	-	2	4
Physics	2	-	-	1	-	3
Psychology	-	2	1	-	-	3
Total	15	16	11	12	16	70
%	21.4	22.9	15.7	17.1	22.9	100

Table 3-36

Staff Opinions about the Lack of Staff in the Loan Section

There is almost an equivalent number of UCB staff who thought that there is a great lack of staff in the Loan Section (15) and those who thought that there is some lack of staff in it (16). These two groups from the various College departments represented 44.3%, whilst, on the contrary, eleven members of staff (15.7%) indicated that there is no shortage of staff in the section at all. Nevertheless, no response was obtained from 12 members of staff (17.1%), and 16 commented that they do not know whether there is a lack of staff in the section or not.

Therefore, it is obvious that 28 members of staff (40%) did not have adequate information about the Loan Section and in addition they were probably reluctant to use this section for some reason.

MEDIA AND THE UCB TEACHERS

There is a vital need for audio-visual media in the teaching/learning situation. Once the teacher is able to handle properly both hardware (i.e. equipment) and software (i.e. films and tapes), then he will be able to utilise them fully in his teaching.

Teachers can learn to operate the various kinds of teaching equipment (i.e. projectors and recorders) either by the process of self-instruction, for example by using guide sheets, slides and recorded tapes, or by attending courses or workshops especially designed for this purpose.

Accordingly, the questionnaire attempted to find out which AV equipment the staff found easy or difficult to operate, and also the kinds of AV equipment which they used most frequently. This investigation was intended to help in the future planning of educational technology courses, training and media provision at the UCB. Therefore, seventy responses obtained from the UCB staff are exhibited in Table 3-37 and also graphically shown in Figure 3-2.

A closer look at Table 3-37 and Figure 3-2 reveals that the most popular type of media and also the easiest to operate for sixty four members of staff out of 70 (91.4%) is the cassette tape recorder, where 39 found it easy to operate in addition to 25 who could also teach others to use it.

Second in popularity came both the reel-to-reel tape recorder and the overhead projector (OHP), where 36 members of staff (51.4%) operated each of these two types of media easily, besides 17 members of staff who, in addition to easy operation, could also teach others. These two groups represented 75.6% of the total 70 staff members. Nevertheless, there

Media	Have Never Operated It	Find It Difficult To Operate	Find It Easy To Operate	I Can Teach Others	No Reply	Total
1 Reel-to-Reel Tape Recorder	13	2	36	17	2	70
%	18.6	2.9	51.4	24.2	2.9	100
2 Cassette Tape Recorder	4	-	39	25	2	70
%	5.7	0	55.7	35.7	2.9	100
3 Video-tape Recorder (VTR)	18	4	31	16	1	70
%	25.7	5.7	44.3	22.9	1.4	100
4 Opaque Projector	36	-	22	10	2	70
%	51.4	0	31.4	14.3	2.9	100
5 Overhead Projector (OHP)	13	3	36	17	1	70
%	18.6	4.3	51.4	24.3	1.4	100
6 Slide/Filmstrip Projector	15	6	32	16	1	70
%	21.4	8.6	45.7	22.9	1.4	100
7 8mm Film Projector	34	8	15	12	1	70
%	48.6	11.5	21.4	17.1	1.4	100
8 Loop Film Projector	44	4	10	10	2	70
%	62.8	5.7	14.3	14.3	2.9	100
9 16mm Film Projector (Manual)	42	9	7	11	1	70
%	60	12.9	10	15.7	1.4	100
10 16mm Film Projector (Automatic)	38	5	14	11	2	70
%	54.2	7.2	20	15.7	2.9	100

Table 3-37

Media Hardware and Ease of Operation

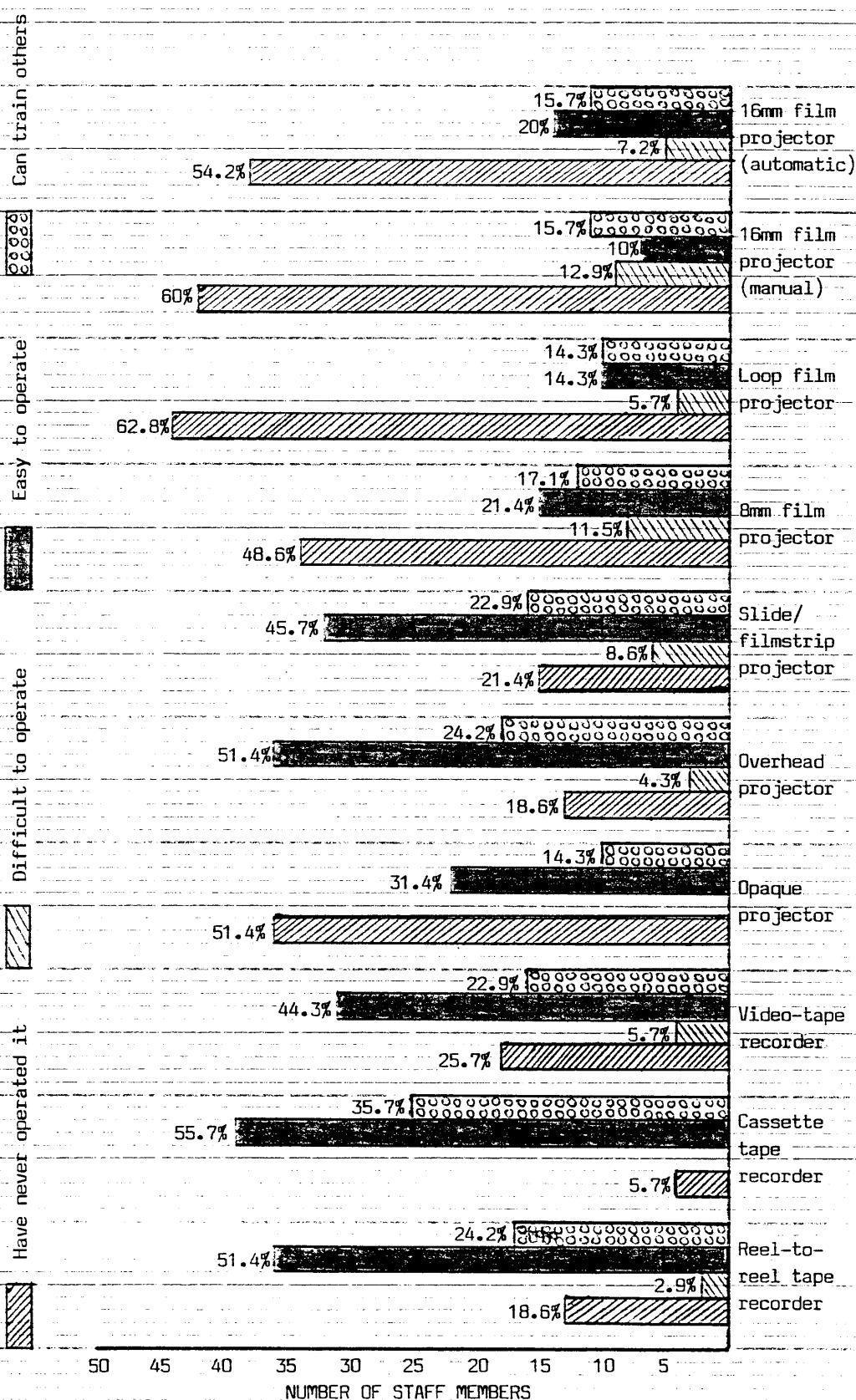


Figure 3-2

Media Hardware and the Range of Ease of Operation

were thirteen members of staff (18.6%) who could neither operate the reel-to-reel tape recorder nor the overhead projector.

The slide/filmstrip projector ranked ~~fourth~~ in popularity and ease of operation, where 32 lecturers were able to operate it quite well and another 16 lecturers found it also easy to teach others. These two groups represented 68.6% of the replies.

The number of staff who found the video-tape recorder (VTR) easy to operate (31) is almost the same as the number of staff who easily operated the slide/filmstrip projector (32). One might consider the VTR as the ~~fourth~~ in ease of operation. The thirty one lecturers who found it easy to operate, plus the sixteen lecturers who could teach others, represented 67.2% of the total replies.

The ~~sixth~~ most easily operated item of equipment was the opaque projector, where 22 lecturers were able to operate it easily in addition to 10 lecturers who found it so easy that they could teach others. Both groups represented 45.7% of the replies.

Twenty seven lecturers found the 8mm film projector easy to operate, fifteen in addition to the twelve who could teach others. They represented 38.5% of the total replies which made this type of equipment rank sixth. Following that, the automatic 16mm film projector (35.7%) where 14 lecturers only, out of 70, were able to operate it easily, besides the 11 who could teach others. ~~Ninth~~ was the loop film projector (28.6%), where ten members of staff only could operate it easily, together with ten who were able to train others. The least popular type of equipment was the manual-threading 16mm film projector. Members of staff representing 25.7% only were able to operate it (7), and could train others (11).

Therefore, it is obvious that the first three types of media, according to ease of operation, were the cassette tape recorder, then the overhead projector and the reel-to-reel tape recorder.

A further examination of Table 3-37, in order to find out the types of media which have never been used by the UCB staff, revealed that this is most likely to be the loop film projector. This had never been used by forty four members of staff (representing 62.8% of the replying staff). In addition, four other lecturers (5.7%) found it difficult to operate.

The manual-threading 16mm film projector ranked second among the equipment which had never been used by lecturers. Forty two members of staff (60%) did not ever operate it, which is a relatively large number, although the modern 16mm film projectors have mostly automatic threading and therefore they are unlikely to meet the manual projector. Also, the manual-threading 16mm projector is considered to be the most difficult type to operate by nine members of staff (12.9%). One member of staff, however, did not indicate any response. On the other hand, 38 (54.2%) members of staff had also never operated the automatic-threading 16mm film projector besides five lecturers (7.2%) who found difficulty in operating this type of hardware.

The fourth type of equipment, which some members of staff were reluctant to use, is the opaque projector. Thirty six lecturers (51.4%) had never used it for their teaching purposes, but nobody mentioned that he/she found it difficult to operate.

Following that is the 8mm film projector, where thirty four members of staff (48.6%) had never operated it, and eight members of staff (11.5%) reported difficulties in handling this type of equipment.

The video-tape recorder (VTR) had never been operated by 18 members of staff (25.7%), and it was found to be difficult to operate by four staff members (5.7%).

Moreover, the slide/filmstrip projector had never been used by 15 members of staff (21.4%), besides six people^{who} indicated that they were confronted with difficulties in operating this item.

Thirteen members of staff (18.6%) had never operated both the reel-to-reel tape recorder and the overhead projector. Two staff members found it difficult to operate a reel-to-reel tape recorder, and three staff members could not operate the overhead projector easily. Lastly, only four members of staff (5.7%) indicated that they had never operated the cassette tape recorder. But none mentioned any problem in operating it.

Therefore, the loop film projector is the type of media which had never been used by most lecturers. Second in order of unpopularity came the manual-threading 16mm film projector, and third is the automatic-threading 16mm film projector.

FREQUENCY OF USING TEACHING AIDS AT THE UCB

Question 30 was intended to investigate the frequency of use of 23 or more items of teaching aids. As is shown in Table 3-38, the results are most disappointing, as most teaching aids were not being used by the majority of replying staff at all. Also, when teaching aids have been used by staff, it is obvious that it was a rare occurrence.

Apparently, Table 3-38 indicates an intensive use of the chalkboard, sixty three lecturers (90%) using it in every lesson, besides three lecturers who use it three times a week, and one lecturer twice a week. This high use of a chalkboard makes it the preferred medium used on a regular weekly basis by the College staff.

Models are the next most frequently used medium. Nine members of staff (13%) used them regularly, especially the Physical Education staff members. A total number of 46 lecturers (65.7%) made some kind of use of models either regularly or rarely.

The overhead projector is being used by a similar number of staff (45) who represented 64.3%. Eight of the staff (11.4%) used it regularly almost in every lesson.

Charts are being used frequently by twenty six staff members (37%), besides twenty five lecturers (35.7%) who were using them rarely.

A considerable number of staff (40%) made infrequent use of photographs in addition to 21 lecturers (30%) who used this type of media frequently during the week or the month.

With regard to the rest of the teaching aids being used by the College staff, it is apparent that a scattered use was indicated. However, several lecturers did not reply to this question. Besides, all the staff members who wrote comments, stated that they use these

Question 30

Type	In Every Lesson	Three Times A Week	Twice A Week	Once A Week	Once a Month	Rarely	Not At All	No Reply	Comment	Total
1 Demonstration Boards (i.e. flannel)	-	1	-	-	3	15	45	6	-	70
2 Chalkboard	63	3	1	-	1	2	-	-	-	70
3 Flash Cards	1	-	-	3	3	21	39	2	1	70
4 Maps	1	1	2	1	8	18	37	1	1	70
5 Charts	3	1	5	9	8	25	17	1	1	70
6 Photographs	3	1	3	10	4	28	18	2	1	70
7 Models	9	1	4	11	6	15	19	4	1	70
8 Audio-tape	1	1	5	5	2	18	33	4	1	70
9 Record Player	-	-	1	1	-	16	48	4	-	70
10 Language Laboratories	-	3	3	4	1	11	46	2	-	70
11 Radio	-	-	-	-	-	14	54	2	-	70
12 Computer	1	4	1	3	2	8	49	2	-	70
13 Overhead Projector	8	4	4	1	5	23	23	1	1	70
14 Opaque Projector	-	1	2	-	4	13	48	1	1	70
15 Filmstrip	-	2	2	2	5	10	46	2	1	70
16 Slides	2	2	1	2	6	16	39	2	-	70
17 Synchronised Tape-slide	1	-	2	2	3	8	53	1	-	70
18 8mm Film	-	1	2	-	2	17	46	2	-	70
19 8mm Loop Film	-	1	2	-	2	11	52	2	-	70
20 16mm Film	1	1	-	2	9	10	44	2	1	70
21 Video-tape	1	1	1	3	8	16	37	2	1	70
22 Closed-Circuit Television	1	1	1	2	4	8	50	2	1	70
23 Open-Circuit Television	-	-	-	1	-	2	65	2	-	70
24 Others										

Table 3-38

Frequency of Use of Teaching Aids by the UCB Staff

teaching aids whenever they are needed. Moreover, some science lecturers stated that they, sometimes, used other aids such as microscope slides, electron microscope micrographs, and science laboratory instruments.

So, the chalkboard seems to be the paramount teaching aid used at the University College, as well as being an integral part of the regular classroom routine.

The other media which are being used fairly widely in teaching are models and overhead projectors, followed by wall charts and photographs.

The College staff were asked in question 31 whether they feel that some of the media mentioned in question 30 are not appropriate for their subject, and if so, could they give their reasons. Some members of staff did not reply to this question, others stated their reasons as indicated below.

Of four lecturers from the Arabic and Islamic Studies Department who gave their comments, one said that "Films and videos are not related to my subject matter", another stated "I do not need to use such equipment in my subject". The third pointed out that "Religious Studies depend upon the teacher himself rather than any other teaching aid", while the fourth said that "Models and realia, maps, and record players, are not relevant to my subject".

Also, three members of the Biology Department staff replied to question 31. One of them said, "Each kind of media could be used according to the teacher's objectives"; the second lecturer indicated that, "Most of the mentioned media are appropriate, but it is not easy to get or use them when they are present". While the third lecturer said that, "Many types of media are not appropriate for the course I teach".

One lecturer from the Chemistry Department stated that the main reason which hindered him in using the various types of teaching media was "The lack of appropriate materials for use on these media".

Coming to the Education Department, five members of staff mentioned the lack of appropriate media for use in their subjects. One stated that "Language Laboratories are not related to my subject" while another added "Radio, maps and Open Circuit Television (OCTV) are not important for my subject". The third felt that "Language Laboratories and radio are more appropriate for language teaching, but they have nothing to do with the methods of science teaching, unless there is a scientific programme in the radio broadcasting which could be recorded".

The fourth member of staff commented that "The educational films which are relevant to my subject are not available in the College". The fifth pointed out that "All the mentioned types of teaching aids are appropriate to my teaching except the computer".

Replies to question 31 were obtained from four lecturers of the English Department. One of them indicated his reason for not using most types of media is because he thought that "Student/student interaction is all important". The second lecturer's reason is "The theoretical subject matter".

The third lecturer stated that "The media are appropriate, however time does not permit extensive use", while the fourth lecturer said that "Computers, maps, charts etc. are not relevant to reading courses".

In the General Studies Department, two lecturers who teach History stated their reasons for not using most types of media listed in question 30. The first said that "Most of those teaching aids are not appropriate for teaching History, except for the ancient History subjects sometimes,

besides using maps whenever needed". The other lecturer indicated that he taught History to adult students, and "There is no urgent need for most of these types of media, except to provide an appropriate historical background to the related topic".

From the Mathematics Department four opinions were obtained in regard to question 31. One of them is that, "Maths is an abstract subject and we need to encourage creativity and imagination". Another reason for not using as many teaching aids was that "My subject does not need many aids". A third lecturer indicated, "I can show my students objects or get them to imagine things, but other AVA would not help at all". The fourth said that, "Almost all AVA I use are in courses of Maths laboratory, Microteaching and partly in Maths education, but not in pure Maths".

Only one member of the Physical Education Department staff gave her reason for not using the variety of teaching aids available. She said "Most of what I teach are skills (sports) so I prefer films, etc. to still pictures. Also we cannot black out the windows".

Lastly, one member of the Psychology Department staff said that, "Psychology as a subject needs some films which are not provided now in the department".

PURCHASE OF EDUCATIONAL EQUIPMENT AND MATERIALS AT THE UCB

Both question 32 and 33 were intended to find out to what extent the College staff, from the various departments, contribute in the purchase of educational equipment (hardware, e.g. tape recorders, slide projectors etc.) and educational material (software, e.g. slides, films, etc.). On the other hand, was there any relation between determining the purchase of both hardware and software, and the staff qualification? The results are shown in Table 3-39.

Contribution of Staff According to their Qualification	Purchase of Equipment		Total	Purchase of Materials		Total
	Yes	No		Yes	No	
Doctoral Degree	16 (33%)	33 (67%)	49	22 (45%)	27 (55%)	49
Masters Degree	10 (83%)	2 (17%)	12	10 (83%)	2 (17%)	12
Advanced Diploma	1 (100%)	- (0%)	1	1 (100%)	- (0%)	1
Bachelor Degree	4 (50%)	4 (50%)	8	4 (50%)	4 (50%)	8
Total	31	39	70	37	33	70
%	44.3	55.7	100	53	47	100

Table 3-39

Staff and the Purchase of Educational Equipment and Materials

Apparently, more staff are involved in the process of suggesting the purchase of materials (53%) than in the purchase of equipment (44.3%), especially lecturers holding the Doctoral Degree - when only 33% of them contribute in purchasing equipment and 45% contribute in purchasing

materials. In addition, a considerable number of replying staff who hold a Masters Degree (83%) contribute in the process of both purchasing equipment and materials. Besides, the one member of staff with an Advanced Diploma, as well as 50% of staff with Bachelor Degrees, also contribute in suggesting the purchase of appropriate teaching equipment and materials. Therefore *overall* almost half the staff with different qualifications are involved in such processes at the UCB.

Question 34 investigated the problems facing UCB staff in the production and utilisation of teaching aids. An analysis of the replies to this question reveals that the major problem facing the UCB staff is the heavy load of teaching hours which hinders them, a great deal or to some extent, from the production and utilisation of teaching aids. Forty six lecturers (65.7%) considered this as their main problem. The lack of technicians was considered to be another major problem at the UCB. Forty six lecturers (65.7%) indicated that this problem hindered them either to a great deal (18) or to some extent (28).

Other important problems are the lack of time, as well as insufficient training courses in the use and production of audio-visual aids. Both were indicated as problems by forty five lecturers (64.3%).

A further look at Table 3-40 reveals that the fifth problem encountered by College staff is the lack of instructional guidebooks and handouts which explain, for instance, the utilisation of equipment. This problem was considered important by forty two lecturers (60%), who thought that it either presented a great deal of problems, or to some extent. Similarly, the insufficient budget allocated for purchasing equipment and materials was considered to be an equally serious problem facing the UCB staff (60%), largely or to some extent.

Problem	A Great Deal	To Some Extent	I Don't Think So	No Reply	Comment	Total
1 Lack of Equipment (Hardware)	14	24	21	9	2	70
2 Lack of Materials (Software)	18	23	18	10	1	70
3 Lack of Technicians	18	28	14	10	-	70
4 Lack of Time	15	30	15	10	-	70
5 The Overload of Teaching Hours	23	23	13	11	-	70
6 Lack of Black Out in the Classrooms	12	19	25	14	-	70
7 Lack of Electrical Points in the Classrooms	6	13	39	9	3	70
8 Inefficient Planning and Organisation of the Supply of Teaching Aids	14	24	21	9	2	70
9 Lack of Equipment Maintenance	15	19	24	10	2	70
10 Lack of Administrative Support	9	21	28	11	1	70
11 Lack of Storage Rooms	6	19	30	11	4	70
12 Insufficient Training Courses in the Use and Production of AVA	19	26	13	10	2	70
13 Lack of Instructional Guide Books, which Explain, for example, the Utilisation of Equipment	18	24	18	10	-	70
14 Lack of Production Skills	15	26	14	13	2	70
15 Insufficient Budget Allocated for Purchasing Equipment and Materials	16	26	16	10	2	70

Table 3-40

Range of Teaching Aids Problems Faced by the UCB Staff

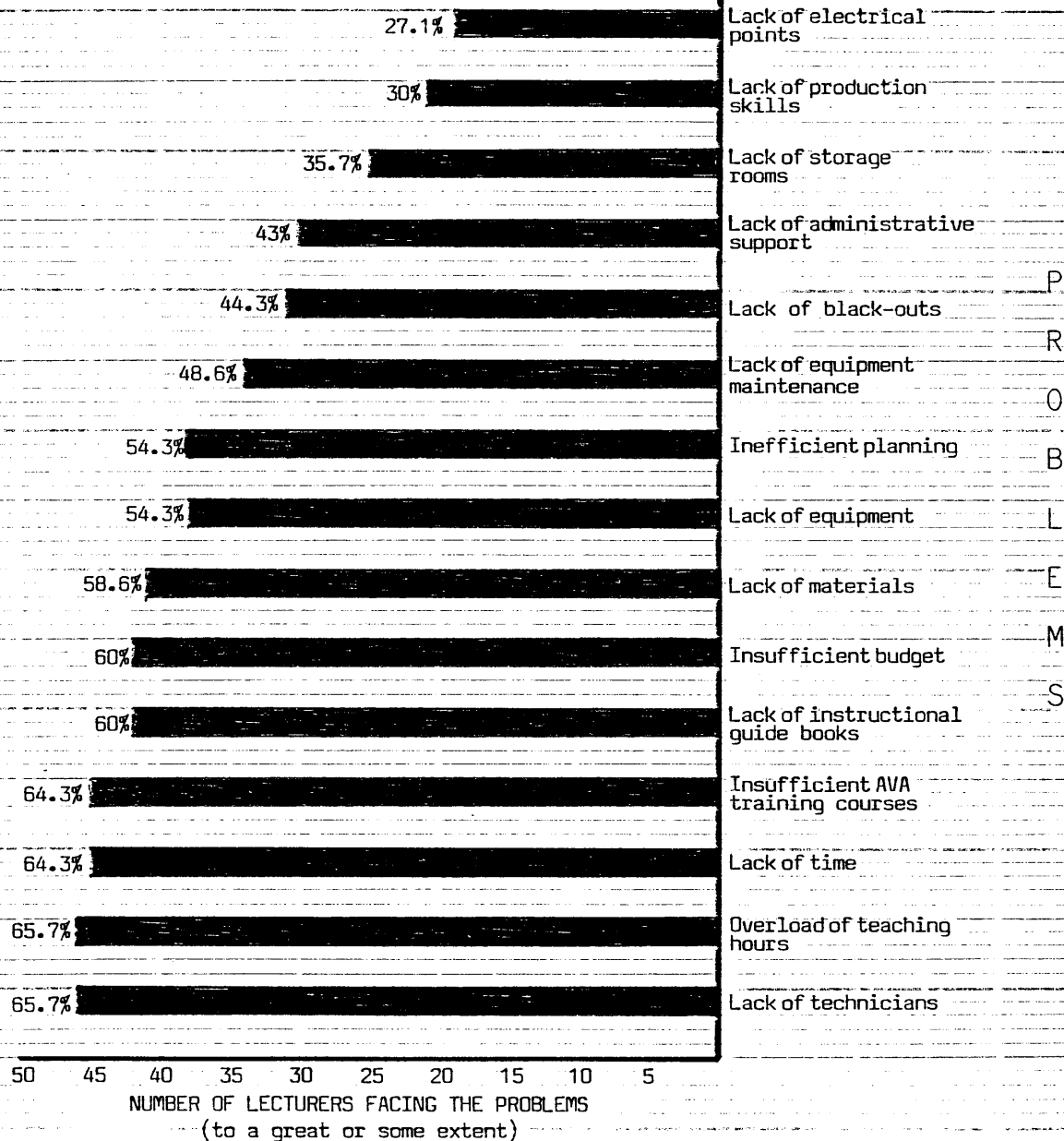


Figure 3-3

Range of Teaching Aids Problems Faced by the UCB Staff (in order)

The lack of materials (software) was pointed out to be the seventh problem by forty one members of staff (58.6%). Eighth was lack of equipment (54.3%) and inefficient planning and organisation of the supply of teaching aids.

All these problems, and others, are given in Figure 3-3 in order of magnitude.

On the other hand, a considerable number of staff (39 : 55.7%) did not think that the lack of electrical points in the classroom could be considered as a problem in preventing the staff from using the various types of teaching aids. Therefore, this problem could be classified as a minor one facing the UCB staff.

Many lecturers did not reply to all or some items of question 34. Perhaps their reluctance to reply was due to their insufficient information about the use of teaching aids, or because they made so little use of these aids that it was difficult for them to determine the problems arising from their use.

In question 35, the UCB staff were asked to state any other problem which they thought affected the production and application of teaching aids in instruction. Not all the members of staff answered this question. However, the replies which were received reflected several points of view as stated below.

One member of the Mathematics Department staff stated that:

" ... the Educational Technology Section should advertise to faculty members exactly what they have, without the members having to ask individually whether or not something is available."

A member of the Arabic and Islamic Studies Department stated as a problem the

"... lack of qualified graphic artists and technicians."

Another member of staff from the same department thought that

"... the lack of co-operation among teaching staff members themselves is also a problem

Two members of the Chemistry Department staff raised two other problems, they stated that

"... there is a lack of understanding of how to use teaching aids by some academic staff members ..."

and that

"... there is no adequate information for teachers, about such aids."

One lecturer from the English Department noticed that

"... no incentive to produce materials is given by the University College."

In addition, another lecturer from the same department pointed out the problem of "lack of screens". He added further

"... teaching in a different classroom for every class one meets is not conducive to media use. Also, carrying materials from one classroom to another is very burdensome."

From the Physical Education Department, one member of staff indicated that

"... it is sometimes difficult to find sources for obtaining software."

These, then, are some of the problems facing members of UCB staff which affect their use of teaching aids in their pedagogic task.

Chapter IV

UCB STAFF SUGGESTIONS

Question 36 - Part I:

STAFF SUGGESTIONS ABOUT THE FUTURE DEVELOPMENT OF THE
EDUCATIONAL TECHNOLOGY SECTION AT THE UCB

Not all of the staff replying to the questionnaire provided suggestions about the future development of the Educational Technology Section. This is possibly because of insufficient awareness of the present situation of the Section by some members of the staff and, on the other hand, a lack of communication between the Section and the other Departments of the College. However, the suggestions made include the following:

(A) One lecturer from the Biology Department said that:

"The presence of such a Section should be known to the UCB staff. The staff should also be aware of AVA with the help of seminars and lectures offered by members of the Educational Technology Section."

A similar suggestion was obtained from a lecturer in the Chemistry Department who stated,

"The Educational Technology Section should introduce itself and its available facilities to other UCB departments."

In this respect, one lecturer from the English Department suggested giving his department the chance of an organised tour of the section to become acquainted with it.

- (B) With regard to providing the Section with more facilities, such as media hardware and software, one suggestion from the Chemistry Department recommended that the Section should concentrate on modern methods, i.e. Closed-Circuit Television, and computer usage. Moreover, one lecturer from the Psychology Department suggested providing more educational equipment in the Educational Technology Section. Besides this, another member from the Education Department suggested providing the Section with adequate financial support.
- (C) Three lecturers from the Education Department, in addition to one lecturer from the Physics Department and one from the Psychology Department, recommended the provision of more staff in the Educational Technology Section, and also indicated the need for more technicians to be provided, for example, for maintaining the educational equipment.
- (D) Two lecturers from the Education Department suggested offering more scholarships for the Bahraini staff of the Section, in order for them to specialise abroad in the field of educational technology, and get acquainted with new ideas in this field.

Another lecturer in Education suggested providing and training an entirely Bahraini staff in this Section, in order to better tackle the whole responsibility for the Educational Technology Section. Presumably, such a suggestion would provide staff who would be more familiar with Bahrain conditions, and who would be likely to produce more stability in the staff. By so doing, an attempt will be made to avoid the relatively rapid changes in staff appointed, which have taken place in recent years.

- (E) Two lecturers from the Education Department, as well as one lecturer from each of the Departments of Mathematics, Physical Education, Physics and Psychology, found it desirable to offer more academic courses in educational technology, and also provide training courses for UCB staff in the use and production of teaching aids.
- (F) Two lecturers from the Education Department viewed the present Section as a small unit with limited facilities. Therefore, they recommended its expansion. One of them argued that the Section should be developed further in order to ensure a large learning resource centre with sufficient facilities and staff.
- (G) With regard to the field of educational technology, three lecturers from the Education Department suggested conducting educational research which will relate to the needs of the Bahraini society.

SUMMARY

The College staff suggestions concerning the Educational Technology Section could be summarised as follows:

Communication

- (1) Provide better communication between the Section and other departments.
- (2) Invite staff from other departments to visit the Section in order to be acquainted with its role and its facilities.
- (3) Inform the other departments about the new media received in the Section, and the latest inventions in educational technology.

Finance

- (1) Provide the Section with more financial support from the UCB.
- (2) Provide more facilities, such as media hardware and software.

Staff & Technicians

- (1) Provide more specialised staff in the field of educational technology.
- (2) Increase the number of scholarships for the Bahraini Educational Technology staff.
- (3) Employ more technicians in order to handle the technical aspects of the Section (i.e. media production), and also have technicians for equipment maintenance.

Courses

- (1) Offer more educational technology courses.
- (2) Organise training courses for the College staff in the production and utilisation of teaching aids.

Space

- (1) Provide more space for the Section.
- (2) Expand the Section into a large learning resource centre.

Research

Conduct educational technology research which is related to the needs of the Bahraini society.

Question 36 - Part II

STAFF SUGGESTIONS ABOUT THE FUTURE DEVELOPMENT OF
EDUCATIONAL TECHNOLOGY IN THEIR DEPARTMENTS

Replies to the questionnaire indicated some suggestions and comments about educational technology in each of the College departments.

Arabic and Islamic Studies Department

Few comments and suggestions were obtained from this department. One lecturer did not suggest anything because he felt that educational technology was not important in his department. Another lecturer said that equipment and facilities were now available at the UCB, and also that the College had a great deal of AV equipment which is located in some departments but is under used at present.

Biology Department

Suggestions and comments received from this department, reflected the requirements of its staff, depending upon their needs and experience. These suggestions are listed below as indicated in the replies:

- (1) The Biology Department needs more 16mm films.
- (2) The Department "should provide facilities and make contacts with the television stations to tape many of the educational programmes and keep a library of such tapes for future use".

- (3) The Department should have video-tape recorders in order to record and play back any required programme.
- (4) The Department should also "have a media room instead of taking the students all the way to another building (i.e. to the studio): that wastes time".

Chemistry Department

Somewhat similar suggestions to those of the Department of Biology were received from the Chemistry Department staff. They recommended that:

- (1) There should be a media room for the use of the department with a technician responsible for it.
- (2) There should be more provision of equipment and films related to the teaching of Chemistry courses and also a projection room.
- (3) There should be more samples and living organisms provided for the various laboratory studies.
- (4) There should be a better understanding of how to use teaching aids by some academic staff members.

Education Department

Suggestions towards the future development of educational technology at the Department of Education pointed out the following:

- (1) Provide more up-to-date educational equipment (e.g. video disc).
- (2) Provide more technicians.
- (3) Offer continuous training courses in educational technology for UCB staff.
- (4) Introduce the computer to the teaching of education courses, and design an elective course for students.
- (5) Exchange experiences with other universities in the field of educational technology.

English Department

Other suggestions were also given by some of the English Department staff members:

- (1) One of the comments and suggestions made by a lecturer of this department stated,

"I would like to see overhead projectors
available in most, if not all, teaching rooms."

He added,

"I used to use the OHP a lot when I first came to UCB but gave up as it was just too much of a problem carrying the machine around or finding someone in the Loan Section."

- (2) In addition to the necessity of providing an adequate number of overhead projectors in the Department of English, another suggestion pointed out the development of self-access facilities required for independent learning, i.e. developing various student-access language laboratories and materials.
- (3) A video camera, in addition to a video-tape recorder, were also suggested to be provided in the Department in order to be introduced in the language learning process.
- (4) More films (literary, linguistic etc.) were also suggested to be purchased for use in English Department teaching.

General Studies Department (History/Geography/French/Fine Arts)

Only one suggestion was made by a lecturer in this department. He stated that the Department needed more space for audio-visual use and film projection.

Mathematics Department

Apart from two members of the Mathematics Department staff who said that they were unfamiliar with the subject of educational technology, most of the replying staff suggested the following:

- (1) The Mathematics Department needs white boards (marker boards).
- (2) The Department urgently requires a supply of dustless chalk.
- (3) The Department asks for more overhead projectors.
- (4) The Department should be provided with more films for demonstration sessions.

Physical Education Department

For the future development of educational technology in their department, the Physical Education staff members suggested:

- (1) Providing more films in the Department, especially 16mm films as well as loop films.
- (2) Providing more slides and photographs.
- (3) Providing a motion picture camera or a video camera and video recorder obtaining feedback, particularly during teaching practice and swimming lessons.

Physics Department

Among the three replies to the questionnaire, only one suggestion was received from the Department of Physics. This suggestion recommended establishing a learning resource centre within the Physics Department itself.

Psychology Department

Two lecturers from the Psychology Department introduced their suggestions for the future development of what they saw as educational technology in their department. They recommended:

- (1) Providing technicians and assistants in the Psychology laboratory.
- (2) Providing an adequate number of each type of equipment (i.e. OHP and film projectors) in the Department.
- (3) Providing new tests and measurements in the field of Psychology.
- (4) Improving the quality of the Psychology laboratory.
- (5) Improving the quality of tools, equipment, and experiments in the laboratory.

Question 36 - Part III

STAFF SUGGESTIONS ABOUT THE FUTURE DEVELOPMENT OF THE
SERVICE AND LOAN SECTION AT THE UCB

The Loan Section at the UCB could be considered an important source of help for College departments, because every member of staff can use it according to his/her teaching requirements. However, it was previously mentioned that this section was small and had only one technician in charge of the loan and retrieval of media.

Therefore, the suggestions which were derived from the questionnaire were made by those members of staff who actually used this section, and had been acquainted with its facilities. Nevertheless quite a number of staff (approx. 50%) did not know about the section and the facilities provided in it, particularly some of the new members who asked to receive adequate information about such a section, because they did not want to receive just random information. So, suggestions and recommendations from the various College departments about the future development of the Loan Section could be summarised as follows:

- (1) Locate the Section in a more central place, for example on the ground floor or near a lift. (NB At the present time the Section is located on the third floor of the Arts Building, and rather far from the lift.)
- (2) Expand the Section, its space and facilities, and provide it with an adequate number of specialists and technicians, in order to fulfil the needs of the College staff and students.

- (3) Provide a better arrangement in the Loan Section itself, besides an improved system of media provision.
- (4) Employ an expert in educational technology or librarianship to supervise the Section.
- (5) Adopt a new method of loan and retrieval of both media hardware and software.
- (6) Provide more equipment and materials.
- (7) Offer permanent loans to the College departments (i.e. overhead projectors and video-tape recorders).
- (8) Increase the financial support to the Section.
- (9) Offer training workshops in the use and operation of equipment for the College staff.
- (10) Inform the College staff about the types of media and services available in the Section, as well as what is newly received.

Chapter V

STUDENTS' QUESTIONNAIRE

THE QUESTIONNAIRE TO STUDENTS AT THE UNIVERSITY COLLEGE OF BAHRAIN

INTRODUCTION

Students and teachers represent the essential elements in any teaching/learning process. It is therefore very important to try and find out the opinions, suggestions, and comments of students in order to get a more complete picture of the process of communication in any teaching situation.

Therefore, it is essential that

"... any competent teacher, whatever place in the educational system he occupies, makes use of student feedback to improve his effectiveness." (Nathenson [1980])

For such reasons, a study was made to investigate the students' reactions to the subject of educational technology at the UCB, for the sake of better instructional design and improvement. Then, one can say that a more complete picture of educational technology at the UCB was obtained from the two paramount sources, namely the teachers and the students working there.

The students' questionnaire was designed for College students who attended one or more course in educational technology, no matter what subjects they were reading for, Arts or Sciences.

Seventy five questionnaire forms were distributed to two groups of College students: twenty five forms to the students doing the Post Graduate Diploma in Education (PGDE) and fifty forms to the undergraduate students doing Majors in Education.

Only sixteen complete questionnaires (64%) were returned from the first group (the PGDE students): ten from the female students and six from the males. Forty one complete questionnaires (82%) were returned from the second group (the undergraduate students): thirty six from the female students and five from the males. A total of fifty seven reply forms were, therefore, received from both groups, representing 76% of the total forms distributed. Eighteen questionnaires were not returned.

It should also be mentioned that all the students, from both groups, were Bahrainis. Thus the questionnaire was entirely in Arabic, but an English translation is given in Appendix IV.

To analyse the results of the questionnaire, it was decided to divide the replies into two categories: those of the postgraduate students (PGDE) who have considerable experience in teaching, and those of undergraduate students, who have no experience at all in the field of teaching.

This division was decided in order to find out whether or not teaching experience could affect the students' replies. Moreover, divisions into groups such as sex were not thought worthwhile because of the small number of students involved, especially the small number of male students.

ITEMS OF THE STUDENT QUESTIONNAIRE

The student questionnaire consisted of twenty seven questions, which could be grouped into eight categories:

- (1) Opinions regarding behavioural objectives:

Items 1 to 5.

- (2) The effect of using teaching aids in the process of teaching and learning:

Items 6 to 12.

- (3) Opinions about the Educational Technology courses at the UCB:

Items 13 to 15.

- (4) The importance of educational television:

Items 16 and 17.

- (5) The effectiveness of educational motion pictures:

Items 18 to 20.

- (6) The range of effectiveness of other teaching aids:

Questions 21 (consisted of 23 items) to 23.

- (7) The problem of using and producing teaching aids:

Items 24 to 26.

- (8) Suggestions on improving educational technology at the UCB:

Item 27.

The age of the replying students could be set into two groups. The first group involves the postgraduate students (PGDE) whose ages range between 25 and 38 years. The second group involves the undergraduate students whose ages range between 19 and 25 years.

All the PGDE students have attended a course in Educational Technology - Ed.511: Introduction to Educational Technology. On the other hand, the undergraduate students differed in the number of educational technology courses which they had attended during their study at the UCB. Most of them (34 - 83%) enrolled in one course only; six (15%) attended two courses, and one (2%) followed three courses in educational technology.

STUDENTS' DEFINITIONS OF THE TERM 'EDUCATIONAL TECHNOLOGY'

Sheet one of the questionnaire asked the question "What does the term 'Educational Technology' mean to you?". This was an attempt to obtain definitions of the term 'educational technology' from a sample of College students. An analysis of the students' answers revealed that they held about eleven main ideas on the nature of educational technology.

- (1) The first definition, held by two PGDE and two undergraduate students, can be summarised as:

"... educational technology is the use of modern theories (hypotheses) and modern technological devices, namely educational equipment and materials, in the teaching process in order to achieve better learning 'feedback'."

- (2) The second kind of definition, put forward by two PGDE students, can be summarised as being

"... educational technology means the integrated arrangement (organisation) of various elements: the learner, the machine, the working methods, the theories, and the administration. All these elements interact within one framework to enhance learning."

- (3) Four PGDE students and five undergraduates, interpreted the term rather differently. Their views can be summarised as:

"The use of educational equipment and teaching materials in the teaching/learning process."

- (4) The fourth definition was supplied by only one PGDE student and four undergraduates. In essence they explained that

"Educational technology means the scientific development of machines and teaching aids which are used to convey certain information to the learners in a more effective way."

- (5) Only one PGDE student believed that educational technology means

"... the efficient utilisation of the teaching aids with less time, less effort, and less expense, in order to create the desirable change in student behaviour."

- (6) Four PGDE students viewed educational technology essentially as

"... a method of working and solving problems, following an organised method or a given curriculum in order to achieve certain objectives in the teaching/learning process."

They also thought that

"... it is a means of appraisal and of evaluation of the teaching as such, and thus a means to foster learning."

- (7) Another definition, given by one PGDE student, was that educational technology

"... means the teaching aids which help the learner to understand any subject via different means."

- (8) Eight undergraduate students viewed educational technology as

"... the methods and the ways of using the available audio-visual materials to achieve certain educational objectives, and also to help the learner to understand and acquire any subject."

- (9) The ninth definition was suggested by twelve undergraduate students whose summarised views were that educational technology meant

"... the ways of thinking, and the methods of solving problems. It also means a systematic approach to teaching theory, design application, and evaluation to achieve certain objectives in the process of teaching and learning."

- (10) Five undergraduate students all agreed that

"... educational technology does not merely mean the development in the use of audio-visual aids and equipment; it means, basically, the development of the entire curriculum."

- (11) The last definition of educational technology was given by one undergraduate student, who thought that educational technology means

"... the communication between two parts, the teacher and the learner, in order to convey certain educational messages."

It should also be mentioned that five undergraduate students did not attempt to define educational technology. However, the definitions given by the other fifty two students, as summarised above, give a clear indication that many of them understand a great deal about the basic nature of educational technology. Many of them view educational technology as being far more than merely the use of audio-visual teaching aids.

The first numbered question on the questionnaire aimed to find out the students' opinions about behavioural objectives, namely the statement "I would like to know beforehand what I am required to do by the end of any subject". The responses to this statement are displayed in Table 5-1.

Students	Agree	%	Dis- agree	%	Do Not Know	%	No Reply	%	Total
Postgraduates (PGDE)	14	87.5	-	0	-	0	2	12.5	16
Undergraduates	27	66	5	12	7	17	2	5	41
Total	41		5		7		4		57
%		72		8.7		12.3		7	100

Table 5-1

Students Opinions about Knowing the Subject's Objectives

Obviously, the vast majority of postgraduate students (85.7%) wanted to know beforehand the subject's objectives, although two of them (12.5%) did not answer this question. Also 66% of the undergraduate students agreed upon this matter, though five students out of the 41 (12%) did not wish to know the objectives at the beginning of any lesson. One of them stated

"I prefer not to know the objectives
beforehand in order not to lose the
interest and enjoyment in the subject."

Seven undergraduate students (17%) stated that they did not know. Two (5%) did not reply to the question. Therefore, a total of 41 students

(72%) of both groups, PGDE and undergraduate, preferred to know the subject's objectives beforehand.

One reason for knowing the objectives of any subject beforehand was introduced in the statement of question 2, which said, "I think that I will participate better in any subject when I know its objectives". Whether or not the replying students agreed with this statement is shown in Table 5-2.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
Postgraduates	15	94	-	0	-	0	1	6	16
Undergraduates	38	93	-	0	3	7	-	0	41
Total	53		-		3		1		57
%		93		0		5	2		100

Table 5-2

Students' Opinions about Participation in the
Subject While Knowing its Objectives

Almost the same proportion of PGDE students (94%) and undergraduate students (93%) agreed that knowing the subject's objectives leads to better participation. However, three of the undergraduate students (7%) could not decide about this matter.

A further investigation concerning the opinion of students about teachers setting specific objectives to their subjects was provided in question 3, which stated "There should be specific and clear objectives for all subjects". The results are given in Table 5-3.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
Postgraduates	15	94	-	0	-	0	1	6	16
Undergraduates	41	100	-	0	-	0	-	0	41
Total	56		-		-		1		57
%		98		0		0		2	100

Table 5-3

Students' Opinions about the Necessity of Specifying
Objectives for all Subjects

Table 5-3 shows that apart from one non-reply, all the students, PGDE and undergraduates, agreed upon the necessity of specifying clear objectives for all subjects.

Moreover, the statement related to question 4 was: "I think that the university lecturer does not need to specify objectives for his/her subject". The students' opinions regarding this matter are given below in Table 5-4.

Students	Agree	%	Disagree	%	Do Not Know	%	Total
Postgraduates	1	6	15	94	-	0	16
Undergraduates	3	7	36	88	2	5	41
Total	4		51		2		57
%		7	89.5		3.5		100

Table 5-4

Students' Opinions about Question 4

The numbers and proportions in Table 5-4 indicated that a bigger number of the PGDE students (94%) were convinced that the statement related to question 4 should not be true, therefore, they disagreed with the view that the University lecturer does not need to specify objectives for his/her own subject. Whereas 88% of the undergraduate students similarly disagreed with this statement. Nevertheless, three of the undergraduates (7%), besides one of the PGDE's (6%), thought the opposite, namely, that there is no real need for the university lecturer to specify objectives for his lesson. While two undergraduates (5%) did not know what to think about the matter.

TEACHING AIDS

As regards teaching aids, the College students were asked to give their opinions about the statement in question 5 which stated, "I feel that I can understand any subject much better when teaching aids are used in it". Student opinions regarding this matter are shown in Table 5-5.

The results reveal a small difference between the PGDE students, of whom 94% agreed with the statement, and the undergraduates, of whom 85% agreed upon such a statement.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	15	94	-	0	-	0	1	6	16
Undergraduates	35	85	4	10	2	5	-	0	41
Total	50		4		2		1		57
%	87.5		7		3.5		2		100

Table 5-5

Students Opinions about Better Understanding when Teaching Aids are Used

No PGDE student disagreed with the statement of question 5. There were four undergraduates (10%) who did not think that they could understand any subject simply because better teaching aids were used in the teaching process. In addition, two undergraduates (5%) indicated that they did not know whether teaching aids helped them to understand their subject better, while none of the PGDE students thought so. In short,

87.5% of the total replying students (57) agreed that a better understanding was likely to occur when teaching aids were used in any subject.

What do the College students think about the UCB lecturers' use of teaching aids? This is what question 6 tries to find out by stating: "I believe that some lecturers at the University College of Bahrain use a variety of teaching aids effectively". In this respect, Table 5-6 reveals interesting results.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	9	56	5	31	2	13	-	0	16
Undergraduates	12	29.5	23	56	5	12	1	25	41
Total	21		28		7		1		57
%	37		49		12		2		100

Table 5-6

Students Opinions about the Effective Use of
Teaching Aids by the UCB Lecturers

The results show that 56% of the PGDE students agreed that the College lecturers use a variety of teaching aids effectively, while 29.5% of the undergraduates agreed. However, 56% of the undergraduate students did not agree with the statement, as did 31% of the PGDE students.

A total of seven students from both groups (12%) did not know whether the College lecturers used teaching aids effectively or not. Only one student (2%) did not reply to the question. Moreover, when the

students were asked whether they agreed with the statement related to question 6, namely to state the subjects in which teaching aids were used effectively, their replies indicated the following subjects:

Subject	Number of Students Indicating that Teaching Aids were Used Effectively
(1) Educational Technology	12
(2) Science (Biology, Chemistry, Physics)	7
(3) Teaching Methods	6
(4) English Language	5
(5) Social Studies (History, Geography)	3
(6) Teaching Practice	2
(7) Psychology	2
(8) Education	1
(9) Arabic Language	1
(10) French Language	1

It is difficult to draw firm conclusions from these figures, as they are obviously influenced by the number of students reading a particular subject. However, even in Educational Technology the percentage of students considering that teaching aids are used effectively is only 21%.

Moving to question 7, this stated that: "No teacher in the UCB uses teaching aids properly in his/her teaching". Various reactions to this statement were obtained from the students' questionnaire, and the results are given in Table 5-7.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	4	25	8	50	4	25	-	0	16
Undergraduates	10	24	17	42	11	27	3	7	41
Total	14		25		15		3		57
%	24.5		44		26.5		5		100

Table 5-7

Students' Opinions about the Proper Use of Teaching Aids

Half of the PGDE students, and nearly a half of the undergraduates, rejected the statement in question 7. On the other hand, a quarter of the PGDE students, and a similar proportion of the undergraduates, stated that no teacher at the UCB uses teaching aids properly. Another 25% of the PGDE students and 27% of the undergraduates, were not sure whether the statement was true or not. While three undergraduate students preferred not to reply to this question.

Furthermore, what do the College students think about the statement made in question 8, which says: "I think that the teacher who uses teaching aids in his/her subject is wasting time (his/her and our time)". Students' replies are given in Table 5-8.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	1	6	15	94	-	0	-	0	16
Undergraduates	2	5	37	90	1	2.5	1	2.5	41
Total	3		52		1		1		57
%	5		91		2		2		100

Table 5-8

Students' Opinions about the Effect of Teaching Aids
on the Students' and Teachers' Time

Only one PGDE student agreed with the statement, all the rest (15 : 94%) disagreed with the fact that the use of teaching aids wasted both teachers' and students' time.

A similarly large proportion of undergraduate students (90%) also disagreed with the statement, except two undergraduates (5%) who thought that the statement was true. One student did not know and one did not reply. Hence, a total of 52 students (91%) rejected the statement made in question 8.

The statement made in question 9 supported the use of teaching aids, and the College students were asked to comment on: "I notice that teaching aids create motivation among students in the classroom". The students' opinions are summarised in Table 5-9.

From Table 5-9 it is clear that all the PGDE students agreed that the use of teaching aids motivated students in the classroom. Similarly, apart from two undergraduate students, of whom one disagreed and one did not know, all the rest (96%) agreed with the statement.

Students	Agree	%	Disagree	%	Do Not Know	%	Total
PGDE	16	100	-	0	-	0	16
Undergraduates	39	95	1	2.5	1	2.5	41
Total	55		1		1		57
%	96		2		2		100

Table 5-9

Students' Opinions about whether Teaching Aids Create Motivation

"Is it true that teaching aids cause trouble in the teaching environment?" Question 10 tried to investigate this matter by stating: "I notice that teaching aids cause troubles". Replies to this statement are shown in Table 5-10.

Students	Agree	%	Disagree	%	Do Not Know	%	Total
PGDE	-	0	15	94	1	6	16
Undergraduates	2	5	34	83	5	12	57
Total	2		49		6		57
%	3.5		86		10.5		100

Table 5-10

Students' Opinions about whether Teaching Aids Cause Troubles

Almost all the PGDE students (15) who had various experiences in the teaching field, disagreed with the statement that teaching aids caused troubles, except one who did not yet know whether this was true or not. 83% of the undergraduate students also disagreed with the statement, while two of them (5%) believed that the statement was true. One of these two students thought that teaching aids caused trouble especially when pupils had to do their practical projects. The other said that teaching aids and educational equipment needed special arrangements in the classroom, such as space. Five undergraduates (12%) did not know whether the statement was true.

Therefore, a total of 49 students out of 57 (86%) considered that teaching aids did not cause trouble in classroom teaching.

The statement in question 11 said: "I wish that teaching aids could be used in every subject". Did the College students wish that to occur? Table 5-11 summarises their responses:

Students	Agree	%	Disagree	%	Do Not Know	%	Total
PGDE	16	100	-	0	-	0	16
Undergraduates	35	85	4	10	2	5	41
Total	51		4		2		57
%	89.5		7		3.5		100

Table 5-11

Students' Opinions about Using Teaching Aids in Every Subject

Table 5-11 indicates a difference between the PGDE students and the undergraduates. The entire first group (100%) wished to see teaching aids used in every subject, while thirty five undergraduates (85%) thought likewise. Four undergraduates did not wish teaching aids to be used in all subjects but their reasons were not indicated. Two undergraduates (5%) were undecided.

Question 12 was designed to investigate the students' opinions about training courses for College staff. This question stated: "I think the University College should organise training courses in the production and use of teaching aids for the College staff". The students' replies are summarised below in Table 5-12.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	14	88	—	0	1	6	1	6	16
Undergraduates	37	90	2	5	2	5	—	0	41
Total	51		2		3		1		57
%	89.5		3.5		5		2		100

Table 5-12

Students' Opinions about Training Courses for College Staff

It seems that the undergraduate students are really enthusiastic about having such training courses for the College staff; 90% of them approved of the idea, while 88% of the PGDE also agreed.

No PGDE student disagreed with the idea, while two undergraduates (5%) rejected the suggestion. Therefore, 89.5% of the total students

agreed that training courses in the use of teaching aids should be provided for College lecturing staff.

Thus, there has been considerable pressure on the UCB lecturers to receive such training courses in order

"... to make their subject more vital and relevant to today's pupils." (Collins [1980])

The College students' reactions to the statement related to question 13, namely: "I found that the Educational Technology courses, which I have attended, are very useful", are displayed in Table 5-13.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	16	100	-	0	-	0	-	0	16
Undergraduate	34	83	3	7	2	5	2	5	41
Total	50		3		2		2		57
%	88		5		3.5		3.5		100

Table 5-13

Students' Opinions about the Educational Technology Courses

It is clear that all PGDE students, without exception, agree that the Educational Technology courses are useful to them. 83% of the undergraduate students shared the same opinion about such courses. However, 7% of undergraduates did not consider these courses to be useful, while a further 5% did not know, and 5% did not give any reply. Therefore, as can be seen, 88% of the total students replying found the Educational Technology courses which they had attended to be useful. Some of their reasons for such a positive opinion are given below:

- (1) "Educational Technology courses taught me how to use the modern equipment in my teaching. It also trained me to produce some related teaching aids to my subject."
- (2) "Educational Technology courses showed me the importance of teaching aids in the teaching process. It also enabled me to use materials which are available in the surrounding environment as useful teaching aids."
- (3) "Educational Technology courses taught me how to select the appropriate media for my future teaching."
- (4) "I have learnt some new and useful skills such as preparing Overhead transparencies, photographing, and filming."
- (5) "Educational Technology courses taught me how to specify objectives for any subject."
- (6) "What I have learnt during the Educational Technology courses will help me in my future teaching."

A further investigation of students' opinions about Educational Technology courses was involved in question 14, which statement indicated "I feel that Educational Technology courses did not contribute to increasing my knowledge". The students' responses to such a statement are shown in Table 5-14.

Table 5-14 shows that 86% of the total students did not agree with the statement, but on the contrary, felt the opposite, namely that Educational Technology courses contributed a lot to increasing their knowledge. Only nine per cent of the students felt that they did not benefit from such courses.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	2	12.5	14	87.5	-	0	-	0	16
Undergraduate	3	7	35	86	-	0	3	7	41
Total	5		49		-		3		57
%	9		86		0		5		100

Table 5-14

Students' Opinions about the Contribution of Educational Technology Courses in Increasing their Knowledge

Question 15 asked "Were there some deficiencies in the Educational Technology Courses?". The College students' answers to this question are given in Table 5-15.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	6	37.5	7	44	1	6	2	12.5	16
Under-graduates	15	36	13	13	12	29.5	1	2.5	41
Total	21		20		13		3		57
%	37		35		23		5		100

Table 5-15

Students' Views about the Deficiencies in the Educational Technology Courses

It is interesting to note that 37% of the total number of students stated that there are some deficiencies in the UCB Educational Technology courses, while 35% of the total number of replying students did not think this to be the case. However, 29.5% of the undergraduates did not know whether the statement was true or not.

The students who thought that there were some deficiencies in the Educational Technology courses, stated that the deficiencies were:

- (1) "The insufficient time allocated to Educational Technology courses, prevents the students from receiving adequate training in the use of teaching aids. Besides, the course was too intensive compared to the time allocated to it."
- (2) "The allocation of too much time to the theory of Educational Technology compared to the short time given to the practical work."
- (3) "Lack of space in the workshop, that is not convenient for the number of students who use it."
- (4) "Lack of teaching materials, and of teaching equipment compared to the number of students to be trained."
- (5) "Lack of co-ordination between theory and practice."

These replies provide interesting feedback, and should be considered when planning future educational technology courses at the UCB.

Question 16 was inserted in order to find out the students' opinions about the provision of educational television. It stated: "It is important to have educational television at the UCB". The students' reactions to this statement are shown in Table 5-16.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	14	88	1	6	-	0	1	6	16
Under-graduate	29	70.5	9	22	2	5	1	2.5	41
Total	43		10		2		2		57
%	75.5		17.5		3.5		3.5		100

Table 5-16

Students' Opinions about the Provision of Educational Technology at UCB

88% of PGDE students supported the idea of providing educational television at the UCB, while only 70.5% of undergraduates thought so. A total of ten students (i.e. 17.5% out of 57) did not think that television was necessary, whereas two students (3.5%) did not know what to think about this matter, and two other students (3.5%) did not answer.

Question 17 stated: "I have learned a lot from the educational programmes in television broadcasting". Therefore, whether the College thought that they have learned a great deal from the educational programmes broadcast by the television, is revealed by their answers which are displayed below in Table 5-17.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	4	25	5	31	4	25	3	19	16
Under-graduate	12	29.5	12	29.5	15	36	2	5	41
Total	16		17		19		5		57
%	28		30		33		9		100

Table 5-17

Students' Opinions about Learning from the TV Educational Programmes

It is interesting that the largest number of replies was in the "do not know" category. 33% of the replying students could not decide whether they had learned from the educational television programmes. This percentage represents one quarter of the PGDE students and 36% of the undergraduates. Another quarter of the PGDE students thought they learned from educational TV programmes. This percentage increases for the undergraduates, since 29.5% of them also agreed upon the usefulness of the TV programmes. On the contrary, the same percentage of undergraduates (29.5%) held the opposite opinion. They felt that they did not learn from the educational TV programmes. Also, 31% of the PGDE students shared the same opinion, whereas the students who agreed that they learned a good deal from the educational TV programmes, gave the following examples of what they had learned:

- (1) The life of different nations in the world: their way of life, customs, beliefs, and so on.

- (2) Living organisms on land and in the sea.
- (3) Types of human diseases, and also the means of protection and treatment (Health Education).
- (4) First aid measures.
- (5) Safety measures.
- (6) Educational and social seminars.
- (7) Religious studies.
- (8) The animal world.
- (9) Mathematics education.

The students' questionnaire was also intended to discover what opinions students held about educational motion pictures. Question 18 stated that: "I found that the 16mm films, which I have seen at the UCB, were effective". Therefore, whether or not the College students agreed upon this statement is given in Table 5-18.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	8	50	1	6	3	19	4	25	16
Under-graduate	16	39	11	27	14	34	-	0	41
Total	24		12		17		4		57
%	42		21		30		7		100

Table 5-18

Students' Opinions about the Effectiveness of the
16mm films at the UCB

Half of the PGDE students agreed on the effectiveness of the 16mm films which they had seen at the UCB, whereas the proportion decreased to 39% for the undergraduates. 27% of the undergraduates did not consider that the films were effective and 6% of the PGDE students shared this view.

30% of the students did not know whether films were effective or not. Therefore, only 42% of the total students agreed about the effectiveness of the 16mm films which had been projected at the UCB. These students stated the subjects during which the films were projected. These subjects are listed below according to the most frequent use of films:

- (1) Educational Technology.
- (2) Integrated sciences (Biology, Chemistry and Physics).
- (3) Language teaching (English and French).
- (4) Education (especially Micro teaching and Methods of Teaching).

- (5) Psychology.
- (6) Geography and History.
- (7) Fine Arts.

The group who agreed upon the effectiveness of the films, also stated the reasons why they found the films effective. These reasons include:

- (1) "It changed the class routine."
- (2) "It supported the teacher's explanations about certain topics."
- (3) "It held the students' attention."
- (4) "It clarified various concepts."
- (5) "It represented scientific and educational experiments."
- (6) "It led to a better understanding."
- (7) "It made things clearer and better understood, i.e. closer to reality."
- (8) "It sustained individualised learning."
- (9) "It is considered as the practical application of the theory of various subjects."

Question 19 simply stated: "Watching educational films is boring". The students' reactions to this statement are shown in Table 5-19.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	2	12.5	14	87.5	-	0	-	0	16
Under-graduate	4	10	35	85	1	2.5	1	2.5	41
Total	6		49		1		1		57
%		10		86		2		2	100

Table 5-19

Students' Opinions about whether or not Films are Boring

87.5% of PGDE students, and 85% of undergraduates did not agree with the statement made in question 19. A total of only six students (10%) considered that watching educational films was boring.

Question 20 of the questionnaire aimed to investigate how the students could benefit from watching educational films. The statement related to this question said: "I have learned a variety of skills through educational films". Table 5-20 displays the various responses to this statement.

Students	Agree	%	Disagree	%	Do Not Know	%	No Reply	%	Total
PGDE	8	50	3	19	2	12.5	3	19	16
Under-graduate	19	46	9	22	11	27	2	5	41
Total	27		12		13		5		57
%	47		21		23		9		100

Table 5-20

Students' Opinions about Learning Skills from Educational Films

A study of Table 5-20 reveals that there is very little difference between the opinions of the PGDE students and the undergraduates in terms of agreement about learning from educational films. While half the PGDE students agreed that they have learned a variety of skills through this particular medium, 46% of the undergraduates shared this opinion. Those who did not think that they have acquired any type of skill through viewing educational films represent 21% of the total number of students. Less than half of the students (47%) thought that the statement related to question 20 was true. Some of them stated that the skills they had learned from educational films included:

- (1) Programmed learning.
- (2) Micro-teaching skills.
- (3) How to operate some educational equipment, such as a film projector.
- (4) First Aid.
- (5) Home economics, for example, cooking and sewing skills, etc.

With regard to the effectiveness of the teaching aids, question 21 was set up in order to investigate the most effective teaching aids as well as the least effective ones; and also those aids which have some value from the students' point of view. This question asked the students to tick (✓) the appropriate teaching aids (in the given list) according to the degree of their effectiveness. The students' responses to this question are given in Table 5-21 overleaf.

According to the students, models and real objects are the most effective teaching aids amongst the 23 items listed in Table 5-21. 84% of the students replying to this question considered the models and real objects to be very useful teaching aids: a further 12.5% of the students thought that models and real objects have some value in teaching. The video-tape recorder (VTR) was considered to be the next most effective teaching aid. 72% of the 57 students listed it as "very effective" while a further 26% believed the VTR to have "some value".

A further examination of Table 5-21 reveals that the third most effective teaching aid is considered to be the language laboratory, as 66.5% of the total students considered it to be "very effective", and a further 21% thought it was "of some value".

Next comes the chalkboard, since 61% of the students considered it to be a very effective teaching aid, and 37% of the students thought that this medium had some value. Similarly, the overhead projector was also indicated as being "very effective" by 61% of the students, and a further 31.5% thought that this aid had some value in the teaching and learning process.

The 16mm film projector, as well as the 8mm film projector, were both considered to be "very effective" teaching aids by 56% of the

Question 21

Type of Aid		Ver Effe
1	Demonstration Boards (Flannel, Pocket)	11
2	Flash Cards	1
3	Chalkboard	31
4	Charts	28
5	Maps	24
6	Photographs	15
7	Models & Real Objects	48
8	Audio-tape Recorder (Reel to Reel)	13
9	Audio-tape Recorder (Cassette)	10
10	Record Player	4
11	Language Laboratories	38
12	Radio	8
13	Computer	26
14	Overhead Projector	35
15	Opaque Projector	20
16	Slide Projector	27
17	Filmstrip Projector	15
18	8mm Film Projector	32
19	8mm Silent Loop Film Projector	11
20	16mm Sound Film Projector	32
21	Video-tape Recorder	41
22	Closed-Circuit Television	26
23	Open-Circuit Television (broadcasting)	24

Students' (

students. A further 38.5% thought that both types of film projectors had "some value" in teaching.

Some teaching aids, however, were considered not to be useful at all by some students. For example, ten students (17.5%) did not think that the record player had any value in teaching at all. Also, Closed-Circuit Television (CCTV) was not considered to be an effective medium by six students (10.7%). Five students (8.5%) thought the 8mm silent loop film projector to be of no use as a teaching aid, but this may have been due to unfamiliarity with the equipment. Unfamiliarity is probably also the reason for 28% of the students indicating that they had no idea about the value of the computer as a teaching aid.

Hence, it can be concluded that models and real objects, video-tape recorders, language laboratories, followed by chalkboards and overhead projectors, are regarded as the most effective teaching media by students at the UCB.

It was felt - from the present writer's experience - that the students replying to questions 22 and 23, did not provide precise answers to the statement related to question 22, namely, "Please list below any of these aids (which were mentioned in question 21) which you are able to produce yourself". Also, they probably did not supply accurate details when they were asked in question 23 "Which of the other devices are you able to handle or operate?". The inadequate replies to these two questions were, presumably, due to their hurry in filling in the questionnaire forms. However, the results obtained are given in Tables 5-22 and 5-23.

The replies indicate that a considerable number of students (65%) are able to produce different types of demonstration boards, such as

No.	Type	PGDE	Undergraduate	Total	%
1	Demonstration Boards	10	27	37	65
2	Flash Cards	7	20	27	47
3	Chalkboard	2	6	8	14
4	Charts	7	16	23	40
5	Maps	4	15	19	33
6	Photographs	8	26	34	60
7	Models & Real Objects	2	14	16	28
8	Audio-tape Recorder (R to R)	1	6	7	12
9	Audio-tape Recorder (Cassette)	4	16	20	35
10	Record Player	1	1	2	3.5
11	Language Laboratories	-	-	-	-
12	Radio	-	-	-	-
13	Computer	-	1	1	2
14	Overhead Projection	11	21	32	56
15	Opaque Projection	3	2	5	9
16	Slides	8	23	31	54
17	Filmstrip	-	-	-	-
18	8mm Film	1	2	3	5
19	8mm Loop Film	1	-	1	2
20	16mm Film	-	-	-	-
21	Video-tape Recording	-	10	10	17.5
22	Closed-Circuit Television	-	-	-	-
23	Open-Circuit Television	-	-	-	-

Table 5-22

Students' Indications of the Types of Aids which They are able to Produce

No.	Type	PGDE	Undergraduate	Total	%
1	Demonstration Boards	1	2	3	5
2	Flash Cards	1	-	1	2
3	Chalkboard	1	-	1	2
4	Charts	1	-	1	2
5	Maps	1	-	1	2
6	Photographs	1	5	6	10.5
7	Models & Real Objects	1	2	3	5
8	Audio-tape Recorder (R to R)	4	23	27	47
9	Audio-tape Recorder (Cassette)	9	29	38	67
10	Record Player	1	13	14	24.5
11	Language Laboratories	-	8	8	14
12	Radio	4	10	14	24.5
13	Computer	-	5	5	9
14	Overhead Projector	14	35	49	86
15	Opaque Projector	12	28	40	70
16	Slide Projector	12	29	41	72
17	Filmstrip Projector	6	13	19	33
18	8mm Film Projector	6	25	31	54
19	8mm Loop Film Projector	5	27	32	56
20	16mm Film Projector	8	30	38	67
21	Video-tape Recorder	3	21	24	24.5
22	Closed-Circuit Television	2	14	16	28
23	Open-Circuit Television	2	-	2	3.5

Table 5-23

Students' Indications about the Type of Media which they
are able to Handle or Operate

flannel boards and pocket boards. Next comes photography, since 60% of the students indicated that they possessed ability in producing photographs. Some other students (56%) mentioned that they were able to produce overhead transparencies, while 54% indicated that they could make tape-slide programmes.

Moreover, when analysing the students' replies to questions 22 and 23, it was noticeable that the computer came last. Approximately 90% of the replying students did not mention possessing ability in handling the computer. One of them commented that the microcomputer belonged only to the Mathematics Department - for the time being - and thus wondered why computers were not introduced in Educational Technology courses.

Furthermore, the replies revealed that the most popular type of equipment was the overhead projector, since 86% of the students were able to handle it. Then comes the slide projector (72%). Third is the opaque projector (70%), followed by both the audio-tape cassette recorder (67%) and the 16mm film projector (67%).

Nevertheless, students attending Educational Technology courses were trained to use most of the above-mentioned media - except language laboratories and computers. Therefore, all of them have got at least an idea about each item in the Educational Technology Workshop. However they might not receive adequate training in operating or producing certain items, such as in photography, where it is most probable that because of the large number of students (30-35) in the Educational Technology courses, this prevents them from receiving a sufficiently detailed training. The limited time allocated to the course itself is also a limiting factor.

In short, the overhead projector, opaque projector, tape-slide presentation, 8mm loop film projection, and 16mm film projection, represented the most popular media, in addition to demonstration boards, charts, cards, and models which were likely to be used by students in their future teaching tasks.

Question 24 intended to investigate the students' opinions about the problems which prevent teachers from using teaching aids in their teaching process. It enquired, "What, in your opinion, are the problems which prevent teachers from using teaching aids in their subjects?". The replies obtained reflected students' opinions about such problems on a general basis. They mentioned problems that had occurred in schools and College, according to their experience (especially the PGDE students who are originally teachers).

Hence, the problems derived from the students' questionnaire could be summarised as follows:

- (1) Lack of educational equipment in schools and College departments.
- (2) Overburdened teaching hours (the intensive theory of curricula).
- (3) The difficulty of carrying the equipment from one classroom to another according to the teaching schedules.
- (4) The considerable distance between the teaching aid room and the classrooms in the UCB and in schools.
- (5) Lack of special AVA rooms in schools and College departments.

- (6) The difficulty of setting up a suitable schedule that would satisfy the requirements of all the different departments in the UCB.
- (7) Lack of suitable educational films related to the various subjects.
- (8) Involvement of teachers in school or College duties such as lesson preparation, examination setting-up and checking, etc., which prevent them, to some extent, from producing and using teaching aids.
- (9) The high cost of some educational equipment such as the video-tape recorder.
- (10) Lack of material.
- (11) Lack of projection rooms in schools and College departments.
- (12) Lack of electrical points in the classroom.
- (13) Lack of knowledge about the proper use of teaching aids by some teachers.
- (14) Some teachers' distorted views about teaching aids being only a means of entertainment or for filling in leisure time.

- (15) Lack of space in the classroom, which prevents the teacher from using some types of equipment – such as film projectors and opaque projectors.
- (16) Lack of teaching aid workshops (production laboratories).
- (17) Delay in equipment purchasing orders.
- (18) Overcrowded classrooms which, to a certain extent, prevent the teacher from using teaching aids such as real objects and models.
- (19) Lack of media libraries in schools and College departments.
- (20) Lack of competent technicians.
- (21) Lack of instructional guide books in the production and use of teaching aids.
- (22) Lack of time devoted to the use of teaching aids in the theoretical teaching practice.
- (23) Insufficient budget allocated for the teaching aids.

In short, these were the problems indicated by the sample of College students, as being major obstacles to the effective usage of teaching aids in the subjects taught.

Question 25 asked the students: "What sort of problems do you encounter when you use or produce teaching aids?". Replies to this question revealed the following problems:

- (1) Lack of material for the production of teaching aids.
- (2) Lack of workshops.
- (3) Lack of equipment compared to the number of trainees.
- (4) Lack of projection room..
- (5) Insufficient time for production (i.e. some teaching aids require a considerable time for production - such as tape-slides, films, etc.).
- (6) Insufficient production skills.
- (7) Inadequate training in handling equipment.
- (8) Old-fashioned equipment available (such as old types of 16mm projectors).
- (9) Lack of instructional guide books.

Those were the students' main problems in the use and production of teaching aids. Consequently, the UCB needs to solve these problems in order to enhance the teaching/learning process, and also to produce education students with a higher level of practical skills in educational technology.

A further investigation about different types of problems which occurred in the teaching and learning situation was made, and question 26 was set up for this purpose. It asked: "What types of problems do you encounter when you learn a subject through the medium of teaching aids?". The replies obtained indicated the following problems:

- (1) The lack of clarity of some teaching aids used - such as the crowded maps or charts and the complex (very detailed) models.
- (2) The lack of experience of some teachers in using teaching aids and in handling some types of equipment.
- (3) The inadequacy of some teaching aids to certain subject matter.
- (4) The small size of some teaching aids in relation to the size of the class and the number of students (i.e. small objects or models).
- (5) The absence of instructional guide books for the use of some equipment.
- (6) The moving of students from the classroom (for example, to the projection room, which causes some kind of anarchy).

These were some of the difficulties the students encountered when learning through teaching aids. This leads us to think about efficient solutions to overcome these difficulties, and also to consider what kind of procedure should be adopted to enhance the use of teaching aids in any teaching situation.

Moreover, in an attempt to find out the students' opinions and suggestions concerning the improvement of Educational Technology, question 27 asked: "What are your suggestions for the improvement of educational technology: (a) in the Educational Technology Section at UCB and (b) in the rest of the departments at UCB?".

The College students expressed their opinions about the first part of question 27 (a), and provided some suggestions and recommendations for improving the Educational Technology Section at UCB as follows:

- (1) More provision of educational equipment to enable all the students in educational technology courses to have the chance to be trained to handle and use these aids effectively.
- (2) Spatial expansion of educational technology workshops, especially for the practical work sessions.
- (3) Allocation of more time for educational technology courses, i.e. make two courses instead of one intensive course. For example, in the "Introduction to Educational Technology" course, have one complete course for theory and another for practical work.
- (4) Devote more time to practical work.

- (5) Increase the number of staff and technicians at the Educational Technology Section.
- (6) Provide more materials for the production of teaching aids.
- (7) Encourage the students' creative work in the production of teaching aids.
- (8) Introduce the microcomputer in Educational Technology courses.
- (9) Establish a special department for Educational Technology.
- (10) Provide the students with a booklet about the course's objectives.
- (11) Train the students in the basic principles of equipment maintenance.
- (12) Provide more references and texts in educational technology in the College Library.
- (13) Provide the Section with up-to-date educational equipment to keep pace with advances in educational technology.
- (14) Exclude the practical examination because, as three students stated:

" It is not necessary to have a practical test in using and handling equipment, because the mastery of teaching aids could be considered as a skill and, therefore, it could be improved by practice only."

However, without the practical examination, it is difficult to ensure that all students reach an adequate level in the practical skills. The existence of an examination does not mean that facilities for practice are limited in any way.

- (15) Provide better training opportunities for the students in outdoor filming, using movie cameras and video cameras. Consequently, more cameras of both types should be provided for the purpose of training.
- (16) Organise some visits to different schools, in order to evaluate the available teaching facilities and methods.

On the other hand, the students' recommendations about the development of educational technology in the other UCB departments could be summarised as follows:

- (1) Use educational technology approaches in every subject, either Arts or Sciences.
- (2) Provide educational equipment in every department.
- (3) Provide adequate training for the teachers in all departments in the effective use of teaching aids.
- (4) Use the various types of teaching aids in every subject whenever it is appropriate.

- (5) Provide media and projection rooms in every department in order to reduce the demand on the Educational Technology Section.

Chapter VI

RECOMMENDATIONS AND CONCLUSION

RECOMMENDATIONS

The following suggestions and recommendations are derived from the present investigation of the position of educational technology at the University College of Bahrain.

(1) Resource-Based Learning Centre

To improve the position of educational technology at UCB, and to increase the use of teaching media in all of the College departments, it is desirable to create a much larger resource centre at the UCB. This should aim at fulfilling the needs of all the College departments, and also at achieving specific educational goals.

Such a resource centre could be considered as a vital aspect of curriculum planning,

"... either to supply stimulus and source material that is lacking or to supplement existing resources in order to match more closely the needs of particular students or a particular teaching situation."

(Beswick [1977])

Hence, careful planning of a resource centre is required.

(2) Media Packages

It is suggested that media packages for various types of subject matters are prepared by professional people, such as graphic artists and photographers, in order to assist the teaching/learning process. Such packages could be kept either in one place for loan, or in every department according to the package topics.

(3) Books on Educational Technology

Books and other references on educational technology are very limited for the time being in the College Library. So it is advisable to provide references, i.e. books and journals, which are relevant to the subject of educational technology, and have them available for all students who attend educational technology courses.

(4) Research

Research is recommended to be conducted in the educational technology field, because, as Elton (1979) indicates,

"... changes in higher education require innovations which have to be introduced through research and development and in turn evaluated."

Many problems arise in educational technology at the UCB. Adequate solutions could be found by conducting controlled educational researches, and hence, improve the work of the Educational Technology Section at the UCB.

(5) Staffing

In order to expand the Educational Technology Section, i.e. its courses and activities, the staff should be increased according to present needs. These posts should have specific job descriptions in order to

- (a) specify the number of staff needed for the kind of job to be done;
- (b) avoid duplication;
- (c) specify responsibilities.

Increasing the number of staff could also mean increasing educational technology courses, activities, and services.

(6) Space

More space is required to respond to the growing needs of the increasing number of students attending educational technology courses, i.e. space for lecturing, practical work, staff offices, and so on.

(7) Equipment

More educational equipment is needed in the Educational Technology Section to meet the increasing demand for its use. This applies especially to overhead projectors, slide projectors, and 16mm film projectors, because these are the most frequently used items of equipment at the College..

Careful planning, therefore, is needed for providing equipment, and various factors should also be taken into consideration in such matters. To cite a few, the provision of relevant software, or adequate space, and maintenance facilities are all necessary for better management.

(8) Microcomputer

It is desirable that the microcomputer is introduced in educational technology courses, to make students familiar with such a modern technological instrument, and also to enhance the teaching/learning process.

"The computer with its virtually instantaneous response to student input, its extensive capacity to store and manipulate information, and its unmatched ability to serve many individual students simultaneously, is becoming more and more widely used as an aid to instruction." (Heinich [1982])

Therefore, it is advisable to introduce such a modern teaching aid into the learning process, to help students benefit more from the subject taught.

(9) In-Service Training

In-Service training courses in educational technology and in the use of teaching aids, would seem to be worthwhile projects for UCB staff. These courses could be considered of fundamental importance in the future development of teaching skills. Nevertheless, many teachers in higher education, such as in the UCB, are often unable - or unwilling - to attend in-service courses. Therefore, this poor attendance is an important problem of in-service training courses. Hence, an urgent remedy for this problem is needed. The suggested changes in educational technology at the UCB will necessitate substantial provision of in-service training in this field.

Consequently, once the staff is convinced about the vital role of educational technology, then one can say that the training courses will be able to achieve their aims.

(10) Re-constitution of the Film Committee

Although opinions on this point were not asked for in the questionnaire, the present author is firmly of the opinion that this UCB committee (whose former role was described on pp.21 and 22) should be re-constituted.

A re-constituted Film Committee could play a major role in providing films and other audio-visual materials for all the College departments.

(11) Microteaching Method

Microteaching is at present conducted only in the Department of Education; however, this method would seem to be a valuable way of improving teaching skills of student-teachers.

Microteaching methods may be described as

"... a scaled down teaching encounter in which a student teaches a small group of pupils for up to fifteen minutes. The proceedings are usually video-recorded and supervisors and students discuss the playback." (Brown [1975])

Simply, the micro-teaching

"... aims to break down the complex act of teaching into simpler components so that the learning task will be more manageable for the beginner."

This method is important for students for their future teaching job, because it trains them in how to organise themselves in the classroom teaching situation, how to achieve their teaching objectives even in a limited time, and how to attain the desired interaction between them and their pupils in order to convey their messages properly.

Therefore, special attention should be devoted to such an important teaching and learning method.

At present, the space and facilities available^{for microteaching} are limited. Thus, it is recommended that more space, staff, and technical facilities are provided for this important aspect of teacher education.

CONCLUSION

The present study was set up in order to investigate the development of the Educational Technology Section at the University College of Bahrain (UCB) since its establishment in 1978. Adequate documentary evidence about educational technology at the College was not available, and therefore the method of questionnaire research was adopted. The two questionnaires, for staff and students respectively, were prepared in order to study the present situation of educational technology at the UCB from both the students' and the teachers' points of view.

The aim of the present work is to examine the development and present position of educational technology in the various departments at the UCB, and also to make relevant suggestions for the future development of the Educational Technology Section as a unit.

The results of both questionnaires revealed that staff and students have a positive outlook as far as educational technology development is concerned. It also showed that, in general, optimistic attitudes existed towards the evolution and improvement of educational technology at the UCB. In contrast, the negative attitudes expressed, such as the objection of some of the College lecturers to the use of educational technology in the teaching process, represented only a minority of the teaching staff.

However, the study revealed that educational media were under-used in many UCB departments. As a result, a thorough re-evaluation and re-organisation of the educational technology courses, teaching methods, and activities is urgently required.

In addition, this present study includes recommendations, by both staff and students, for the future development of educational technology at the UCB.

Finally, it is hoped that the time will soon come when educational technology will take its place in every teaching situation, and thus become an integral part of the teaching and learning of every subject. This will help to solve many problems in the teaching/learning process.

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Appendix I

STAFF QUESTIONNAIRE FORM AND ITS ACCOMPANYING LETTER (ARABIC VERSION)

دولة البحرين
الكلية الجامعية للعلوم والآداب والتربية
دائرة التربية - شعبة تكنولوجيا التعليم
ديسمبر ١٩٨٣ •

حضرة الزميل / الزميله العزيز/ة •

تحية طيبة وبعد ،

ان الاستبيان المرفق هو جزء من دراستي لدرجة الماجستير في تكنولوجيا التعليم بجامعة ويلز ، لذا فاني سأكون جدد ممتنه لدى ملء هذا الاستبيان ثم ارجاعه لي في أسرع وقت ممكن ، كما اني سأكون شاكرة لك تفضلك بالاهلاء ببعض المقترحات والتعليقات الإضافية اذا كنت ترغب / ترغبين في ذلك •

هذا ولمن المؤكد أن المعلومات التي سوف تدلي بها في هذا الاستبيان ستكون ذات فائدة كبيرة لي للقيام بدراسة استقصائية عن الوضع الحالي لتكنولوجيا التعليم في كلية البحرين الجامعية •

كما اني أود أن أؤكد أن أية معلومات خاصة سوف تكون سرية ولن تنشر معلومات تشير الى أشخاص معينين •

مع كل شكرى وتقديرى لتعاونكم ،

نبيله زبارى

استبيان هيئة التدريس بكلية البحرين الجامعية
عن دور تكنولوجيا التعليم في الكلية

الاسم (اختياري) : المر :

الجنسية : الجنس : ذكر ☐ أنثى ☐ [

المؤهلات :

التخصص :

الدائرة :

عدد سنوات العمل بالكلية الجامعية :

هل لديك شهادة / أو دبلوم تدريب المعلمين ؟ ☐ نعم ☐ لا

هل حضرت كورسا أو تدريبا معينًا في مجال استخدام
الوسائل التعليمية ؟

☐ نعم ☐ لا

إذا كان الجواب نعم فما هي مدة تلك الدراسة ؟

.....

..... وكذلك ، ما نوع هذه الدراسة ؟ الرجاء وضع إشارة (✓) في المربع المناسب :

— كورس ضمن تدريب المعلمين في كلية البحرين الجامعية

— ضمن التأهيل والتدريب أثناء الخدمة — ورشة عمل

— غير ذلك :

(الرجاء تحديد نوع الدراسة) :

.....

.....

الرجاء وضع إشارة (/) أينما تجده مناسبة :

الرقم	أوافق	لا أوافق	لا أعرف
١			
٢			
٣			
٤			
٥			
٦			
٧			
٨			
٩			
١٠			
١١			
١٢			
١٣			

الرقم	أوافق	لا أوافق	لا أعرف
١٤			
١٥			
١٦			
١٧			
١٨			

الرجاء وضع إشارة (٤) في الخانة المناسبة :-

الرقم	الى حد كبير	الى حد ما	أبداً
١٩			
٢٠			
٢١			
٢٢			
٢٣			
٢٤			

الرقم		الى حد كبير	الى حد ما	أبداً
٢٥	استخدام الوسائل التعليمية السمعية البصرية في الصف يتطلب وقتاً أطول من الوقت المخصص للحصة الدراسية			
٢٦	أنا استخدم قسم استعارة الأجهزة بالكلية الجامعية			
٢٧	هنالك نقص في الأجهزة في قسم الاستعارة بالكلية الجامعية			
٢٨	هنالك نقص في الموظفين العاملين بقسم الاستعارة بالكلية الجامعية .			

٢٩ - هل باستطاعتك تشغيل الأجهزة التالية ؟

الرقم	الجهاز	لم أشغله أبداً	أجد صعوبة في تشغيله	أجده سهل التشغيل	أستطيع تدريس الآخرين
١	جهاز التسجيل الصوتي (البكرات)				
٢	جهاز التسجيل الصوتي (الكاسيت)				
٣	جهاز التسجيل المرئي (الفيديو تيب)				
٤	جهاز عرض الصور العتمة (جهاز التكبير)				
٥	الجهاز العارض فوق الرأس				
٦	جهاز عرض الشرائح (سلايدز) والأفلام الثابتة .				
٧	جهاز عرض الأفلام المتحركة مقاس ٨ مم				
٨	جهاز عرض الفيلم الحلقي (الدوار)				
٩	جهاز عرض الأفلام المتحركة قياس ١٦ ملم (اليدوي أو شبه الأتوماتيكي)				
١٠	جهاز عرض الأفلام المتحركة مقاس ١٦ ملم (الأتوماتيكي)				

٣٠ - الرجاء وضع إشارة (✓) أمام أى نوع تستخدمه من الوسائل التعليمية التالية موضحاً مدى استخدامك لها (تقريباً) :

الرقم	النوع	في كل درس	ثلاث مرات في الأسبوع	مرتين في الأسبوع	مرة في الأسبوع	مرة في الشهر	نادراً	ولا أستخدم أبداً
١	لوحات العرض التعليمية الويرية ، الجيبية ، المغناطيسية)							
٢	لوح الطباشير							
٣	بطاقات							
٤	خرائط							
٥	لوحات توضيحية							
٦	صور فوتوغرافية							
٧	مجسمات وأشياء حقيقية							
٨	جهاز التسجيل الصوتي							
٩	جهاز الأسطوانات الصوتية							
١٠	المختبرات اللغوية							
١١	المذياع (الراديو)							
١٢	الكبوتر							
١٣	الجهاز العارض فوق الرأس							
١٤	جهاز عرض الصور المعتمدة (جهاز التكبير)							
١٥	جهاز عرض الأفلام الثابتة							
١٦	جهاز عرض الشرائح الثابتة (السلايدز)							
١٧	البرامج المتزامنة بين الشريحة الثابتة (سلايدز) والشريط الصوتي							

الرقم	النوع	في كل درس	ثلاث مرات في الأسبوع	مرتين في الأسبوع	مرة في الأسبوع	مرة في الشهر	نادرا	ولا أستخدم أبدا
١٨	جهاز عرض الأفلام المتحركة مقاس ٨ ملم .							
١٩	جهاز عرض الأفلام الحلقية (الدائرة) مقاس ٨ ملم .							
٢٠	جهاز عرض الأفلام المتحركة مقاس ١٦ ملم							
٢١	جهاز التسجيل المرئي (الفيد يوتيب) .							
٢٢	التلفزيون ذو الدائرة المغلقة							
٢٣	التلفزيون ذو الدائرة المفتوحة							
٢٤	غير ذلك (الرجاء ذكرها) :							

٣١ - إذا كنت تشعر بأن بعض الوسائل المذكورة أعلاه غير مناسبة لمادتك فالرجاء ذكرها مع توضيح أسباب عدم ملاءمتها :

.....
.....
.....

٣٢ - هل تتاح لك الفرصة لبدء رأيك فيما يتعلق بشراء الأجهزة التعليمية (مثلا جهاز التسجيل الصوتي ، جهاز عرض شرائح ٠٠٠ الخ) والتي تستخدم في دائرتك ؟

لا ☐ نعم ☐

٣٣ - هل تتاح لك الفرصة لأبداء رأيك فيما يتعلق بشراء المواد التعليمية (الشرائح ، الأفلام المتحركة ١٦٨ ملم ٠٠ الخ) والتي تستخدم في دائرتك ؟

لا ☐ نعم ☐

٣٤ - الرجاء وضع إشارة (✓) في المكان الملائم بالنسبة للمشاكل التي تواجهه المدرس لدى انتاج واستعمال الوسائل التعليمية :

الرقم	المشكلة	الى حد كبير	الى حد ما	لا اعتقد ذلك
١	عدم توفر الأجهزة التعليمية			
٢	عدم توفر المواد التعليمية اللازمة للإنتاج والاستعمال			
٣	نقص الفنيين			
٤	ضييق الوقت			
٥	زيادة عبء حصص التدريس			
٦	عدم توفر الأعتام اللازم للعرض في الغرف الدراسية			
٧	نقص (الفيشات) الكهربائية (السوكت) في الغرف الدراسية .			
٨	عدم كفاءة التخطيط والتنظيم بالنسبة لتوفير الوسائل التعليمية .			
٩	عدم توفر الصيانة اللازمة للأجهزة التعليمية			
١٠	النقص في الدعم الإداري			
١١	عدم توفر غرف التخزين			
١٢	عدم كفاية الكورسات التدريبية في انتاج واستخدام الوسائل التعليمية .			
١٣	عدم توفر الكتيبات أو المذكرات التي تبين طرق استعمال الأجهزة وغيرها مثلاً .			
١٤	عدم توفر مميزات الانتاج			
١٥	عدم كفاية الميزانية المخصصة لشراء الأجهزة والمواد التعليمية			

٣٥ - الرجاء ذكر أية مشكلة / مشكلات أخرى تعتقد أنها تؤثر على انتاج وتطبيق الوسائل التعليمية في التدريس .

.....
.....
.....

٣٦ - الرجاء التفضل بكتابة آرائك واقتراحاتك بشأن التطوير لمستقبلي لـ :
(أ) : شعبة تكنولوجيا التعليم في كلية البحرين الجامعية :

.....
.....
.....

(ب) : التطوير المستقبلي لتكنولوجيا التعليم في دائرتك كذلك :

.....
.....
.....

(ج) : مقترحاتك بشأن التطوير المستقبلي في قسم الخدمات والاستعارة
بكلية البحرين الجامعية أيضاً :

.....
.....
.....

مع الشكر الجزيل لتعاونك

Appendix II

**STAFF QUESTIONNAIRE FORM AND ITS ACCOMPANYING LETTER
(ENGLISH VERSION)**

STATE OF BAHRAIN
UNIVERSITY COLLEGE OF ARTS
SCIENCE & EDUCATION
EDUCATION DEPARTMENT

Dear Colleague,

The enclosed questionnaire is a part of my study of a Master's degree in Educational Technology at the University College of Wales.

I shall be most grateful if you will help in completing this questionnaire and return it to me as soon as possible. I shall also be glad to receive any additional comments that you would like to make.

I believe that your information will be very beneficial to me in producing a comprehensive survey of the present position of educational technology the University College of Bahrain.

All information received will be treated as confidential and no indentifiable information will be published.

Many thanks to you all for your cooperation.

Nabeela Zubari
Department of Education
Educational Technology Section.

A QUESTIONNAIRE FOR THE UNIVERSITY
COLLEGE OF BAHRAIN STAFF ABOUT THE
ROLE OF EDUCATIONAL TECHNOLOGY
IN THE COLLEGE

Name:- (optional)

Nationality:-

Qualification:-

Specialisation:-

Department:-

Number of years employed in the

University College of Bahrain (UCB):-

Age:-

Sex:- ☐ M ☐ F

- Have you had any teacher training certificate/Diploma?

☐ Yes ☐ No

- Have you had any special training or course work in the use of
teaching aids?

☐ Yes ☐ No

- If yes please indicate the length of the course:

- ... and also, what type of training have you had? Please tick:

☐ Courses taken as part of teacher training in the
University College of Bahrain.

☐ In-service training/workshop.

☒ Other (please specify) _____

Please tick (✓) the answer while you think is most appropriate:-

No.		I agree	I do not agree	I do not know
1.	Educational Technology (Ed.Tech) should be used in teaching all subject matter.			
2.	Educational Technology is concerned only with Audio Visual equipment.			
3.	Educational Technology deals with the systematic approach in teaching.			
4.	All teachers in different subjects should have a basic training course in Educational Technology.			
5.	Only the teachers who teach subjects which include practical work should have training course in Educational Technology, e.g. science.			
6.	Every teacher should construct the behavioral objectives which clarify the performance, conditions and standard in achieving the objectives in his teaching.			
7.	The teacher should give his students the opportunity to know the objectives of his teaching course before starting it.			
8.	The student's assessment should reflect the course objectives.			

No.		I agree	I do not agree	I do not know
9.	The teacher should use as many audio-visual-aids as he can in one lesson.			
10.	A lesson could be useful and understandable by using only one type of audio-visual-aid (i.e. tape recorder ...) .			
11.	The teacher should know the basic use and application of teaching aids (i.e. overhead projector, slide projector ... etc.)			
12.	The teacher is not required to know about operating equipment, the university should provide technicians for this job.			
13.	It is desireable for the teacher to master some skills in producing some of the teaching aids in order to use them in his/her teaching.			
14.	It is a waste of the teacher's time for him to prepare teaching aids for his/her courses.			
15.	The University College of Bahrain should provide a number of technicians and graphics people in order to produce materials for all the department when needed.			
16.	There is a lack of space and staff in The Media Resource Centre at the U.C.B.			

No.		I agree	I do not agree	I do not know
17.	There is a lack of technicians for equipment maintenance in the Media Resource Centre at the U.C.B.			
18.	I support the idea of constructing a big media resource centre in the University College of Bahrain.			

Please tick (✓) where it is appropriate:-

No.		a great deal	To some extent	Not at all
19.	There is a considerable influence on the students (ie. attract their attention ...) when I use the teaching aids in my subject.			
20.	Using teaching aids in the classroom increases the students' interaction.			
21.	Using teaching aids in my subject leads the student to become idle and limit their imagination and creativity.			
22.	while using teaching aids, the students pay more attention to them than to the actual lesson (subject).			
23.	Using audio visual aids (AVA) create difficulties for the teacher in class-management.			
24.	AVA may substitute the teacher and reduce his effectiveness in the classroom.			

No.		A great deal	To some extent	Not at all
25.	Using AVA in the classroom requires longer time than the time allocated for the lesson period.			
26.	I use the media Loan Section in the University College of Bahrain.			
27.	There is a lack of equipment in the Loan Section of U.C.B.			
28.	There is a lack of staff in the Loan Section of U.C.B.			

29. Could you operate the following equipment?

No.	Equipment	Have never operated	Find it difficult to operate	Find it easy to operate	I can teach others
1.	Reel-to Reel Tape recorder.				
2.	Cassette tape recorder				
3.	Video-tape recorder				
4.	Opaque projector				
5.	Overhead projector				
6.	Slide/film strip projector				
7.	8mm. film projector				
8.	Loop film projector				
9.	16mm film projector (manual)				
10.	16mm film projector (Automatic).				

30. Please tick (✓) the type of media which you use in your teaching, showing how often (approximately).

Type	In every lesson	Three times a week	twice a week	once a week	once a month	Rarely	not at all
1. Demonstration boards (flannel, pocket, magnetic)							
2. Chalkboard							
3. Flash cards							
4. Maps							
5. Charts							
6. Photographs							
7. Models and real objects							
8. Audio tape-recorder							
9. Record Player							
10. Language Laboratories							
11. Radio							
12. Computer							
13. Overhead Projector							
14. Opaque Projector							
15. Film strip projector							
16. Slide projector							
17. Synchronized tape-slide — programme.							
18. 8mm film projector							
19. 8mm film loop projector							
20. 16mm sound film projector							
21. Video-tape recorder							
22. Closed circuit television							
23. Open - circuit television							
24. Other devices (please indicate) _____ _____							

31. If you feel that some of the above media are not appropriate for your subject could you please give your reasons for this?

32. Do you have any opportunity to suggest the purchase of educational equipment (hardware e.g. tape recorders, slide projector ... etc.) used in your department?

☐

Yes

☐

No.

33. Do you have any opportunity to suggest the purchase of educational material (software e.g. slides, 16mm films ... etc.) used in your department?

☐

Yes

☐

No.

34. Please tick (✓) what you believe is true about the problems which face the teacher in the production and utilization of teaching aids:-

No.	Problem	a great deal	to some extent	I do not think so
1.	Lack of equipment (hardware)			
2.	Lack of materials (software)			
3.	Lack of technicians.			
4.	Lack of time.			
5.	The overload of teaching hours.			
6.	Lack of black-out in the classrooms.			
7.	Lack of electrical points in the classrooms.			
8.	Unefficient planning and organisation of the supply of teaching aids.			
9.	Lack of equipment maintenance.			
10.	Lack of administrative support.			
11.	Lack of storage rooms.			
12.	Insufficient training courses in the use and production of audio-visual aids.			
13.	Lack of instructions guidebooks and hand-outs which explain for instance the utilization of equipment.			

No.	Problem	a great deal	to some extent	I do not think so
14.	Lack of production skills.			
15.	Unsufficient budget allocated for purchasing equipment and materials.			

35. Would you please state any other problem/s which you think affects the production and application of teaching aids in instruction:

36. Would you kindly write your suggestions about the future development of:

I- The Educational Technology Section in the University College of Bahrain:

II- ... also about the future development of educational technology in your department:

III- ... and about the future development of The Service and Loan Section in the University College of Bahrain:

Thank you for your co-operation.

Appendix III

STUDENTS' QUESTIONNAIRE FORM
(ARABIC VERSION)

دولة البحرين
الكلية الجامعية للعلوم والآداب والتربية
دائرة التربية - شعبة تكنولوجيا التعليم
ديسمبر ١٩٨٣ م

استبيان طلبة كلية البحرين الجامعية
عن دور تكنولوجيا التعليم في الكلية

الاسم : (اختياري)

العمر : الجنس : ذكر ☐ أنثى ☐

المرحلة الدراسية (السنة) : الدائرة :

مجال الدراسة (علمي ، أدبي) التخصص :

- هل درست أي مقرر في تكنولوجيا التعليم ؟

نعم ☐ لا ☐

- إذا كان الجواب نعم ، فكم عدد المقررات التي درستها في هذا المجال ؟

.....

- ماذا تعني لك عبارة (تكنولوجيا التعليم) ؟ (اذكر التفسير الذي تعتقده)

.....

.....

.....

.....

الرجاء وضع إشارة (سر) في الخانة المناسبة

ترقم	أوافق	لاوافق	لااعرف
١			
٢			
٣			
٤			
٥			
٦			
٧			
٨			
٩			
١٠			
١١			

الرقم	وافق	لاوافق	لاعرف
١٢			أعتقد أن الكلية الجامعية لابد أن تنظم دورات تدريبية فسي انتاج واستخدام الوسائل التعليمية لهيئة التدريس بالكلية .
١٣			لقد وجدت أن مقررات تكنولوجيا التعليم التي درستها بالكلية مفيدة جدا بالنسبة لي . (اذا كنت موافقا على ذلك فالرجاء ذكر الأسباب في كونها مفيدة) :
١٤			أشعر بأن مقررات تكنولوجيا التعليم التي درستها بالكلية لم تساهم في زيادة معلوماتي .
١٥			هنالك بعض النواقص في مقررات تكنولوجيا التعليم . (اذا وافقت على ذلك فالرجاء ذكر هذه النواقص) :
١٦			انه لمن المهم أن يكون هنالك تلفزيونا تعليميا في كلية البحرين الجامعية .
١٧			لقد تعلمت الكثير عن طريق البرامج التعليمية التي تبث من خلال محطات التلفزيون اللاسلكية . (اذا وافقت على ذلك فالرجاء ذكر بعض الأمثلة عما تعلمته من التلفزيون) :
١٨			لقد وجدت أن الأفلام المتحركة مقاس ٨ ر ١٦ ملم والتي شاهدتها في الكلية الجامعية كانت فعالة ومفيدة . (اذا وافقت على ذلك فالرجاء ذكر المادة / المواد الدراسية التي عرضت فيها تلك الأفلام) :

الرقم	أوافق	لا أوافق	لا أعرف
			٠٠٠ وكذلك لماذا وجدت تلك الأفلام فعالة ؟
١٩			مشاهدة الأفلام التعليمية شيء ممل .
٢٠			لقد تعلمت مهارات مختلفة عن طريق مشاهدة الأفلام التعليمية . (إذا وافقت على ذلك فالرجاء ذكر أمثلة لبعض المهارات التي تعلمتها عن طريق الأفلام) :

٢١ - الرجاء وضع إشارة (✓) في العمود المناسب أمام كل وسيلة تعليمية (مدى فعاليتها الوسائل التعليمية) :

الرقم	نوع الوسيلة	فعالة جدا	لها بعض الفائدة	ليست مفيدة على الإطلاق	ليست لدى فكرة عنها
١	لوحات العرض التعليمية : (الهرية - الجيبية - المغناطيسية ٠٠)				
٢	البطاقات				
٣	لوح الطباشير				
٤	الرسومات التوضيحية والبيانية				
٥	الخرائط				
٦	الصور الفوتوغرافية				

الرقم	نوع الوسيلة	مفيدة جدا	لها بعض الفائدة	ليست مفيدة على الإطلاق	ليست لديها فكرة
٧	المجسمات والأشياء الحقيقية				
٨	جهاز التسجيل الصوتي (بكرات)				
٩	جهاز التسجيل الصوتي (كاسيت)				
١٠	جهاز الأسطوانات				
١١	المختبرات اللغوية				
١٢	المذياع				
١٣	الكمبيوتر				
١٤	الجهاز المعارض فوق الرأس				
١٥	جهاز عرض الصور المعتمة (جهاز التكبير)				
١٦	جهاز عرض الشرائح الثابتة (سلايدز)				
١٧	جهاز عرض الأفلام الثابتة				
١٨	جهاز عرض الأفلام المتحركة مقاس ٨ ملم				
١٩	جهاز عرض الأفلام الحلقية (الدائرة) مقاس ٨ ملم (صامت)				
٢٠	جهاز عرض الأفلام المتحركة مقاس ١٦ ملم				
٢١	جهاز التسجيل المرئي (الفيديو تيب)				
٢٢	التلفزيون ذو الدائرة المغلقة .				
٢٣	التلفزيون ذو الدائرة المفتوحة (المحطات التلفزيونية)				

٢٢ - الرجاء تعداد أى من الوسائل المذكورة أعلاه باستطاعتك انتاجها (أو انتاج المـ
اللازمة لها كالأفلام والشرائح مثلاً ٠٠٠)

.....
.....
.....
.....

٢٣ - أى من الأجهزة المذكورة بإمكانك تشغيلها أو استعمالها :

.....
.....
.....

٢٤ - ماهي - في رأيك - الصعوبات التي تعوق المدرسين من استخدام الوسائل التعليمية في
تدريس موادهم ؟

١ -
٢ -
٣ -
٤ -
٥ -

٢٥ - مانوع المشاكل التي تواجهها عندما تنتج أو تستخدم الوسائل التعليمية ؟

.....
.....
.....

٢٦ - ماهي الصعوبات التي تواجهها عندما تدرس أية مادة (أو موضوع) عن طريق الوسائل التعليـ

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.....
.....

Appendix IV

STUDENTS' QUESTIONNAIRE FORM
(ENGLISH VERSION)

S T U D E N T S ' Q U E S T I O N N A I R E

Name (optional)

Age

Sex: Male ☐ Female ☐

Stage/Year

Department

Field of Study

Specialisation

How many courses have you attended in Educational Technology?

.....

What does the term "Educational Technology" mean to you?

.....

Please tick (✓) the answer which you think is most appropriate.

NO.	Q U E S T I O N	I AGREE	I DON'T AGREE	I DON'T KNOW
1	I would like to know beforehand what I am required to do by the end of any subject.			
2	I think that I will participate better in any subject when I know its objectives.			
3	There should be specific and clear objectives for all subjects.			
4	I think that the university lecturer does not need to specify objectives for his/her subject.			
5	I feel that I can understand any subject much better when teaching aids are used in it.			
6	I believe that some teachers in the University College of Bahrain (UCB) use a variety of teaching aids effectively. (If you agree, please state the subjects):			
7	No teacher in the University College uses teaching aids properly in his/her teaching.			
8	I think that the teacher who uses teaching aids in his/her subject is wasting time (his/her and our time).			
9	I notice that the teaching aids create motivation among the students in the classroom.			
10	I notice that teaching aids cause troubles, such as (please state):			
11	I wish that teaching aids were used in every subject.			
12	I think that the university should organise training courses in the production and use of the teaching aids for the College staff.			

NO.	Q U E S T I O N	I AGREE	I DON'T AGREE	I DON'T KNOW
13	I found that the Educational Technology courses, which I have attended, are very useful. (If you agree, please state why they are useful): 			
14	I feel that the Educational Technology courses did not contribute to increasing my knowledge.			
15	There are some deficiencies or faults in the Educational Technology courses. (If you agree, please state the deficiencies): 			
16	It is important to have educational television at the UCB.			
17	I have learned a lot from the educational programmes in television broadcasting. (If you agree, please state some examples of what you have learned): 			
18	I found that the 16mm movie films, which I have seen in the UCB, were effective. (If you agree, please state during which subject(s) the films were projected): 			
19	Watching educational films is boring.			
20	I have learned a variety of skills through educational films. (If you agree, please state some examples of the skills learned): 			

(21) Effectiveness of Teaching Aids

Please tick (✓) the appropriate box.

NO.	T Y P E O F A I D	VERY EFFECTIVE	IT HAS SOME VALUE	NOT USEFUL AT ALL	I HAVE NO IDEA ABOUT IT
(a)	Demonstration boards (flannel, magnetic, pocket)				
(b)	Flash cards				
(c)	Chalkboard				
(d)	Charts				
(e)	Maps				
(f)	Photographs				
(g)	Models and real objects				
(h)	Audio-tape recorder (reel to reel)				
(i)	Audio-tape recorder (cassette)				
(j)	Disc player or record player				
(k)	Language Laboratories				
(l)	Radio				
(m)	Computer				
(n)	Overhead projector				
(o)	Opaque projector				
(p)	Slide projector				
(q)	Filmstrip projector				
(r)	8mm film projector				
(s)	8mm silent loop film projector				
(t)	16mm sound film projector				
(u)	Video-tape recorder				
(v)	Closed-circuit television				
(w)	Open circuit television (broadcasting)				

- (22) Please list below any of these aids which you are able to produce yourself.

.....
.....
.....

- (23) Which of the other devices are you able to handle or operate?

.....
.....
.....

- (24) What, in your opinion, are the problems which prevent teachers from using teaching aids in their subjects?

[1] [4]
[2] [5]
[3]

- (25) What sort of problems do you encounter when you use or produce teaching aids?

.....
.....

- (26) What types of problems do you encounter when you learn a subject through the medium of teaching aids?

.....
.....

- (27) What are your suggestions about the improvement of Educational Technology?

(a) in the Educational Technology Section at UCB:

.....
.....

and

(b) also in the rest of the departments at UCB:

.....
.....

Thank you for your co-operation.

NABEELA ZUBARI

Education Department
[Ed. Tech. Section]