DOCUMENT RESUME

ED 119 664 IR 003 127

AUTHOR Bates, A. W.
TITLE Student Use of Open University Broadcasting; A Survey of 10,537 Students Carried Out in November 1974.
INSTITUTION Open Univ., Walton, Bletchley, Bucks (England). Inst. of Educational Technology.
PUB DATE 75
NOTE 204p.; Open University, IET Papers on Broadcasting No. 44

EDRS PRICE MF-$0.83 HC-$11.37 Plus Postage
DESCRIPTORS College Students; Educational Programs; *Educational Radio; *Educational Television; *External Degree Programs; Higher Education; Multimedia Instruction; Participant Satisfaction; Programing (Broadcast); Questionnaires; *Student Opinion; Student Participation; Surveys; Tables (Data); *Television Surveys
IDENTIFIERS *Open University

ABSTRACT

The Open University of Great Britain relies heavily on broadcasting as a mode of instruction. Because increased course offerings have made program scheduling a problem and because production costs have risen sharply, a survey was conducted to determine the use patterns of students so that the system's resources could be allocated in the most efficient manner possible. Nearly 13,000 of the school's 45,000 enrolled students were surveyed by mail. The response rate was high, and the results provided data on: 1) student viewing and listening time; 2) student ratings of broadcasts; and 3) factors influencing the viewing and listening times. These results facilitated a discussion of the best allocation of broadcast time. The text provides a detailed discussion of the survey design and tabular summaries of the data. (EMH)

I.E.T. papers on broadcasting
No.44

STUDENT USE OF OPEN UNIVERSITY BROADCASTING

© A.W. Bates

Audio-Visual Media Research Group
Institute of Educational Technology
Open University

STUDENT USE OF OPEN UNIVERSITY BROADCASTING

A Survey of 10,537 students carried out in November, 1974

Dr. A. W. Bates

Senior Lecturer in Media Research Methods

Audio-Visual Media Research Group
Institute of Educational Technology
Open University
Milton Keynes
United Kingdom

CONTENTS

ACKNOWLEDGEMENTS

The production of the report was very much a team effort, and I am very grateful for all the help everyone without exception has willingly given me. Perhaps my greatest thanks are due to Enid Jetten and Vivianne Dowse of Gallup Polls Ltd., who organised the punching, programming and data analysis of over 10,000 questionnaires and managed to complete their part of the job within the incredibly short period of six weeks, thus enabling us to beat the deadline for providing data for the University's submission to the Annan Committee on the future of broadcasting in Britain. At the same time, the print-outs they provided were beautifully clear and error-free. I am also very grateful to Carrie Roberts and John Meed of the Audio-Visual Media Research Group for a good deal of chasing round, tidying up of data, useful suggestions, and the preparation of the many tables and diagrams in this report. Most of the diagrams were drawn by Carrie. The sample could not have been designed without the help of Judith Calder, of the Survey Research Department, and from the same Department, Val Morrison provided a constant stream of supporting data and statistical advice.

Several people, including Peter Davey from SRD, Robert Rowland from the BBC, and Professor Smith, as Chairman of the Broadcast Sub-Committee, provided helpful advice on the wording of the questionnaire. Chris Cameron of Data Processing overcame considerable difficulties to provide us with names and labels for the 12,000 students in the sample, plus background data on each student. I am also grateful to Rob Waller, of the Textual Communications Research Unit of IET for advice on the design and lay-out of the report and to Margaret Lawson, of the Academic Planning Office, for continually trying to make me keep the report related to essential planning issues, and for supplying necessary broadcasting details and statistics. Oonagh Waugh and Judith Fage efficiently carried out the coding of the two open-ended questions, and Sue Cox, Vera Lynham and Gill Clarke have patiently typed the report.

Finally, my colleague Margaret Gallagher has made a major contribution by her advice on analysis and interpretation and careful reading of the drafts. Also, very importantly, I am grateful to the Evaluation Committee for making the money available for the study.

With so much help and advice behind me, it will be apparent that any shortcomings in the report, any carelessness, errors, wrong or misconceived interpretations and omissions must be entirely my responsibility.

1. SOME OPEN UNIVERSITY BROADCASTING PROBLEMS

On BBC 2, at 11.00 a.m. on Saturday, January 3rd, 1971, the first Open University programme was broadcast. It was a general television programme, aimed at students on all courses, giving information about the University's methods of teaching and organisation (a precursor of Open Forum). The University had by then negotiated an agreement with the BBC for 30 hours transmission time a week to be made available to the University both for television and radio. So, with the four foundation courses requiring less than four hours a week transmission time, it was understandable that in early 1971, in the immediate triumph of launching a totally new venture in world broadcasting, there had been very little thought given to the broadcasting problems that the University might be facing five years later. 1976 must have seemed a long way away.

The situation today is rather different. With a planned undergraduate programme of 87 full credits, the difficulty of finding sufficient broadcasting time becomes acute. If broadcasts were to be allocated to course teams roughly at the same rate as at present, and if each programme was to be repeated (as at present), the University would require 52 hours a week television transmission time just to meet the requirements of the undergraduate plan. To that should be added time for general information programmes and the as yet unknown but planned continuous education programme. The situation for radio, while not quite so demanding of time, would, nevertheless be somewhat similar.

In 1975, the University is already using 27½ hours television time, and 23 hours 10 minutes radio time, with less than half the 87 full credits available. In 1976 there will be another 12 full credit equivalents offered. To keep repeats for all courses, the BBC has been able to extend the number of hours transmission time per week to 35 (for television) in 1976, by making available time on BBC 1 between 7.00 a.m. and 8.00 a.m. However, there is obviously a limit to the amount of time that the BBC will be prepared to make available for OU broadcasts. Even more important, the times must be suitable. Any great increase at times that are acceptable for OU students will inevitably encroach upon times required for general broadcasting, and the BBC of course has to meet an obligation to its licence holders, as well as to OU students.

The Broadcast Sub-Committee, therefore, early in 1974, realised that it was faced with some very difficult decisions regarding broadcasts for 1976 and beyond. Which courses should receive only one transmission? What times should courses without repeats be offered? Which courses should receive prime transmission times? What additional times to those now used should the University seek, given the difficulty of moving into peak times for general viewers and listeners? For courses

lucky enough to be offered repeats, what combination of times should be offered? Will the situation be sufficiently bad regarding transmission times to require the University to invest in the very heavy expense of providing videoreplay facilities in Study Centres? To what extent will home recording help students with difficult radio transmission times? Finally, what value do students, as well as the University, place on broadcasting?

The Broadcast Sub-Committee in 1974 did not have some of the basic information needed to answer these questions satisfactorily. For instance, television programmes had been transmitted before 7.00 a.m. for the first time in 1974, and because of the special situation occurring in parts of Scotland and Wales, some radio programmes had been transmitted after midnight. Did students in fact actually make use of these times, even though substantial numbers had said that such times were very inconvenient? Perhaps more crucially, though, the University did not really know, beyond foundation courses, the extent to which students were actually using broadcasts, and to what extent this was affected by the different times at which programmes were broadcast. Since the first year, the University's Survey Research Department had been monitoring viewing and listening figures, by means of the course unit report form. This provided planners and course teams with extremely useful information about viewing and listening figures for each programme on the course, indicating in general very high viewing and listening figures (80% or more of students watching any single programme for instance). However, with the proliferation of courses from 1971 to 1974, there were insufficient resources for the scheme to be extended to every course. Furthermore, as with all regular reporting systems, although the response rate usually began at a respectable level (60%+), towards the end of a course the response rate had dropped considerably. Subsequent studies by the Audio-Visual Media Research Group suggested that low response rates appeared to give overestimates of actual viewing and listening figures (see Bates and Gallagher, 1975). Hence although the course unit report form had provided the main source of viewing and listening figures, it did not cover all courses - particularly the later courses - and had suspect reliability regarding the later programmes in the courses that it did cover.

The need for comprehensive and accurate figures was further reinforced by the setting up by the Government of the Annan Committee on the future of broadcasting. It has already been shown that to meet the planned expansion of just the undergraduate programme, the amount of transmissions at times convenient to students would need to be nearly doubled. Could the University justify this request by showing that students still valued broadcasting after foundation level? And was it really impossible to use other, apparently less convenient times?

Finally, in 1975 the University began to make all its television

programmes in colour. Even though colour was to be used in such a way that students with monochrome sets would not be disadvantaged, it was nevertheless important to discover the proportion of students with easy and regular access to colour sets.

This combination of factors led me as Head of the Audio-Visual Media Research Group, and a member of the Broadcast Sub-Committee, to suggest in May, 1974, that the research group should carry out an extensive survey at the end of 1974. This would seek information on the facilities available to students for receiving Open University broadcasts, and on other audio-visual equipment available to students. The survey would also enquire into the actual use made of broadcasts by students on different courses and at different transmission times. The recommendation was supported by the Broadcast Sub-Committee, and accepted by the University's Evaluation Committee, which voted a sum of £5250 for the project, at its meeting in October, 1974.

Thus in order to provide the necessary information for evidence to the Annan Committee, and for decisions to be made regarding the allocation of resources and transmission times to different courses, the survey was to seek to answer a number of specific questions:

1. How many students are unable to receive Open University television or radio programmes?
2. How many students have tape-recorders, record-players, or colour television sets?
3. What proportion of students view or listen to the programmes on each course, and to general broadcasts such as Open Forum?
4. What differences are there between viewing and listening figures for different times and days?

5. What combination of transmision times appear more favourable than others?

6. Are there significant differences between kinds of courses regarding viewing or listening figures, in particular between:
   (a) Courses in different faculties.
   (b) Courses at different levels.
   (c) Courses with different regularity of transmissions.
   (d) Courses with differently stated levels of essentiality of broadcasts?

7. Does the actual behaviour of students, as measured by viewing and listening figures, differ from their stated preferences for times, as measured by a survey carried out in 1972 (the Forward Planning Survey, by the Survey Research Department).

8. Why do students watch or miss programmes?

9. How do students value broadcasting in relation to other aspects of Open University teaching?

10. Are there significant differences between kinds of students regarding viewing or listening figures or access to broadcast facilities, particularly between the following student characteristics:

    Age, sex, occupation, region, terminal age of education, extent of experience in the Open University, times leaving and returning home from work, access to Study Centre, successful completion of course.

It was hoped that the answers to these questions would provide both evidence for the submission to the Annan Committee on the Future of Broadcasting, and information to enable the Broadcast Sub-Committee to resolve satisfactorily some of its more intransigent policy problems.

2. THE DESIGN OF THE SURVEY

The Sample

The survey presented some interesting and complex sampling problems and we were fortunate to be able to draw on the skill and experience of both the University's Survey Research Department, and Gallup Polls Ltd. These sampling problems need to be explained briefly, because they affect the way the data have been collected and interpreted.

Since each course in 1974 was repeated, and received a regular time-slot, the most feasible way of discovering the use of each transmission slot was to relate this to the viewing and listening figures for each course (taking care at the same time to identify which of the two transmissions was watched or heard). While most courses shared time-slots, it was nevertheless decided to sample all 58 of the 1974 undergraduate courses, in case differences between viewing or listening figures for courses sharing the same time-slot were large (a wise precaution, as it happens). Students taking second-level science courses can take a bewildering number of combinations of one-third and one-sixth credits, but each combination consists of one out of five common "stems", worth a third-credit. Thus only courses worth one-third credit or more were included, which meant that the "stems" were included, but not the "tails". Unfortunately, we were unaware that associate students (i.e. students taking post-experience courses) were on a separate computer file from the undergraduate students, and hence these courses were by error excluded from the sample (including PE231, which doubles as an undergraduate course).

Student numbers on different courses vary considerably (from 184 finally registered students on D342 to 5314 on D100). As in all samples, the aim was to select as few students as possible consistent with a low sample error, but at the same time to provide sufficient numbers for meaningful cross-breaks and analyses of data to be made. Thus, for each course we aimed for a minimum sample size of 175 students, and a maximum sampling error of $\pm$ 5%, at the 95% level of certainty. This means that if 70% of the respondents on a

course for instance owned a tape-recorder, one could be 95% certain that between 65% and 75% (70% ± 5) of all students on the course owned a tape-recorder. For the sake of convenience in drawing the sample by computer, the courses were classified into six strata, according to size, and one of six different sampling fractions (one for each stratum) was used to select a sample of students for each course, the sample being drawn randomly. Thus for courses with low student numbers, all students were sampled, but for very large courses, approximately one student in twelve was selected, the smallest sample size being 177 (S321) and the largest 452 (D100).

The sample for individual courses presents no problems regarding interpretation, since the data reflect the actual number of responders. Problems do arise, however, when data from different courses need to be added together. For instance, within the 12831 students, who were supposed to be representative of all 45159 registered students, different students had different probabilities of being selected for the sample. In particular students taking courses with low student numbers, or students taking more than one course, had a greater probability of being chosen. This would lead to bias in the results. This made it necessary to weight the data for each student, according to his or her probability of selection for the sample. The details of how this was done, and the sampling procedure in general, are given in Appendix I. The weighting procedure enabled not only the sample bias, but also any response bias, to be controlled. Weighting - since it involves fractions of one - results in an artificial number of students being produced in the tables. In any case, for some statistics - such as students not living within a BBC 2 transmission area - estimates were required of the whole student population. Therefore, where weightings had been applied, the statistics were

multiplied by a constant factor to give an estimate for the whole student population.

Finally, since a student could register for up to four courses in any one year, the number of student-courses exceeds the number of students This is important, because if a student is sampled for say two courses, there will be two statistics provided regarding viewing figures, but only one statistic for say student's age. It can be seen that students registered and sampled for more than one course will therefore require a different weight for each course, dependent on their probability of selection for each course. Thus, data based on the 63373 student-courses finally registered in 1974 also required weighting, and have also been multiplied by a constant to give an estimate for all 63373 courses.

The sample was drawn on 27th November, 1974, using all continuing students on file at 16th February, and all students registering for the first time in 1974 on file on 16th April (final registration date). Since the sample was drawn seven months after final registration, during which time there may have been some minor adjustments to the file, there may be some slight discrepancy between the base used for this survey, and the official statistics on final registration for 1974. These discrepancies, however, are so small as to be ignored.

The number of students chosen was 12831, out of 45159 (28%), and the number of student-courses chosen was 15002, out of 63373 (24%)

Questionnaire Design

Since a student might be sampled for more than one course, and to prevent waste in printing, postage, student time, and analysis, the questionnaire had to be carefully designed so that all the information required was collected without repetition or redundancy. Therefore, four different kinds of questionnaire were designed. Each kind had a common stem, requesting information about the students themselves irrespective of the courses they were taking - for instance, time home from work, whether or not they had a colour set, etc. Then there was a section to be answered on the particular course

for which a student was sampled - for instance, how many programmes on that course that they had watched. If a student had been sampled for more than one course, there was a section for each course. Thus, there were four sets of questionnaire, depending on the number of courses for which a student had been sampled.

The wording of the questionnaire was drawn up, in draft form, by the author, and circulated to members of the Broadcast Sub-Committee, other members of the Audio-Visual Media Research Group, and to the Survey Research Department, for comments on relevance, ambiguities, etc. This consultation led to a number of amendments. A main concern was the need for all questions to be pre-coded in such a form that the data could be punched directly from the questionnaires. Quite apart from the need to handle a large amount of information economically and quickly, information from the survey was required in time for inclusion in the University's second and final submission to the Annan Committee on the future of Broadcasting. This submission was due to be finalised on 26th March, so the data would need to be processed by computer by the beginning of March, to allow time for a report to be prepared. In any case, decisions about the allocation of times for 1976 transmission had to be made early in May.

Wherever possible, the codes chosen for answers were either obvious alternatives, or had already been piloted on other surveys or enquiries. However, the BBC representatives on the Broadcast Sub-Committee were concerned that, since the questionnaire asked students to give reasons for missing programmes, the questionnaire should also contain two questions about reasons for watching and listening to provide balance. Unfortunately, possible response codes for this question had not been piloted on other studies, nor was there sufficient time to pilot these questions before printing and mailing the

questionnaire. Furthermore, to have hand-coded these two questions after the return of the questionnaire would have held up drastically the computer processing of the data. Therefore, it was agreed to ask two open-ended questions, each of which would be hand-coded on a sample basis after the main computer analysis of the questionnaire had been completed.

The other main problem was the need to ask students to recall, from over a ten-month period, the number of programmes that they had watched or heard, on a particular course, and, more fundamentally, the number they had watched or heard on the first, or second, transmission, or both. This situation was even more complicatedd for radio, since students may also have heard the programme from just a recording, or may have heard the late-night transmission for Scottish and Welsh students. Quite apart from problems of recall, there was the problem of wording the questions sufficiently clearly so that student responses to which particular transmission they watched or heard were mutually exclusive (i.e. first transmission only, second transmission only, both transmissions). Students were consequently asked to state how many programmes altogether on a particular course they had seen or heard, so that the addition of the number of viewings of a particular transmission could be used as a check. Despite this check, and despite referring students to the titles of broadcasts in the Broadcast Schedule sent to every student, we are not convinced that we have altogether avoided unreliability in the answers. The error between the totals of the individual transmissions and the number of programmes seen or heard was from about 5% for television, to 10% for radio, overall. The main cause for this appeared to be students who had seen or heard both transmissions (or a recording) also including this programme in both the "first or second transmission only" category, thus counting the same programme twice. This means that the transmission slot figures would possibly be overestimated by about 5% for television, and by about 10% for radio, although the overall viewing and listening figure for each course is likely to be more accurate. If this average error was evenly spread across the courses, then it would be best to leave

the figures as they are. However, a small number of courses have considerable discrepancies. These are all courses with above average viewing or listening figures on both transmissions. Therefore, reluctantly, we have split the excess equally, by reducing the figure for single transmissions by 50% of the difference between the sum of the various transmissions and the overall viewing or listening figure, on the assumption that some students have included programmes twice (once on both transmissions, and once on each single transmission). Thus to take an extreme example, Table 1 below shows the effect on SM351's viewing figures:

TABLE 1. Effect of adjusting viewing figures for transmission slots: SM351

	Mean % of programmes viewed:	
	Raw Data	Adjusted Data
Students' estimate of programmes viewed at least once	70.1	70.1
1st transmission only	19.3	12.1
2nd transmission only	33.9	26.7
Both transmissions	31.3	31.3
Total (calculated)	84.5	70.1
Difference (84.5 - 70.1)	14.4	-

We are not happy about making this adjustment, and consequently in Appendix II Tables 1-12, we have given both raw and adjusted data for each course. If this change had not been made, however, the figures for transmission slots where programmes on a course attracted a heavy "double" viewing or listening would have been inflated by between 2½% and 7½% (SM351 in fact having the largest discrepancy), although even at the extreme, the adjustment is comparatively small.

There were two other known but minor sources of error. One was students who included sound recordings of television programmes in the figure for the number of radio programmes

recorded, so this figure is slightly inflated (no adjustment has been made). The other was students who claimed to have watched or heard more than the total number of programmes in a course, and were therefore excluded from the data, as an "invalid" response. On no course did more than 3% of the students submit invalid responses, but why some students listed too many programmes is not known.

None of these detected errors is very large, but they do illustrate the point that too much emphasis should not be placed on small differences between viewing and listening figures for different transmission slots. Also, since the overall viewing and listening figures depend on accuracy of recall, they too are likely to be subject to an estimated error factor of about 5% either way.

Finally, to keep the length of the questionnaire to a minimum, background data about the students which the University already holds (age, occupation, etc.) was not requested from the questionnaire, but the relevant student data kept on the Open University computer file were merged with the questionnaire.

The questionnaire for a student sampled for one course is reproduced in full in Appendix III.

Mailing

A list of students and three sets of address labels were produced by the University computer, in student number order, with the course codes for which each student had been sampled against the student code number. The student number, and the course codes, were then manually copied on to the appropriate place on a questionnaire, the questionnaire was packed with a pre-paid envelope and covering letter from the Chairman of the Broadcast Sub-Committee, the address label was then stuck on, and the questionnaire mailed. (The computing and programming effort required for the preparation of the sample, the time and labour required for packing and mailing, and the detailed costing of the survey, are given in detail in Appendix IV).

The 12831 questionnaires were mailed between 28th November and 13th December, after students had completed their year of study, but

before the results of their end-of-course examination had been received. When questionnaires were returned, they were marked off on the listing. If a questionnaire had not been returned within 12 to 14 days, a reminder letter was sent (using the second set of address labels) and if after another 12 to 14 days, still no questionnaire had been received, a second reminder letter, plus another questionnaire, was sent (using the third set of labels).

Response Rate

A major priority in the survey was to obtain a high response rate, because recent studies had shown that low response rates tended to inflate viewing and listening figures. In fact, 10,537 usable questionnaires were returned before the cut-off date (January 30th), an overall response rate of 82%, beating the target set of 80%.

The response rate varied slightly from course to course. The lowest response rate was on S321 (73%), and the highest on AST281 (89%). Only five courses dropped below a 75% response rate. The response rate, therefore, is very satisfactory given the fact that where a lower response rate occurred, these samples involved a large proportion of all students on a course. The sample error varies from question to question, and from course to course. Although we have not calculated the sampling error for every question response, taking the worst possible case (colour set ownership on S321) the sample error was still below $\pm$ 7% at the 95% level of certainty. In general, the sample error is around $\pm$ 3% for any single piece of information.

Analysis

Because no satisfactory survey research analysis package was available within the University, and because of the size of the job and the speed required to turn it round, it was necessary to put the job out to tender. Three firms were approached, and Gallup Polls Ltd. gave both the only reply within

the deadline, and as it turned out the lowest tender.

Dummy tables reflecting the analysis required were prepared by the author, and Gallup Polls Ltd. provided the punching and computer programming facilities, using their own computer. Since the study was course-based it made sense to provide a course-by-course analysis, which could be made available to each course team. However, the actual print-out required was considerable, since to provide just eight tables on each of the 58 courses required 464 tables. In addition another 32 "cross-course" tables, each requiring a pass of the whole file, were also needed.

A major problem in preparing the analysis was the variety in the number of programmes on each course, ranging from 3 to 36. To enable comparison between courses to be made, viewing and listening figures for each student were converted into a percentage of the programmes it was possible to watch or view on that course. For each course, and each transmission, the percentage scores of all the students on that course were averaged, to provide a mean score for the percentage of programmes watched or heard. Thus on A100, the mean percentage of programmes viewed was 69.8%. Since there were 36 television programmes on that course, the average number of programmes viewed on that course was about 25 (69.8% of 36). In addition, for each course the distribution of students within each percentage range has been given, as follows:

A100: TABLE 1: NO. OF STUDENTS VIEWING (THE FOLLOWING PROPORTION OF PROGRAMMES)

PROP. OF PROGS. SEEN:		NONE	¼ or LESS	¼-½	½-¾	OVER ¾	ALL	NO. ANSWER	AVERAGE
All respondents	289	6	24	31	61	130	26	11	69.8%
%	(100)	2.1	8.3	10.7	21.1	45.0	9.0	3.8	

Thus, of the 289 students who gave valid answers:

6 (2.1%) watched none of the 36 A100 TV programmes

24 (8.3%) watched a quarter or less (i.e. between 1 and 9)

31 (10.7%) watched more than a quarter but not more than one half (i.e. between 10 and 18)

61 (21.1%) watched more than a half but not more than three-quarters (i.e. between 19 and 27)

130 (45.0%) watched more than three-quarters, but not all (i.e. between 28 and 35)

26 (9.0%) watched all 36.

So, over half the students (54%) watched more than 27 programmes on the course.

Although the calculations we have made give mean percentages of programmes viewed or heard, this figure can also be used to represent the mean percentage of students watching or listening to any single transmission, because of the way this figure is calculated.[1] For instance, as well as saying the average number of programmes viewed on A100 was 69.8%, we can also say that on average 69.8% of A100 students watched any single programme, since the calculation of this figure is the same. Hence through this report, "percentage of programmes watched by an average student" and "mean percentage of students watching any single programme" are interchangable.

Although percentages on the print-out were calculated to the first decimal point, this was done merely to identify the differences between percentages and numbers on the print-out itself. Since the sample error is usually about ± 3%, accuracy to the first decimal point is not justified and so in this report all percentages have been rounded to the nearest whole number. All mean scores in this report have been calculated from the ratio of programmes seen or heard by each student.

The computer analysis produced three sets of tables:

1. Course-based tables, for each of 58 undergraduate courses, providing information for each course on:
   (a) viewing and listening figures
   (b) reasons for not watching or listening
   (c) comparative helpfulness of various components of the course
   (d) availability of BBC2/VHF transmissions by access to Study Centre
   (e) access to equipment (TV and radio sets, tape recorders and record players)
   (f) latest convenient time for watching/listening before leaving for work
   (g) earliest convenient time for watching/listening after getting home from work
   (h) time prepared to watch or listen at week-ends
2. Student-based tables, estimated for all 45159 students, providing information on:
   (a) BBC2 and VHF reception
   (b) access to equipment
   (c) times home from work, and week-end preferences for viewing and listening times
   (d) Open Forum viewing and listening figures

   Where appropriate this information was broken down by year of intake of students, region, occupation, faculty, sex, terminal age of education, and access to Study Centre.
3. Cross-course (or "student-course") based tables, estimated for all 63373 "student-courses", providing information on:
   (a) viewing and listening figures
   (b) helpfulness of various Open University components, including television and radio

   Where appropriate, this information was broken down by the same variables as the student-based tables, and in addition by times home from work, week-end preferences for viewing and listening times, no. of courses enrolled for in 1974, no. of courses previously enrolled for, access to tape recorders, level of course, frequency of transmission, whether final exam taken or not, and reasons for missing television

[1] $\frac{\text{Sum of all A100 programmes viewed by A100 students}}{\text{No. of A100 programmes} \times \text{No. of A100 students}} \times 100$

or radio.

From the viewing and listening figures for each transmission on the course-based tables, it was possible to derive the viewing and listening figures (after adjustment) for each transmission slot.

Summary

The survey provides a comprehensive analysis of the use of broadcasting across all courses, and for the student body as a whole. The response rate is very high, and the sample error negligible. In general, the statistics are "clean", and all the information required has been successfully retrieved from the questionnaire. The one area of uncertainty is the viewing and listening figures for particular transmision slots, which for any single transmission slot may be between 2½% and 7½% too high, but it has still been possible to make a rough adjustment of these figures. Provided therefore that small differences are ignored, the statistics collected appear to be highly reliable.

3. STUDENTS AND BROADCASTING

The Problem Of Interpretation

A lot of people - both inside and outside the Open University - already have definite views, one way or the other, about the value of broadcasting in the Open University. It is not uncommon to hear in Senate debates, or to read in staff or student newspapers, criticisms that money is wasted on broadcasting, or that students don't watch the broadcasts, or that the money could be used far better for increased tutorial services, especially in the provision of more face-to-face tuition. A number of people believe that the University is saddled with broadcasting for administrative and political reasons, and that the BBC is a "holy cow" and beyond criticism. On the other hand, a number of academic staff strongly defend the value of broadcasting, and the BBC production staff obviously are keen to see its value stressed, although even within the BBC there are those who view rather bleakly the great swathe cut into transmission times by Open University productions, catering for what some see as a tiny minority of people, in broadcasting terms.

The strength of these contrary views should not be underestimated. We are all subject to being influenced by our pre-conceptions. This is just as true for researchers as for anyone else. Ideally, one would like to present the data as they come from the computer, so that everyone can judge the results themselves. Even so, the wording of the questions and the kind of analysis requested still influence to some extent the results. In any case, to make available generally all the data would not be a practical proposition, with over 500 tables tabulated. Therefore, some interpretation of the data has to be made, and this interpretation will to some extent reflect the personal values of the author and those consulted, although every care has been taken to be objective. Nevertheless, it is important that the reader should be able to check the interpretation from the original data, and consequently, a complete set of tables has been lodged with the Open University library. The tables are clearly printed and set out, and if read in conjunction with this report, they should be self-explanatory.

Secondly, whatever the outcome of this survey, it should be stressed that the value of broadcasting cannot be judged by this survey alone. The survey is concerned solely with student reactions to Open University broadcasting and the implications for University planning. While student reaction is an important factor to be taken into consideration in evaluating the contribution of broadcasting, it is not sufficient on its own. There is evidence to suggest that students are not always the best judges of the value of a programme, and there may well be a need to educate or train students more than is done at present in the skills needed to make the most of broadcasting. The value and use to which broadcasting can be put requires a more complex analysis than the mere counting of the number of programmes seen and heard, or even of subjective reactions to the broadcasts. More directly evaluative studies of individual programmes are currently being carried out by the Audio-Visual Media Research Group (see Bates and Gallagher, 1975). Nevertheless it would be idle to pretend that support for such a comparatively expensive enquiry as this would have been given if there was no evaluative element attached to it, and it would, of course, be absurd to ignore student reactions entirely. Even so, it is important that the following section is read in context, even if it does appear at times to undermine some well-established myths.

Access to BBC2 and VHF reception

When the University first opened, there was concern that a substantial group of students would not be able to watch or listen to BBC2 or VHF transmissions, because they lived beyond the range of such transmissions, or because they did not have appropriate sets. The estimate at that time was that up to 10% of students were affected in this way, particularly in the more remote regions of Scotland and Wales. For this reason, three

of the four original foundation course teams informed students that broadcasting was optional, and deliberately designed the courses so that students could manage quite adequately without seeing or hearing the broadcasts. The fourth, Science, (S100), believed that television was so necessary for students that it strongly advised them not to enrol if they could not get the broadcasts, and proceeded to integrate the broadcasts very closely in the total course design. The figure of 10% which derived initially from BBC estimates of the coverage of the total population by BBC2 in 1971 was supported when data provided from the student application form were analysed. These did indeed show that nearly 10% of students were unable to receive either BBC2 television or VHF radio.

In 1973, however, it was noticed that the actual print-out provided by the University's Data Processing Division in fact was a condensation of two questions into one statistic. The information given on the print-out was for "access":

	1973
Both (BBC2 and VHF)	81.1%
BBC only	9.5%
VHF only	6.4%
None	2.9%
No data	0.1%
Base: 38418 students	

(Thus all students with access to BBC2 = 81.1% + 9.5% = 90.6%)

The actual questions, however, (with their responses, obtained on a special analysis) were:

B1 Enter one code in each box to show whether you expect to have access to BBC2 television and VHF radio. The codes are:

	1973 BBC	1973 VHF
0 - Not available in your area	2.1%	1.1%
1 - Available in area but not at home	7.2%	11.3%
2 - Available at home, or friend's home	90.6%	87.5%
3 - No data	0.1%	0.1%

It can be seen that most of the 10% of students with no "access" to BBC2 or VHF radio were made up, not of students who were outside BBC2 or VHF reception areas, but of students who did not have appropriate sets.

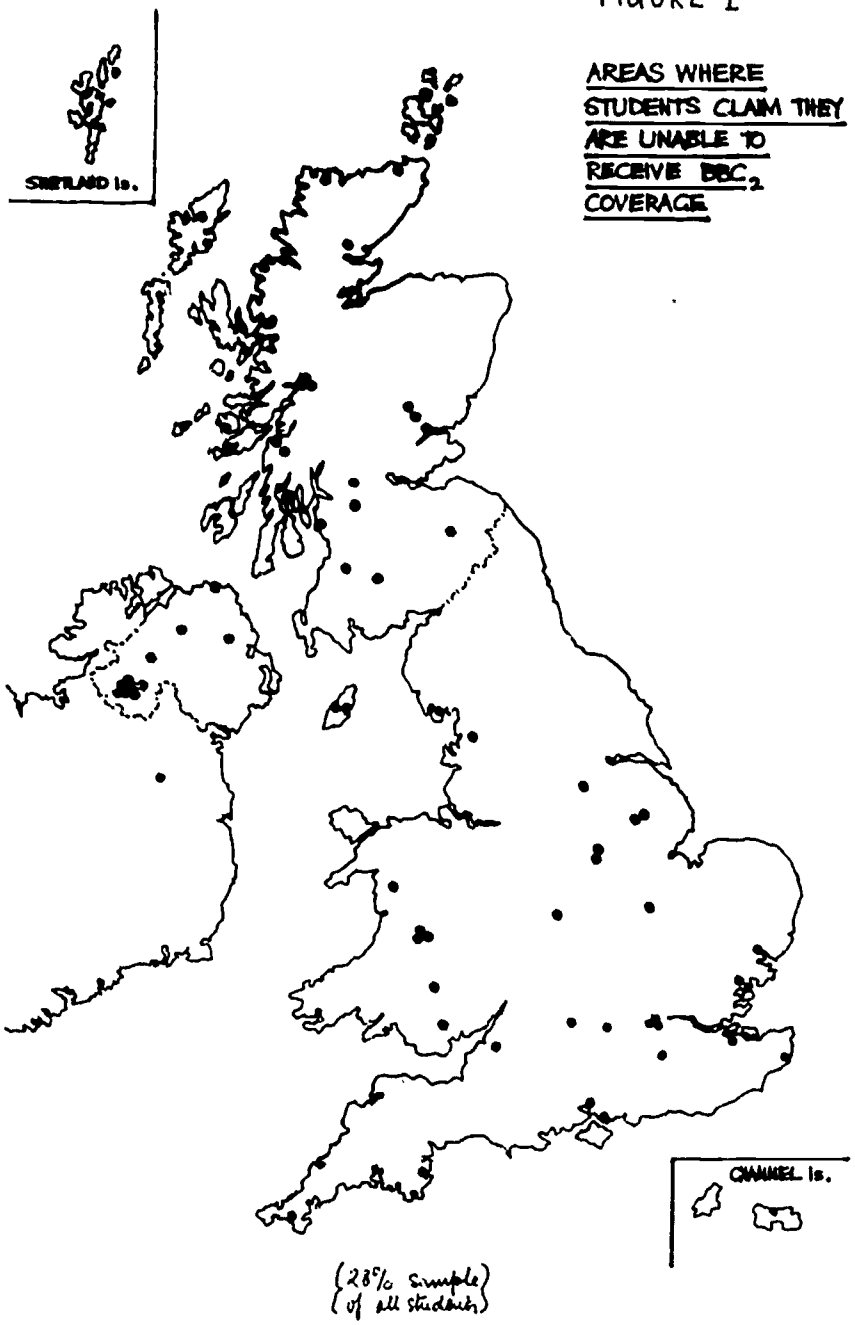
Secondly, data from students' registrations are not currently up-dated. Therefore, data for students who registered in 1971 still on file in 1975 refer to the situation in 1971, not 1975. However, between 1971 and 1975, a number of new BBC2 transmitters were opened, and also during that period sales of BBC2 and VHF radio sets increased. Therefore, a question on access to BBC2 and VHF radio was included on the questionnaire, and at the same time a print-out of the same data from student records was requested. The comparison, in Table 2 (over) is interesting.

First of all, it is encouraging from the point of view of reliability, that the 1974 figures are so similar (BBC2 transmission coverage figures were within 0.1% of each other for 1974). Since student record figures refer to the beginning of 1974, before students began studying, while the survey was carried out at the end of 1974, it may be possible that the 2% difference on access to sets (both on television and radio) is due to purchases made through the year. Of more interest however is that, although the trend is small (it has to be, with such low initial figures), the students in the early years who did not have appropriate sets have tended to get them, so that by 1974, only 3% did not have a BBC2 set, and only 7% did not have a VHF radio set.

The actual numbers not covered by BBC2 television we estimate (from the survey) to be about 650, and those not covered by VHF reception to be about 320. A listing of students in the survey who claimed they were not covered by BBC2 or VHF was produced, and from their addresses it was possible to produce the maps in Figures 1 and 2 (p. 14). As far as BBC 2

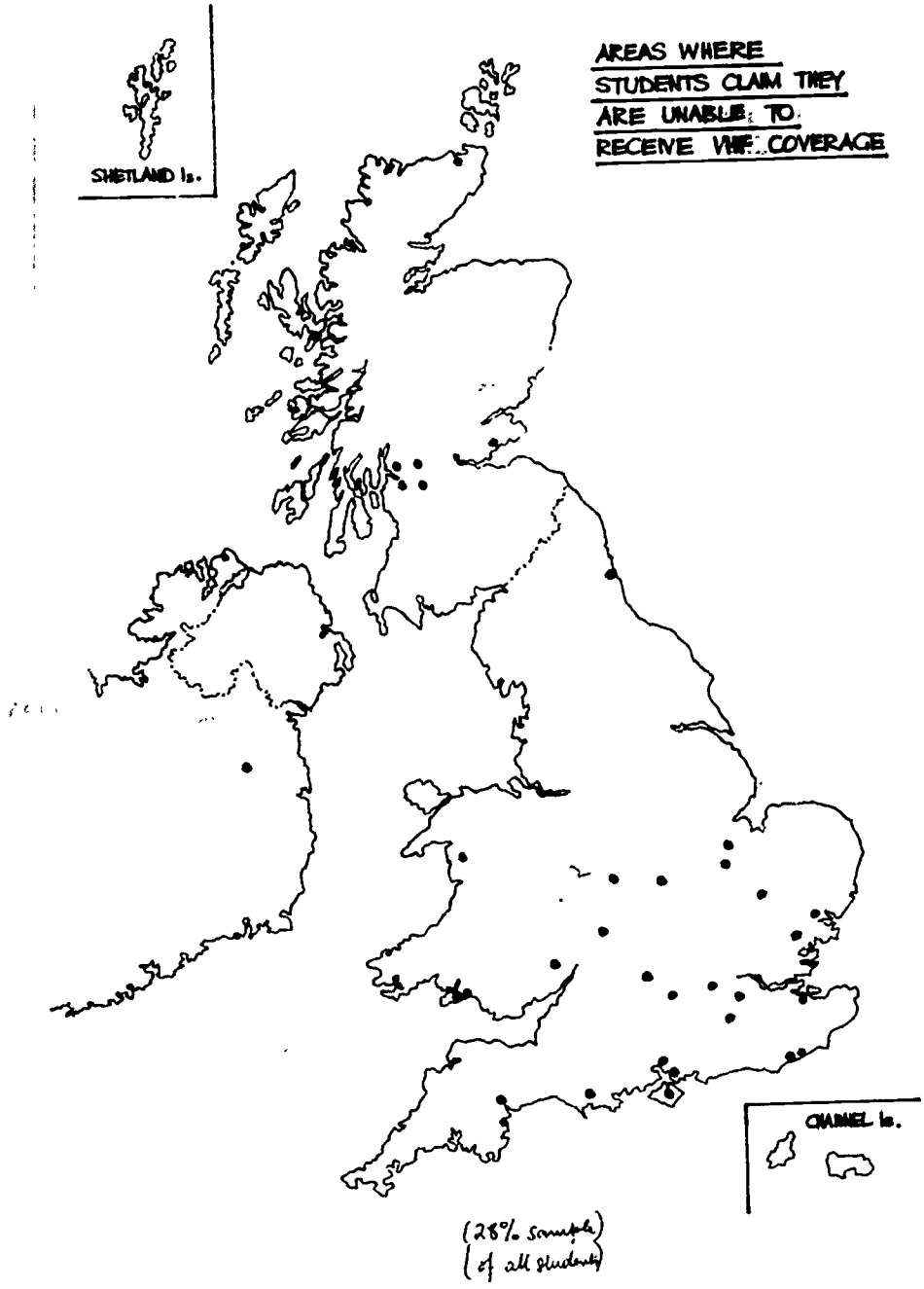
FIGURE 1

AREAS WHERE STUDENTS CLAIM THEY ARE UNABLE TO RECEIVE BBC$_2$ COVERAGE



(28% sample of all students)

FIGURE 2


AREAS WHERE STUDENTS CLAIM THEY ARE UNABLE TO RECEIVE VHF COVERAGE
SHETLAND Is.
CHANNEL Is.
(28% sample of all students)

Others might have picked up programmes at Summer School.

It is clear, therefore, that in 1974, apart from a very small number of students in the more remote areas of Scotland, and Northern Ireland, and in the Channel Islands, BBC2 and VHF coverage within the British Isles is now comprehensive, and in fact BBC2 coverage will reach the Channel Islands this year. The actual number of students not covered is minute, and never exceeded more than 120 in any one course (D100 being the course with the largest number of students (120) outside the BBC2 transmission area).

Availability of Equipment

We have already shown that 97% of students have BBC2 television receivers, and 93% VHF radio receivers. Compared with national figures of approximately 50% of households in December 1974 having colour sets (6,823,633), 39% of Open University students have colour sets. There was little variation in the proportion of students having access to colour sets between different courses. For instance, on most Science courses, between 35% and 40% of students had access to colour sets. This may come as somewhat of a disappointment, since this comparatively low ownership limits the way colour could be exploited in Science teaching. The figure adds weight to the argument that when the current monochrome television monitors in Study Centres come up for replacement, they should be replaced by colour monitors. The figures also reinforce the importance of the current policy of producing programmes, although made and transmitted in colour, in such a way that students with monochrome sets are not disadvantaged. There was generally little variation between regions, with Yorkshire, the North and Wales being the regions with slightly higher figures than average (43% - 45%) for colour sets, and the South West and East Anglia regions having slightly lower figures (33% - 34%). The variation with occupation was greater, but with no obvious pattern. Clerical and office workers had the lowest figures (32%), and shops/sales/service workers the highest (58%). Other occupational groups with comparatively high figures for colour sets were administrators/managers (53%), farming/mining/manu-

facturing (44%) and scientists and engineers (43%).

With regard to sound equipment, 71% of students had a tape recorder of one kind or another. Nearly half had cassette recorders, and a quarter had open-reel recorders (this compares with 16% with cassette recorders, and 47% with open-reel recorders at the beginning of 1971 - see McIntosh, 1975). Just over 3000 students (7%) had been issued with cassette recorders by the Open University. Cartridge recorders were owned by 5% of the students. Access to a tape recorder is clearly associated with higher listening figures. Students with tape recorders listened on average to about 15% more programmes than students without tape recorders. This can be explained in two ways. Students with tape recorders may find it much more convenient to record a programme and listen at another time, whereas without the recording they may have not listened at all. Alternatively, those students who place a higher value on the radio broadcasts, and who would have consequently listened more anyway, may specially purchase tape recorders, to provide a permanent record of the broadcast.

Record players were available to 88% of the students. Tape recorders have pedagogic advantages over record players, since they are easier to rewind, to re-use parts or sections of a tape, and to locate quickly parts of a tape without damage. Tape recorders can also be used for recording radio programmes, and the sound from television programmes, off-air. On the other hand, records are cheaper than cassettes (partly because they can be mailed with correspondence material, and therefore do not require extra packaging or postage, unless exceptionally high quality is required - e.g for music), and although the overall proportion of students is not much greater (88% compared with 70%), the differences between certain occupational groups is large. For instance, only 60% of students in the electrical/engineering trades have access to tape recorders (and 10% of these had been

issued with an OU cassette recorder) compared with 84% of this group who had access to record players. If the pressure on transmission times cannot be relieved, or if course teams wish to supplement broadcasts with recorded material, then it could be assumed fairly safely that most students will have access to record players. (For instance, on course A304, "The Development of Instruments and their Music" which requires students to listen to records, 96% of students have access to a record player).

Viewing and Listening Figures for Courses

The Open University is a very complex system. In 1974 there were more than 58 different courses, and 45000 students taking between them a total of 63000 individual student courses. Each television and radio broadcast was transmitted twice, and students could not only watch or listen to either transmission or both, but could watch or listen to a recording made either "off-air" in the case of radio, or supplied on film or video cassette at Study Centres, or Summer School, in the case of television. The greatest variable, however, is individual student behaviour. With a wide range of different teaching components available to students, and widely different motivational, social and occupational backgrounds, it is not surprising that a student in one situation will adopt a totally different learning strategy from a student in another.

This presents a major problem in trying to provide an accurate picture of student behaviour regarding television and radio. The mass of statistics such a complex situation produces must be simplified to some extent, but in so doing one is apt to conceal the wide differences between individual students. One statistic available for simplifying the data is an "average" figure, but the injustice such a statistic does to the situation can be seen from Figure 3, on page 19, which shows the distribution of students watching different proportions of programmes, across all courses.

Thus, while we can say that the average or mean number of programmes viewed per student was 65% of those offered to him on the specific course for which he was answering, it can be seen that there are very large variations, from 6% who saw no programme at all, to 14% who saw every one. Furthermore, the distribution is "skewed" to the right - indicating that there is a substantial body of students who are very heavy watchers - but fairly "flat" indicating a wide spread of viewing behaviour.

The figures for radio provide quite a different picture. (Figure 4, page 20).

The bases for Figure 4 are exactly the same as for Figure 3. Taking the student body as a whole, over all courses, there is no clear listening pattern. Just as many students listen to no programmes, as students who listen to half or even three-quarters.

One way of interpreting the two graphs is as follows: most students find some value in the television programmes, and while they may not be able to watch every programme on a course, they do try to watch as many as they can. Students are much more evenly divided though on the value of radio. A substantial proportion - a third - rarely listen, a similar proportion listen intermittently, while a similar proportion listen to most programmes.

A mean viewing figure of 65% means that on a course with 16 programmes during the year, an average student would watch between 10 and 11. Students were not asked in this survey to indicate which programmes they had seen or heard, just how many, so the figure of 65% represents the proportion of programmes watched over the whole year, by all students. With a small but substantial minority of students (14%) watching less than a quarter of the programmes on a course, it would only need the bulk of the students to miss one programme because of Summer School, one because of a family holiday and perhaps another

TELEVISION : DISTRIBUTION OF STUDENTS WATCHING DIFFERENT PROPORTIONS OF PROGRAMMES (ALL COURSES).

FIGURE 3

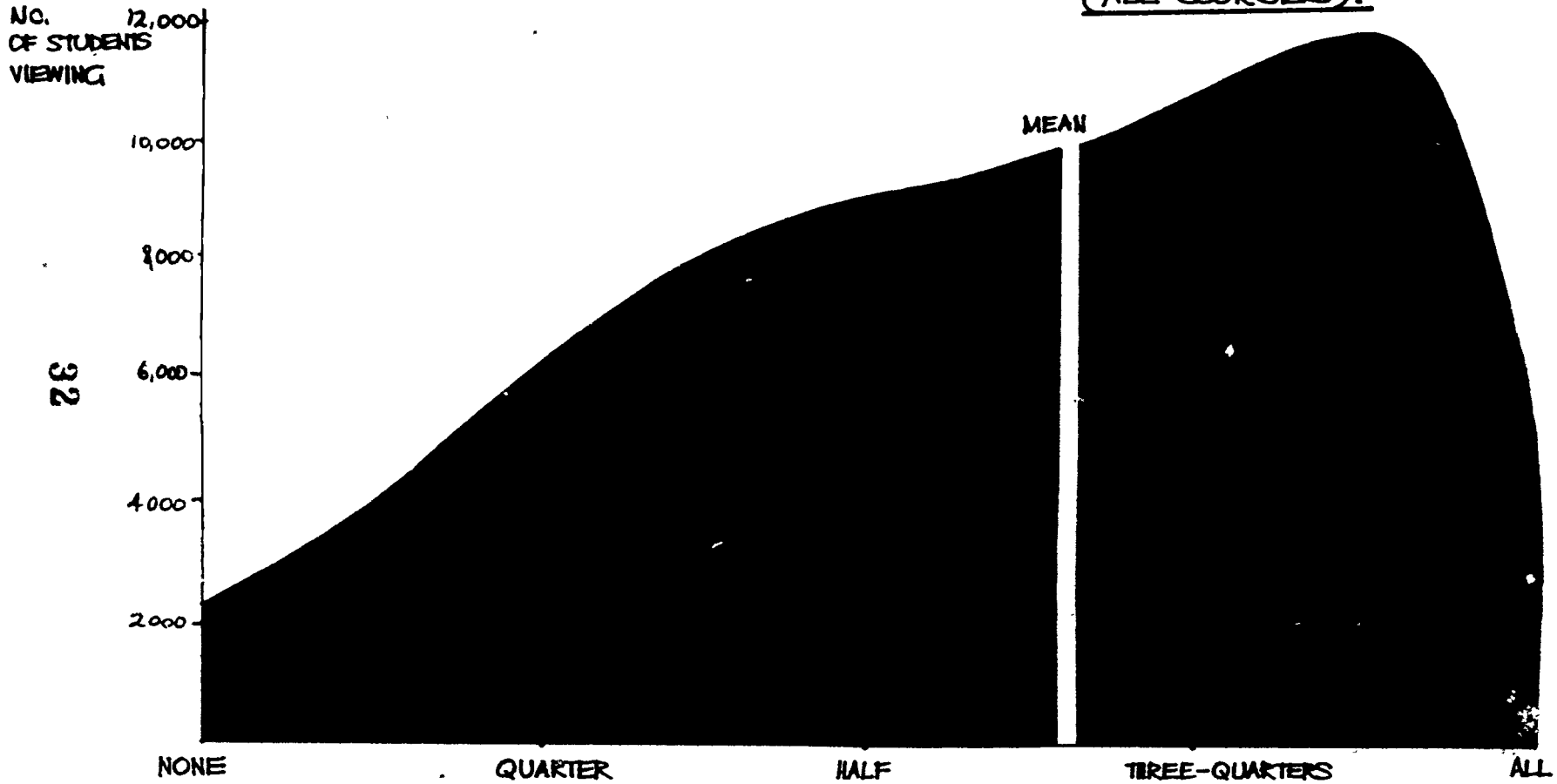
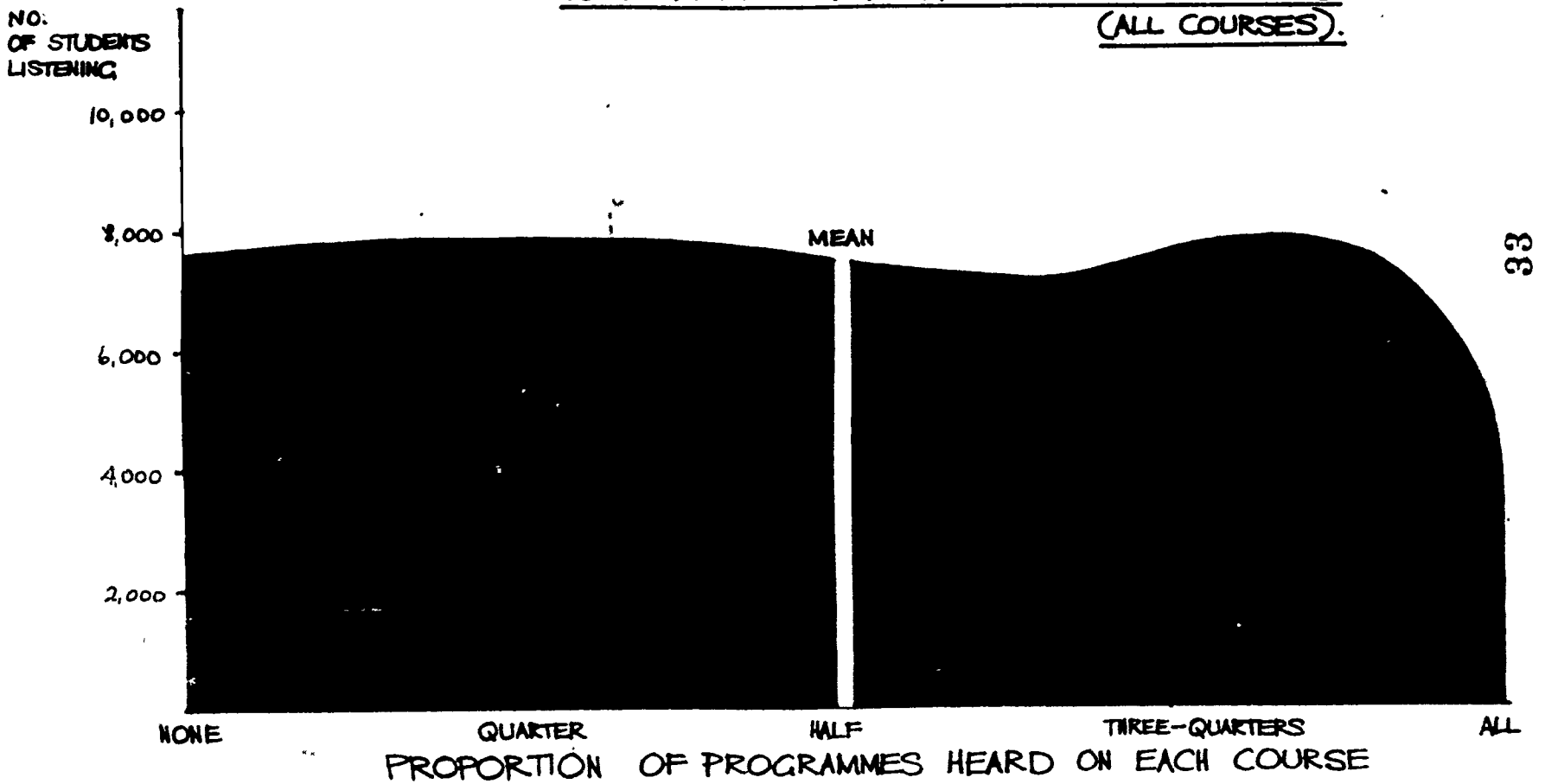


FIGURE 4

RADIO : DISTRIBUTION OF STUDENTS LISTENING TO DIFFERENT PROPORTIONS OF PROGRAMMES (ALL COURSES).



33

32

at the end of the year with an examination looming, for the average for all students to drop to 10 or 11 programmes viewed on a 16 programme course. However, for most of the year, but particularly during the period from January to the Summer School period (about the middle of July), it would require between 80% - 85% of students to be watching individual programmes to produce an average over a whole course of 10 to 11 programmes on a 16 programme course.

This inference is substantiated by two independent sources of information. Studies of individual programmes carried out by the Audio-Visual Media Research Group in 1974 as part of the on-going evaluation of individual programmes produced the viewing figures indicated in Figure 5 (on page 22) at different points in the year (Bates and Gallagher, 1975).

Viewing figures for programmes remain fairly steady (with some individual course variation) until the Summer School period, when a significant decline in the viewing figures begins. Easter and Spring Bank Holiday appear to cause minor drops in viewing figures in the early part of the year.

Studies carried out by the Survey Research Department, using the Course Unit Report Form, also show very high viewing figures for individual programmes, in most cases exceeding 80% (Perry, 1973). However, Course Unit Report Form figures normally remain high throughout the year. This can be partly explained by a marked variation in response rate, which drops particularly towards the end of the course, and there is strong evidence to suggest that low response rates exaggerate the percentage of students watching. Partly because of this, the Survey Research Department has not produced an average viewing or listening figure for individual programmes based on the programmes over a whole year.

In brief, therefore, a student will watch on average about two-thirds of the television programmes and listen to about half the radio programmes on any course, but for individual programmes on most courses more than 80% of students registered for a course will

watch individual television programmes, and more than 60% will listen to individual radio programmes, at least during the early part of the year.

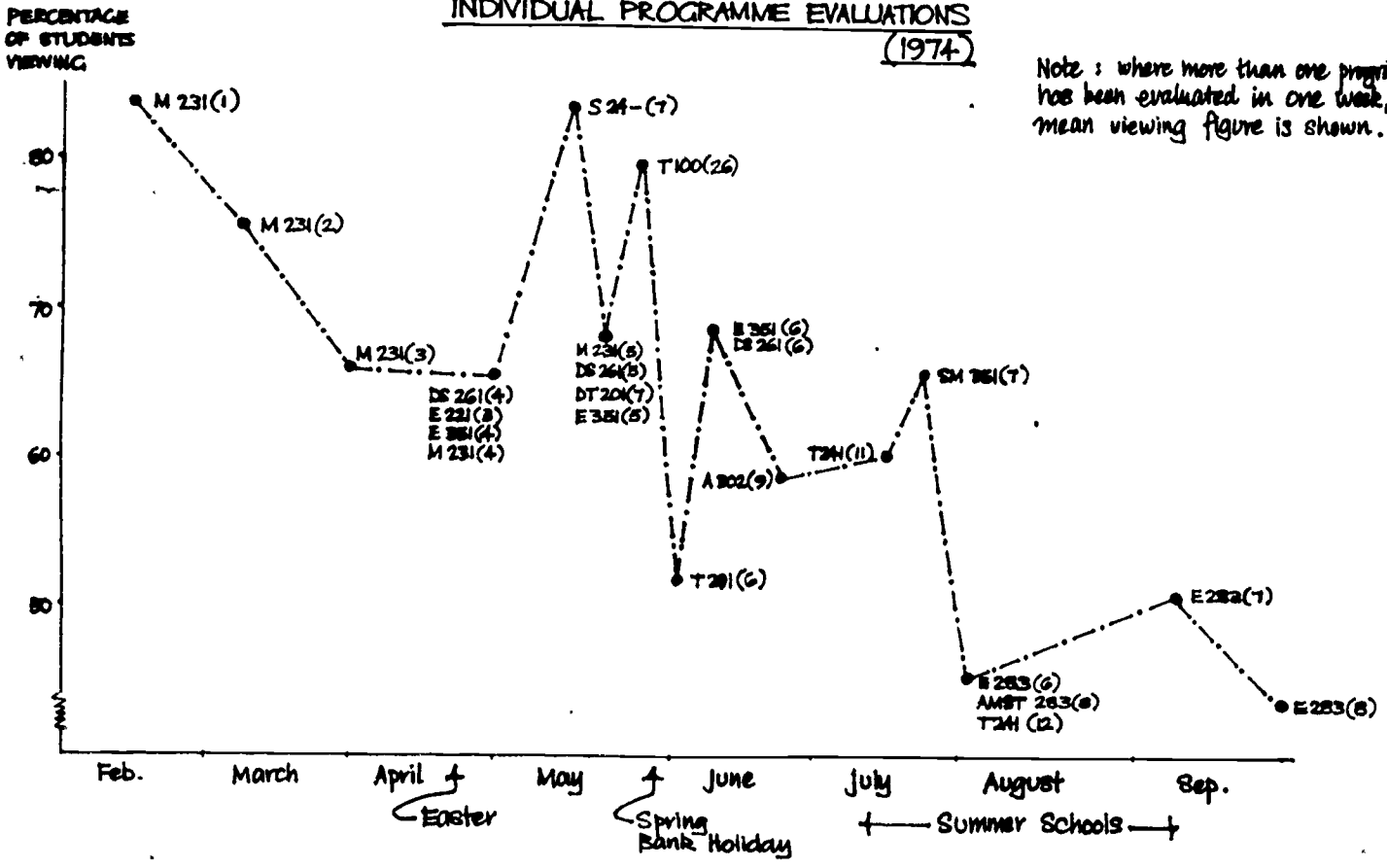
As well as variations over the year, there are also variations between courses, as can be seen from Figure 6 (television) on page 23 .

The base is faculties, and the vertical axis is the percentage of programmes viewed on average by students on each course. Not surprisingly, Science has the highest viewing figures. On most Science courses, students managed to watch on average between 70% - 80% of the programmes, and there were no outstanding differences between courses in Science. With Technology though we have a much greater spread - from 77% of programmes viewed on TS251 (Introduction to Materials) down to the two systems courses (T241, T242), just below 60%. Although Arts have twice the number of courses than Technology, their viewing figures are more compact, the Music course, A304, having the highest viewing figures, and the lowest two courses being the Philosophy and fourth-level History courses. Compared with Arts, Social Science viewing figures are down slightly on average. Their highest viewing figures are for the third-level course "People and Organisations", (DT352), which uses television to show selection of personnel in three organisations (Ford Motor Co., the Army, and the BBC), to enable students to examine the ideologies of these organisations through their selection procedures. By all accounts it was riveting viewing. The lowest viewing figure in Social Sciences was for D342, "Regional Analysis and Development". Educational Studies viewing figures are very compact, averaging around the 60% level.

With clearly the lowest viewing figures, though, is the Maths Faculty. This is interesting, because in the early days, the Maths courses received the same allocation as Science and

TELEVISION : VIEWING FIGURES OBTAINED FROM INDIVIDUAL PROGRAMME EVALUATIONS (1974)

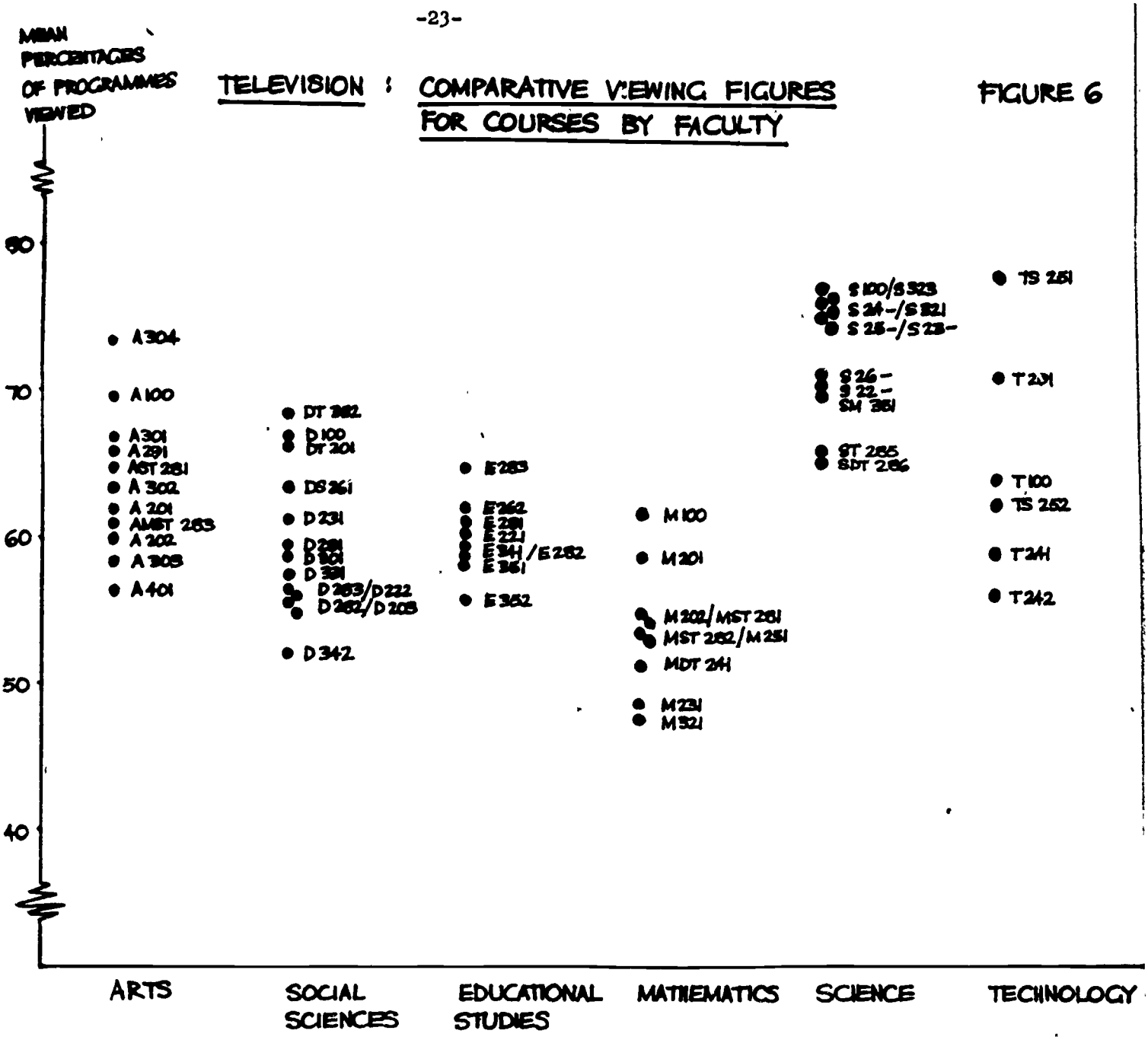
FIGURE 5



Note : where more than one programme has been evaluated in one week, a mean viewing figure is shown.

TELEVISION : COMPARATIVE VIEWING FIGURES FOR COURSES BY FACULTY

FIGURE 6



Technology courses. Hence M201 and M202 are the only courses above foundation level to have one television programme a week, yet there is hardly a course in another faculty with lower viewing figures than M202.

Figure 7 on page 25 gives faculty differences for radio. The base and the scale for radio is exactly the same as for television.

Arts in general had the highest listening figures. The Music course A304 was exceptional, with students listening on average to nearly three-quarters of the programmes. There was little difference between Social Science listening figures, and Ed. Studies and Technology were more compact versions, averaging around 45%. Finally, once again, Maths. were clearly bottom, averaging about 35%.

Figure 8 on page 26 compares viewing and listening figures.

First of all, television viewing figures, as well as being higher, are much more compact than radio. There is less variation within faculties, or even between faculties. Even for Maths, viewing figures hardly ever drop below 50% of the programmes. Courses which had comparatively low viewing figures also tended to have low listening figures. For instance, in each of their respective faculties, A401, D342, M321 and T242 had both the lowest viewing and listening figures, while M321 had the dubious distinction of having lower figures than any of the 57 other courses for both television and radio. The reverse was also true to some extent. In their faculties, both A304 and DT352 had the highest viewing and listening figures, while S23- and T291 had the highest listening figures and above average viewing figures.

Variation between courses is much greater though in radio than in television. The variation for radio even within the same faculty can be considerable (for instance, from 35% for S22- to 60% for S23-), whereas the differences between television figures are less. Secondly, despite these variations, one or two faculties have distinctly higher or lower viewing figures than others. Viewing figures for Science courses are clearly higher, and for Maths courses clearly lower, than

for courses in the other faculties, while listening figures are clearly higher for Arts courses, and clearly lower for Maths courses again. The differences between other faculties are not great. Even so, in each faculty there are some courses which clearly have higher viewing or listening figures than courses in other faculties where viewing or listening figures are generally higher. Viewing and listening figures for each course are given in full, by faculty in Appendix II, Tables 1-12.

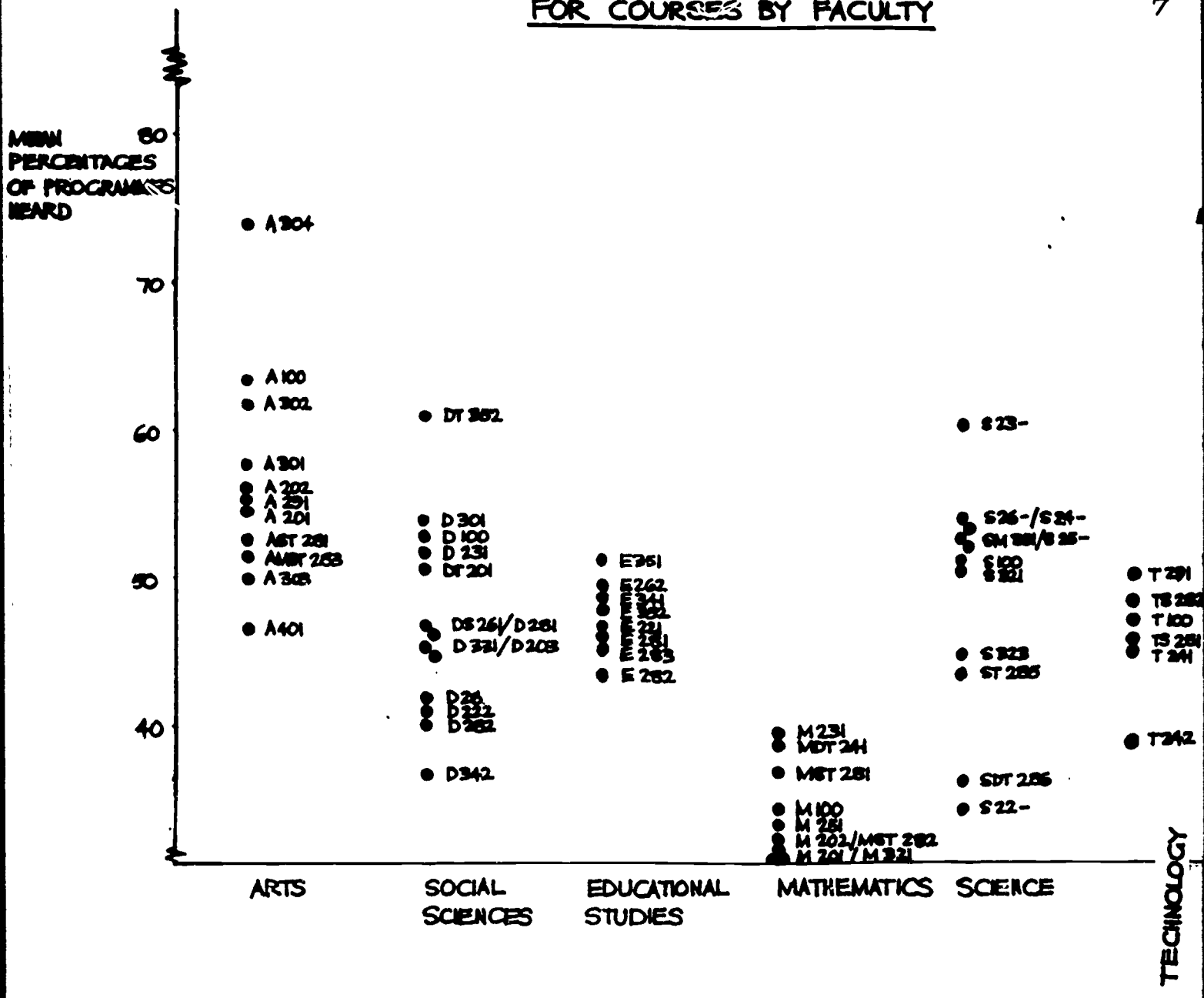
These results suggest that just as there are differences in the value placed on radio by individual students, so do course teams differ in the value they assign to broadcasting, or at least in their ability to use broadcasting. The figures suggest that it is not just a question of some subject areas being more difficult to adapt to television or radio. Although there is no doubt that in some subject areas, it is more difficult to exploit fully television OR radio, it is perhaps more than a coincidence that courses with the lowest figures in their faculty also tended to have the lowest listening figures. It appears then that the figures do to some extent reflect the course teams' commitment to television or radio. In other words, television and radio are a resource. It is up to course teams to exploit fully that resource. Whether this is a sufficient explanation of the differences within faculties, though, it is not possible to say, not having knowledge of the way broadcasting is used in all courses. Senior Producers and Deans will be in a better position to suggest possible reasons for differences, although we shall look a little later at this aspect (pp 39 to 47).

A copy of all relevant course-based tables has been sent, together with a brief explanatory covering note, to each course-team maintenance Chairman.

To summarise therefore:

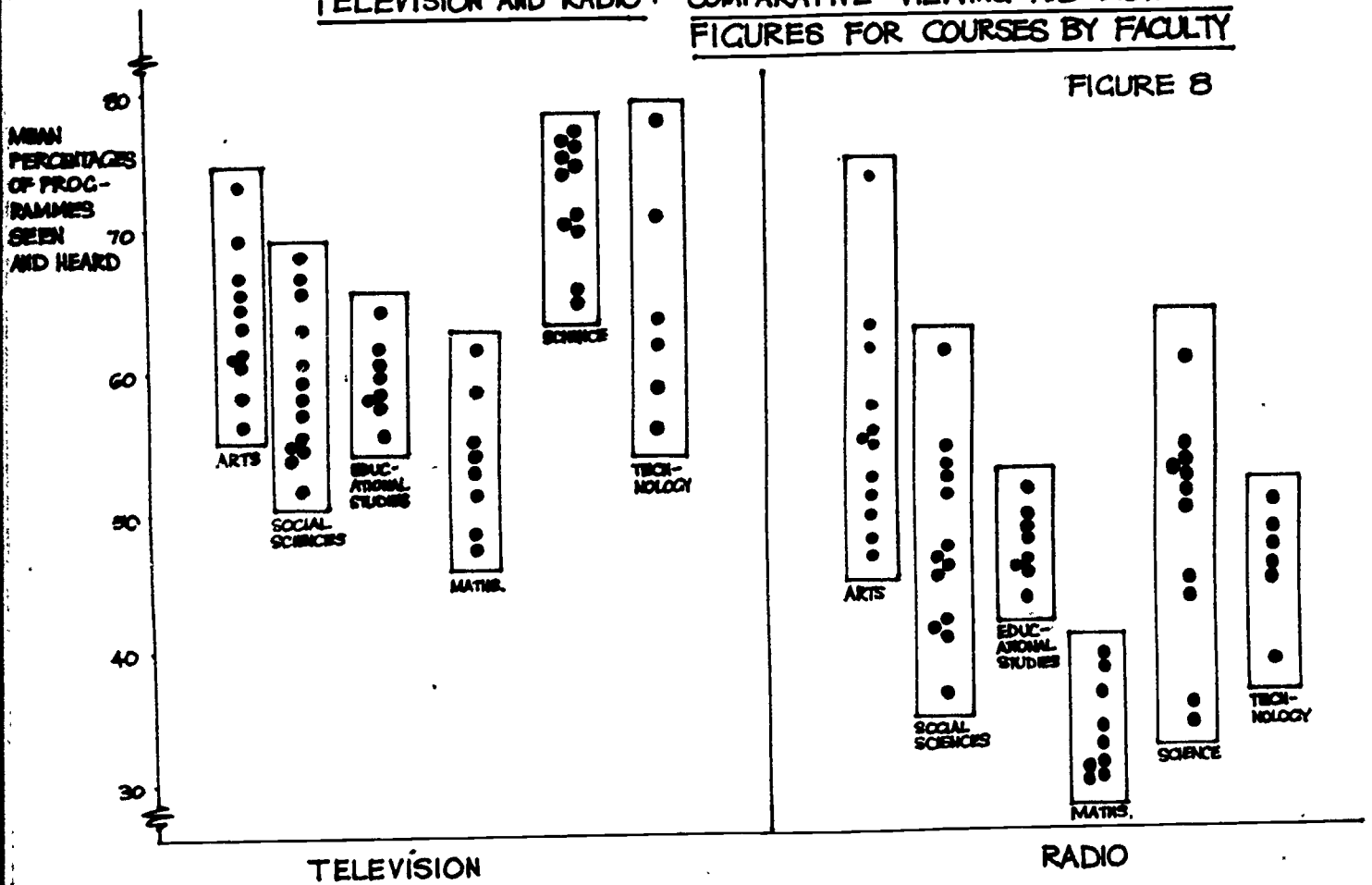
RADIO : COMPARATIVE LISTENING FIGURES FOR COURSES BY FACULTY

FIGURE 7



TELEVISION AND RADIO: COMPARATIVE VIEWING AND LISTENING FIGURES FOR COURSES BY FACULTY

FIGURE 8



1. There were wide differences between the viewing and listening behaviour of individual students. In particular:
   (a) 6% of students saw none of the television programmes on their courses and 14% saw less than a quarter.
   (b) 14% saw all of the television programmes on their courses and 40% saw more than three-quarters.
   (c) 17% heard none of the radio programmes on their courses and 34% heard less than a quarter.
   (d) 11% heard all of the radio programmes on their courses, and 29% heard more than three-quarters.
2. An average student would watch about two-thirds (65%) of the television programmes on each course for which he or she was registered.
3. There was a very wide spread of student behaviour regarding radio listening. Although the mean percentage of programmes heard was 50%, the students were evenly spread from hearing no programmes right through to hearing all.
4. In the early part of the year, it is likely that more than 80% of students registered for a course will be watching, and more than 60% will be listening, to each individual programme on that course.
5. There were large variations on viewing and listening figures between courses in different faculties. In particular:
   (a) Viewing figures on Science courses were generally higher, and on Maths courses generally lower, than on courses in other faculties.
   (b) Listening figures on Arts courses were generally higher, and on Maths courses generally lower, than on courses in other faculties.
6. Courses which had comparatively low viewing figures also tended to have comparatively low listening figures.
7. Even within faculties, there were variations between courses on viewing and particularly on listening figures.

Open Forum broadcasts were seen as being one fairly small aspect of a study which had to cover all 58 undergraduate courses. Consequently, although it was realised that Open Forum broadcasts were aimed at a wider audience than any individual course, the amount of space that could be devoted on the questionnaire itself to questions about Open Forum was strictly limited. The survey, therefore, was not intended as an evaluation of Open Forum programmes, but merely to give some indication as to the overall viewing and listening figures. Within the limits of the questions asked, though, the information is likely to be highly reliable, since it has been possible to validate student responses to questions of a similar nature asked about course transmissions against other, independent studies.

Students were asked (Q.13):

> Please give an estimate of the number of Open Forum television programmes you saw this year (there were approximately 15). Please enter no. [ ]
> (If none, enter 0)

Table 3 (over) summarises the answers to this question.

The figure of 15 television transmissions was supplied by the Academic Planning Office. Strictly speaking, the 15 programmes in fact were not all Open Forum broadcasts, but included other general Open University programmes, such as the General Assembly and graduation ceremonies.

Table 3 shows that nearly half the students (47%) saw no Open Forum programmes at all, and less than 20% watched more than 3. If those who viewed were evenly spread over all 15 programmes (an unlikely assumption, in fact) the audience for each programme would be just over 5,300 (or 12% of all finally registered students). If one takes a strict definition of Open Forum as being 10 programmes, this figure would rise to about 8,000 students per programme (about 18%), although

TABLE 3: Open Forum Viewing Figures - by Year of Intake

No. of students who viewed the following no. of programmes

No. of programmes seen	All students	Year of Intake 1971	1972	1973	1974
None	47%	48%	50%	52%	38%
1-3	35%	33%	33%	32%	41%
4-7	12%	12%	11%	12%	15%
8-11	4%	5%	3%	2%	4%
12-14	1%	1%	1%	1%	1%
15	-	-	-	-	-
No answer	1%	1%	1%	1%	2%
Mean no. of programmes viewed (per student)	2				

No. of students sampled: 12831 Response rate: 82%

since over 500 students claim to have seen more than 10 Open Forum programmes, it seems as if students have taken a broad view of what constitutes an Open Forum broadcast. Allowing for inaccuracies, it does look as if the number of students viewing an Open Forum broadcast is likely to be about the same as those watching a programme from one of the large Foundation Courses.

However, there have been worrying changes in Open Forum viewing patterns over the last two years. Exactly two years previously, the Forward Planning Survey included questions on Open Forum viewing and listening. A full report on Open Forum programmes was submitted to the Open Forum Policy Group and the Broadcast Sub-Committee (Calder, 1973). Then, 30% of students never watched, compared with 47% in 1974. In 1972, the figures suggested that approximately 25% of the students watched any one programme, while in 1974, this had dropped to between 12% to 18%. There was a marked difference in 1974 between "old" and "new" students. Of the students registered for the first time in 1974, only 38% saw none (compared with 35% of "new" students in 1972). It seems, therefore, that the drop in viewing figures between 1972 and 1974 is due to the increased proportion of experienced students in the system, who make markedly less use of Open Forum television

programmes than "freshmen". This means that there are, in actual numbers, about 20% more students now watching Open Forum than in 1972, although the proportion of students viewing has dropped considerably.

In 1974, Open Forum television was generally transmitted on a Saturday morning at 11.25 with a repeat on the following Friday evening, at 19.05. Students were asked which transmissions they normally watched. The answers are given in Table 4 (with an estimate based on all finally registered students).

TABLE 4: Open Forum Television: transmission normally viewed

	No. of students	%
Both transmissions	306	0.7
Saturday morning, mainly	12913	28.6
Friday evening, mainly	2848	6.3
Saturday and Friday, about equally	1922	4.3
None, normally	25360	56.2
No answer	1815	4.0
All finally registered students	45159*	100.1

* 5 students gave more than one answer

It can be seen that the Saturday morning slot was clearly the more popular with those that viewed.

With regard to student background differences, these were not large enough to be worth reporting, for most of the variables examined (region, occupation, sex, terminal age of education), although retired people and those in institutions watched more than other occupational groups.

Similar questions were asked for Open Forum Radio programmes.

Listening figures are given in Table 5.

TABLE 5: Open Forum Listening Figures by Year of Intake

No. of programmes heard	All students	Year of Intake 1971	1972	1973	1974
	No. of students who listened to the following no. of programmes				
None	60%	57%	62%	65%	55%
1-9	29%	28%	28%	27%	31%
10-18	6%	7%	6%	4%	7%
19-27	3%	4%	2%	2%	4%
28-35	1%	2%	1%	1%	1%
36	-	-	-	-	-
No answer	2%	1%	1%	1%	3%
Means no. of programmes heard (per student)	3				

No. of students sampled: 12831 Response rate: 82%

Table 5 shows that 60% heard no Open Forum radio programmes at all, and only 10% heard more than a quarter. Again, assuming an even spread of listeners across each programme , and assuming that the figure of 36 programmes is correct, one would estimate an audience of about 3,400 for each programme - again, about the same number as one would expect to listen to a radio programme on one of the large foundation courses.

3,400 is about 8% of the 45,000 finally registered students in 1974. This represents a similar drop (about half) as for television in the proportion of students listening to Open Forum programmes between 1972 and 1974. The proportion of "new" students who listened to no Open Forum radio programmes increased though from 43% in 1972 to 55% in 1974 (confirming a tendency noted in the 1972 S.R.D report). Indeed, although "new" students do listen slightly more often than experienced students, this difference is much smaller than for the Open Forum television programmes, and the actual number listening to each programme is probably down on 1972, as well as the proportion.

In 1974, Open Forum radio was generally transmitted on a Wednesday

evening, at 17.45 and repeated on the following Saturday morning at 09.05. Students were asked which transmission they usually listened to. Table 6 (below) indicates that students therefore were much more evenly divided between the two transmission times than for television.

The importance given to these figures will depend to some extent on the objectives of Open Forum programmes. Certainly by general broadcasting standards, the actual numbers of students viewing and listening are minute, and certainly by Open University course standards, the proportions watching or listening are very small. Even so, by Open University standards, the actual numbers watching or even listening are still quite high - over 5,000 for each television programme, and over 3,000 for each radio programme. In terms of actually delivering information to students, this must still be a fairly economical exercise.

On the other hand, a more pertinent question might be whether more students might be interested in watching and listening if the programmes had different objectives than at present.

TABLE 6: Open Forum radio transmission normally listened to

	No. of students	%
Both	277	0.6
Wednesday evening, mainly	5627	12.5
Saturday morning, mainly	6888	15.3
Wednesday and Saturday, about equally	1932	4.3
None, normally	28098	62.2
No answer	2370	5.2
All finally registered students	45159*	100.1

* 33 students gave more than one answer

It is quite clear from our other studies that viewing and listening figures for course programmes are directly related to the value of the programmes - as perceived by the students -

in helping them to complete their courses. This appears to be supported by the greater interest shown in the Open Forum television programmes by new students, who obviously need information on how the systems works (and, perhaps, on how they can work the system). Once they have become familiar with the system, though, there appears to be a marked drop in interest in Open Forum programmes.

It must no doubt be a cause of concern that such substantial numbers of students watch or hear no Open Forum programmes, and that those who do watch and listen tend to be those who are older. Perhaps one way of attracting greater numbers of viewers and listeners would be to use the Open Forum slots for helping students to develop general learning skills, such as advice on essay-writing, help with basic or rapid reading techniques, advice on how to use Open University television and radio programmes, remedial or basic help with Mathematics - almost a preparatory course, in other words, but running concurrently with a student's more specific academic studies. Mixed in with these programmes might be programmes of the sort which give advice on the choice of courses, career possibilities, and examination arrangements - in other words, programmes geared specifically to the academic needs of our students, at a very basic level, with "news" items of a very brief nature, plus one or two "specials" where major changes of policy directly affecting students need to be explained.

It will, however, be extremely hard to win back those who watch and listen no more. Listening figures for Maths radio programmes for second-level courses are considerably down, probably due to the failure of the Maths foundation course to use radio in a way which students could see would help them with their many difficulties on the course. Even though a number of second-level Maths courses radically changed this policy, and have made radio programmes which appear to be extremely relevant to the course, and do help those who listen over difficult blocks, through use of radio-vision, etc., many students fail even to switch on. If then it is felt desirable

to increase the Open Forum viewing and listening figures, it would appear necessary not only to have a radical change in policy, but also to find ways of bringing this change of policy to the attention of students and staff.

Student Rating of Various Components

To place student use of television and radio in the context of their total learning situation, students were asked to rate the various components of Open University courses in terms of the helpfulness of each component to the student's learning. (The question asked is given in full on the next page).

A summary of the results from this question for each course is given in Appendix V, Tables 1-6. These results need great care in their interpretation. Because some courses have, for example, Summer Schools while others do not, an "average" figure for all students is not very meaningful. Secondly, foundation courses constitute over a quarter of all student places, and taking an overall average for all students would mean the results being heavily influenced by the foundation courses. These results are summarised, therefore, on a course basis.

With 58 different courses, it is difficult to give details briefly for all nine components, with five descriptors for each component(very helpful, fairly helpful, etc.). We have therefore chosen for analysis just two of the descriptors: the proportion of students on a course finding the component very helpful, and the proportion of students not making use at all of the component.

The "very helpful" descriptor was chosen for two reasons. Although generally most people tend to avoid extreme descriptors on a five-point scale, this did not turn out to be the case on these questions, probably because there was an element of comparison between the different components. The "very helpful" descriptor in fact clearly discriminated between

Q. 30: "Please indicate for this course the extent to which the various components of the course have assisted your learning".

Component	Very helpful	Fairly helpful	Not very helpful	Not at all helpful	Did not use/ not applicable
Class tutorials	1	2	3	4	5
Correspondence texts	1	2	3	4	5
Correspondence tutoring	1	2	3	4	5
Counselling	1	2	3	4	5
Home Experiment Kit	1	2	3	4	5
Radio	1	2	3	4	5
Set book(s)	1	2	3	4	5
Summer School	1	2	3	4	5
Television	1	2	3	4	5

(Please circle the appropriate code for each component)

different components, and also between courses on the same component. Furthermore, since some students were not able to use certain components (like class tutorials), while others were, the "very helpful" category would minimise - although not eliminate - the effect of some students not being able to use a component by avoiding the more neutral "fairly helpful" category. Also for this reason, the "did not use" category was chosen for analysis so that allowance could be made for students unable to use a component, and because it also gave the most negative indication for components available to all students.

The choice of descriptors is important. For instance, if we had grouped together "fairly helpful" and "very helpful", this would have increased the relative "score" of television compared with, for instance, class tuition, since television was available to nearly all students, while class tuition was not.

This question in fact, because it covers most components across all 1974 courses, provides information which will probably be very useful to all course teams. Since it is impossible for us to know in detail the main design features and problems of each course, and because of the different ways in which the figures can be interpreted, we strongly recommend that the individual course or maintenance teams examine

closely not only these collated cross-course data, but also the original data from the print-out for this question, which will have been circulated separately to each course team.

By collating data on this question by course, and averaging the course scores for "very helpful" and "not used", it is possible to calculate average percentages of students giving these ratings, for each faculty, as in Table 7, and from this table, we can obtain data for Figure 9, which shows faculty differences in the rating for the various components.

Clearly, the correspondence texts, as one would expect, are the most valued component of the courses, three-quarters of the students finding them very helpful in their learning, followed by Summer Schools and set books, each of which was found very helpful by about half the students. Television in Science and Technology was surpassed only by correspondence texts and Summer Schools, television being found very helpful by well over a third of the students in these faculties, and was roughly on a par with class tutorials and correspondence tutoring in the other faculties, being found very helpful by about a quarter of the students. Somewhat surprisingly, correspondence tutoring was found very helpful by only about one in five students, nearly a third stating that this was not used by or applicable to them. About 25% of the students are unable to get to class tutorials, and a further 10% never made use of them. Even so, about a quarter of the students found class tutorials very helpful. Home experiment kits, also somewhat surprisingly, were found very helpful by only about a quarter of the students in Science and Technology. Radio was

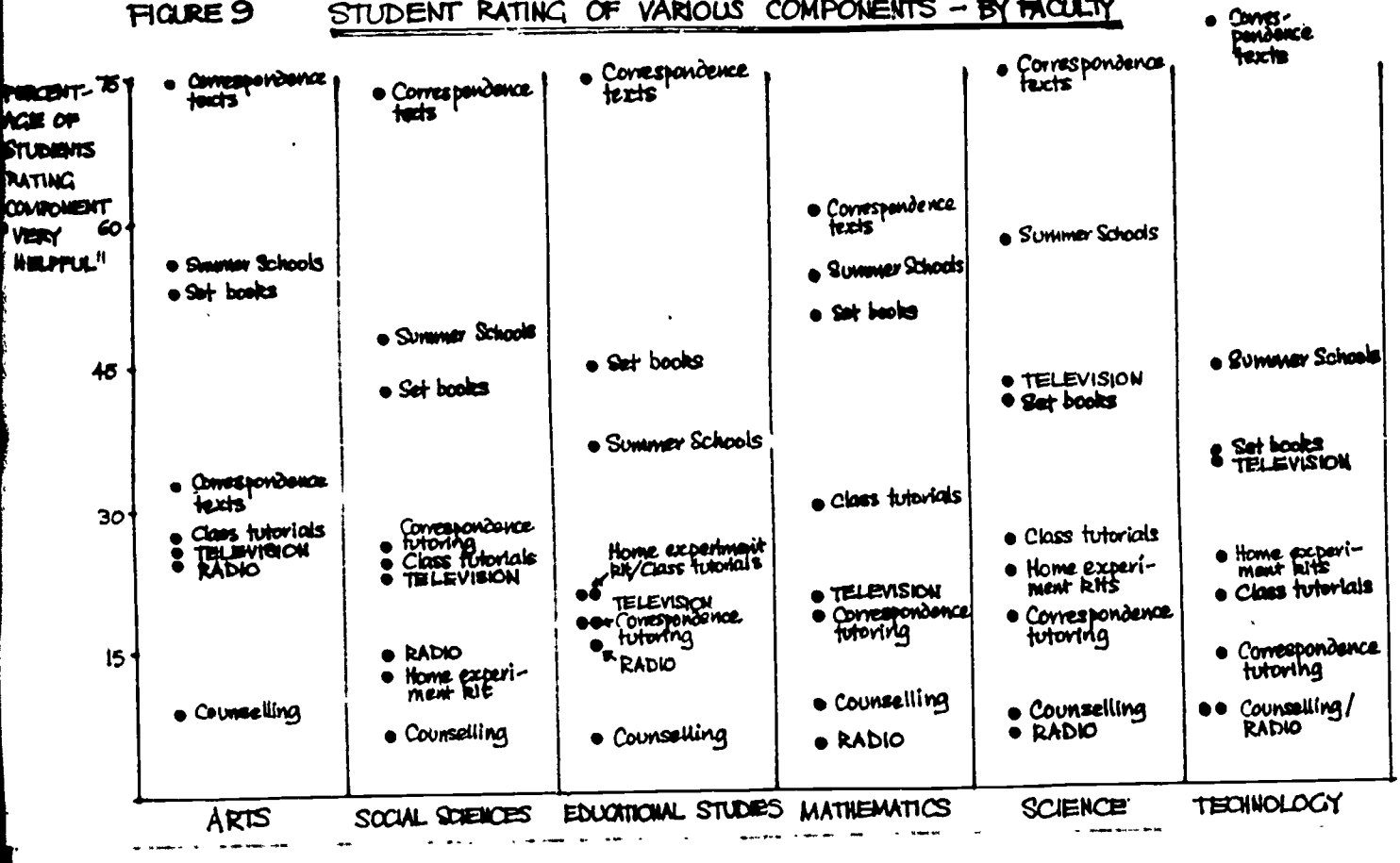
TABLE 7: STUDENT RATING OF VARIOUS COMPONENTS

Mean % of Students

FACULTY	CLASS TUTORIALS		CORRESPONDENCE TEXT		CORRESPONDENCE TUTORING		COUNSELLING		HOME EXPERIMENT KIT		RADIO		SET BOOKS		SUMMER SCHOOL		TELEVISION	
	Very helpful	Not used	Very helpful	Not used	Very helpful	Not used	Very helpful	Not used	Very helpful	Not used	Very helpful	Not used	Very helpful	Not used	Very helpful	Not used	Very helpful	Not used
ARTS	28	34	77	4	33	19	9	63	-	-	25	17	53	6	56	13	26	12
SOCIAL SCIENCE	25	38	74	6	26	27	7	67	13	11	15	22	43	7	48	11	23	16
ED. STUDIES	21	38	75	6	18	34	6	71	21	29	16	20	45	7	37	14	18	16
MATHS	30	37	61	6	18	38	9	65	-	-	5	38	50	10	54	13	20	17
SCIENCE	26	38	78	4	18	33	8	62	23	12	6	27	41	10	58	18	43	7
TECHNOLOGY	20	34	80	3	14	32	8	59	24	13	8	25	34	6	44	17	33	8
ALL COURSES	25	36	74	5	22	30	8	65	21	13	13	22	45	8	52	15	27	12

(Mean % calculated only for courses where component exists)

FIGURE 9 STUDENT RATING OF VARIOUS COMPONENTS – BY FACULTY



found very helpful by about a quarter of the students in the Arts faculty, but was rarely rated very helpful in the other faculties. It was probably not very meaningful to include counselling, since this is not directly related to courses, except at foundation level, where about a quarter of the students found counselling very helpful to their learning. The figures also suggest that between a quarter and a third of students beyond foundation level made use of counselling at some time during the year.

The value one places on these results depends to some extent on one's preconception of what students would find most helpful. We found the Mathematics results particularly interesting, especially when looked at on an individual course basis (Appendix V, Table 9). In general, their correspondence texts were rated as being very helpful by far fewer students than in other faculties. The rating of the correspondence texts is likely to be influenced to some extent by the policy regarding set books. For instance, if the set book is considered adequate, a course team may give a less important role to the correspondence text. It is interesting to note though that of the three courses with the lowest rating for correspondence texts in the University (MST281, MST282 and M321), two of these also had comparatively low ratings for the set books (MST282 and M321). At the same time, M201 had an above average rating for its correspondence text, showing that it is possible to produce Mathematics correspondence texts that students will find very helpful. The low rating given to the correspondence texts, and also to correspondence tutoring, the low viewing and listening figures, and the higher ratings given to class tutorials and Summer Schools (where they were available), in comparison with other faculties, do indicate the particular problems of teaching Mathematics at a distance. They also raise a question about the policy of relying heavily on set books in Mathematics. The results suggests that even more attention has to be paid to the design of the correspondence component in Mathematics courses than in other Open University courses.

The television results are also interesting. Viewing figures were, as we have seen, in general, lower on Maths. courses than in other faculties. Nevertheless, in the light of the viewing figures, a surprisingly high proportion of students (20%) found them very helpful. The differences in the ratings for the helpfulness of television programmes between Mathematics and Arts, Social Studies and Educational Studies courses were far less marked than differences in viewing figures, suggesting that when students did watch Maths programmes, they were likely to find them of value. This is in line with results we have obtained from some of the individual programme evaluation studies, which suggest that one reason for students missing programmes is connected with the overloading or difficulty of the course, rather than with the quality of the programmes themselves. Watching television programmes which are transmitted before students are ready for them (because they are still struggling with an earlier part of the course) is seen by the students as rather pointless if they have not been able to do the necessary pre-reading. For Maths students who are on schedule, though, they do appear to be very valuable (Bates and Gallagher, 1975).

For Arts courses, the two main features were the comparatively high ratings for correspondence tutoring and radio. The correspondence tutoring results generally we found puzzling, in particular the comparatively large proportion of students (nearly a third) who chose the "did not use/not applicable" category. We can only assume that students who answered in this way either did not receive substantial comments on their tutor-marked assignments, or did not consider such comments to be correspondence tutoring. It is interesting, therefore, that less than one in five students in Arts chose the "not used" category, and on many Arts courses well over a third of the students found the correspondence tutoring very helpful. The comparatively high listening figures for radio on Arts courses were also substantiated

by the value attached to radio by the students, a quarter of whom found radio very helpful. On the five Arts courses where Summer Schools were available, these were found very helpful by over half the students.

In Social Sciences, only one course (DS261 - Psychology) had a home experiment kit, and although most students used it, few found it very helpful. There were also some unusual differences between actual use and helpfulness ratings for television in the Arts and Social Sciences. Although D342 ("Regional Analysis and Development") was clearly the least viewed course in Social Sciences, those who did watch rated it slightly above average in helpfulness. This may be due to the fact that another economics course (D222) was presented the previous year (1973) without a television component and perhaps some of the students who had previously studied the D222 course felt they could manage without television in D342 as well, but those who did watch found the programmes of value. The television component of D283 ("Sociological Perspectives"), had the lowest rating on helpfulness of any course, except MDT241 and M321. The television component on DT342 ("People and Organisations") was rated by over a third of the students as being very helpful, exceeded only by Science courses (including AST281) and TS251. A291 ("The Early Roman Empire and the Rise of Christianity") and DT201 ("Urban Development") were other "Arts-based" courses also found very helpful by over a third of the students, although the most viewed Arts programmes - on A304, the Music course - were rated as being very helpful by only just over a quarter of the students. The comparatively high viewing figures on this course, therefore, are probably due to the sheer enjoyment to be obtained from the programmes.

It must be very disappointing for the Educational Studies Faculty that so few students found the television programmes very helpful, especially since on most courses students are told that it is essential for them to have access to both television and radio. The

ratings in fact were generally lower than for Mathematics even, only 55% finding the television programmes at all helpful. Only on one course (E351: Urban Education) did the rating for "very helpful" reach 25%, despite the fact that on all Educational Studies courses, most students saw over half the programmes. The Summer School for E351 also did not appear to be as successful with students as Summer Schools on most other courses.

Home Experiment Kits on most courses were rated as very helpful by fewer students than we anticipated, given the time and trouble involved in designing and distributing them. S23- (Geology) and TS282 (Electromagnetics and Electronics) received very high ratings for their home experiment kits, over 60% of the students finding them very helpful. Only on one other course (T291: Instrumentation) did substantially more than a quarter of the students find the kits very helpful. The home experiment kits received very low ratings on the two Systems courses (T241 and T242). On both SM351 (Quantum Theory and Atomic Structure) and E262 (Language and Learning), the "not used"/"not applicable" category may be outstandingly high (40% and 29% respectively) since the home experiment kits were primarily cassette recorders and some students may not have considered these to be home experiment kits. It is clear though that apart from on S23-, T291 and TS282, television was clearly seen by students as being more helpful than home experiment kits.

As in Mathematics, student rating of radio in Science and Technology is very disappointing. In fact, it is so low as to bring into question the validity of the listening figures in Science. Science courses in 1974 were made up of a bewildering combination of one-third and one-sixth credits. Even so, the pattern with television was fairly straightforward, each unit being accompanied by a different television programme. With radio, however, the programmes were not so frequent, and were

often "shared" between different courses. Since less than 10% of the students on any Science course rated the programmes as being very helpful, and over a quarter did not make use of them, it is possible that the listening figures are exaggerated for some of the "one-third" courses, due to the complex radio situation in Science. The situation is not much better in Technology, regarding students' rating of radio.

Television though is clearly successful in these faculties, in terms of student rating. The most successful courses were S321 (Physiology of Cells and Organisms), S323 (Ecology) and TS251 (An Introduction to Materials), more than half the students on these courses finding these programmes very helpful. The rating of very helpful never dropped below a third on any of the Science courses, and only dropped below a third for T100 (29%) and T242 (20%) in Technology.

Summer Schools were rated very helpful by even more students than for television in Science and Technology, the highest ratings being for S323 (Ecology), S23- (Geology) and TS251 (Introduction to Materials), (over 70%). There were, though, some comparatively unsuccessful Summer Schools. TS251 was the only Technology course where more than 50% of the students found Summer School very helpful, and less than a third of the students rated T242 or S26- as being very helpful, although in the latter case, this may be because a lot of S26- students will also have attended the S23- Summer School. Even so, considering the amount of inconvenience, difficulty and expense caused directly to students by attending Summer School, these courses and E351 may well wish to reconsider their Summer School policy.

In general, there were interesting differences between student ratings of programmes and viewing and listening figures. Viewing and listening figures for instance for foundation courses tend to exaggarate slightly the students view of the value of the programmes, compared with viewing and listening figures for later courses. As one would expect, students are a little more discriminating about what they will watch and listen to after foundation level. Student

ratings, therefore, are probably slightly more accurate than viewing and listening figures for determining the value of programmes, and for this reason we give course and faculty comparisons in full in Figures 10 and 11. The comparatively high viewing and listening figures are also a reflection of the convenience and availability of broadcasts, compared with other components. For instance, although on only eight out of 58 courses was radio rated more helpful than class tutorials, nevertheless, fewer students went to class tutorials than used radio on all but five courses. The failure, therefore, of most course teams to utilise radio effectively is indeed a great waste of potential.

Television, however, is obviously a success, comparing very favourably with correspondence tuition, class tutorials, and home experiment kits in all faculties, and even with set books in Science and Technology. And for those outside the University who were not aware of the balance between various components, these results clearly emphasise the primacy of printed material in the Open University's teaching system, particularly the specially prepared correspondence texts.

Finally, it should be noted that in this section we have been using data based on students who rated the various components as being very helpful. We have already noted that respondents to questionnaires tend to avoid the extremes of a scale, and there are also personality differences influencing the choice of a descriptor - what one respondent means by fairly helpful may be quite different from what is meant by another. Therefore, although some of the percentages look fairly small (e.g. 27% of students finding television very helpful), it must be remembered that most students find most components of the Open University helpful to some extent, as Table 8 (p 38) indicates for television and radio.

FIGURE 10

PERCENTAGE OF STUDENTS ON EACH COURSE RATING TELEVISION AS BEING VERY HELPFUL

NB Differences of less than 5% are probably not significant.

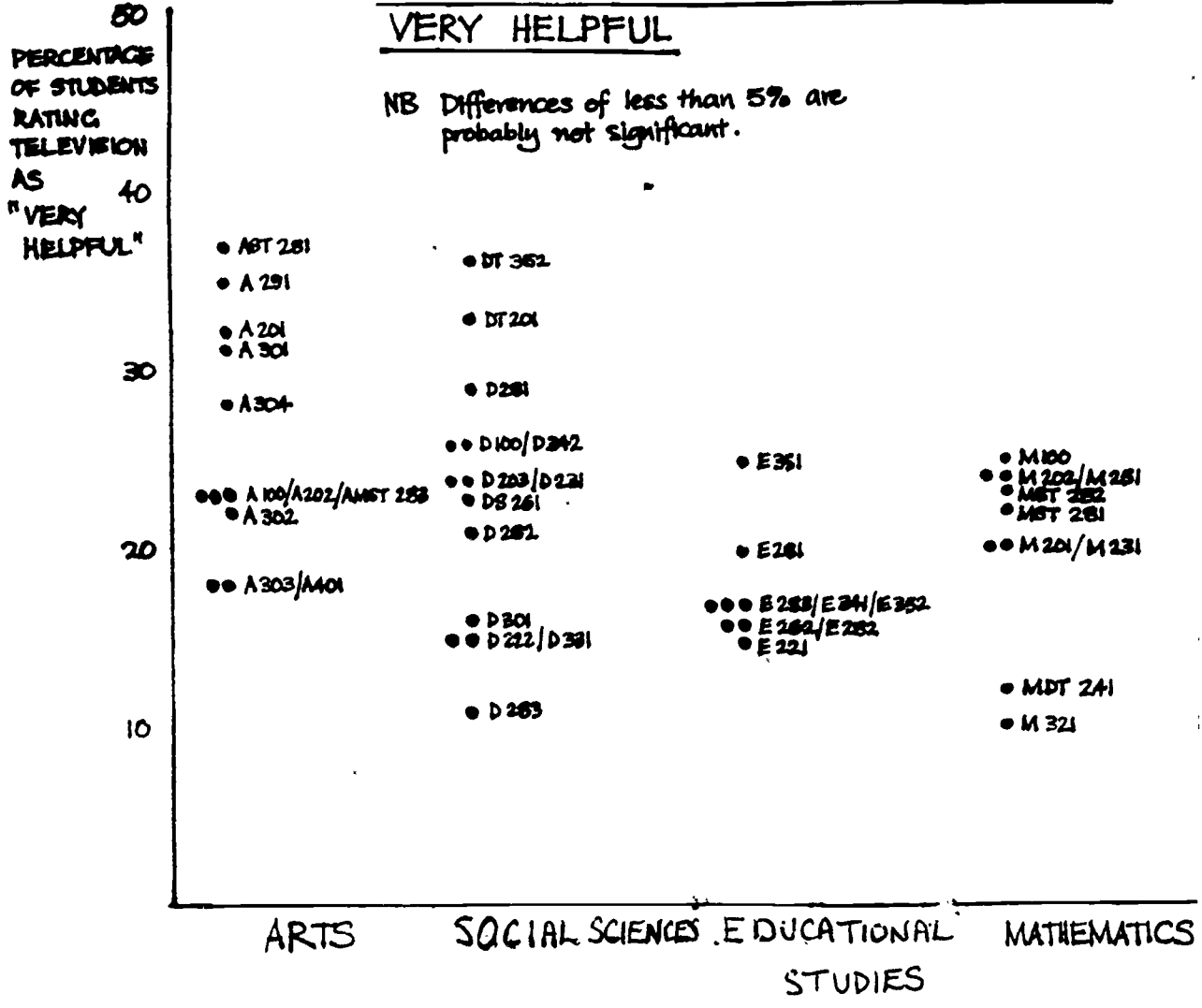
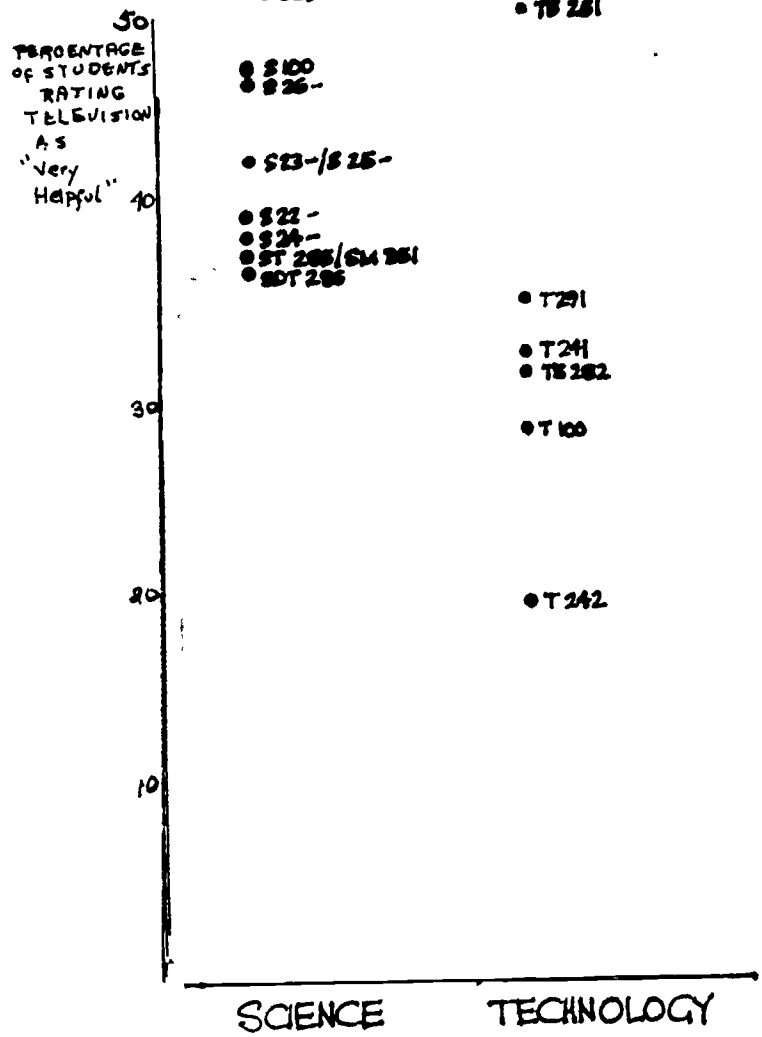


FIGURE 10
Continued



PERCENTAGE OF STUDENTS ON EACH COURSE RATING RADIO AS BEING VERY HELPFUL

FIGURE 11

NB Differences of less than 5% are probably not significant.

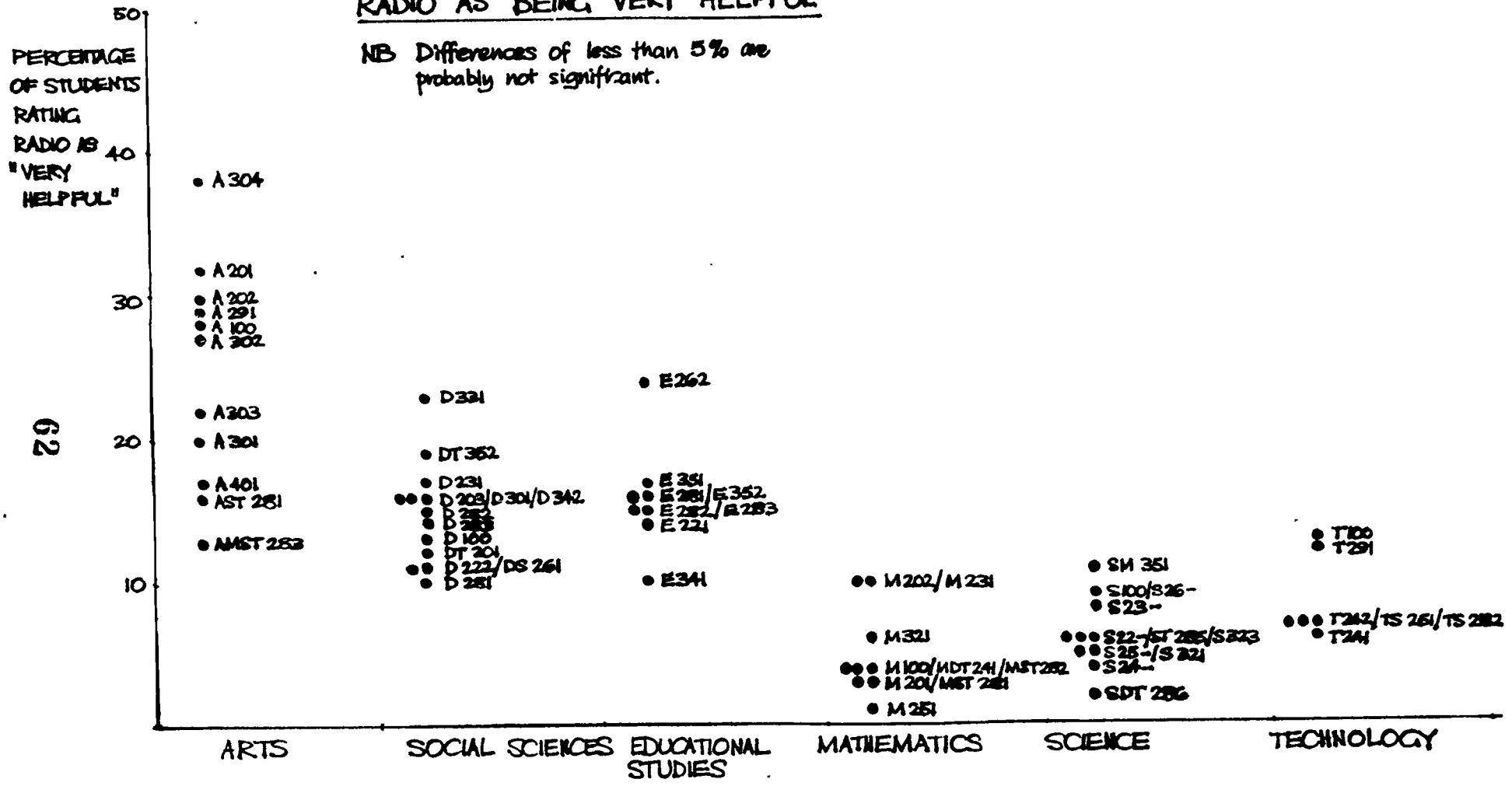


TABLE 8: Student Rating of helpfulness of Television and Radio in learning

TELEVISION	% of Students				
	Very helpful	Fairly helpful	Not very helpful	Not at all helpful	Did not use
Arts	26	42	17	3	12
Social Sciences	23	41	16	4	16
Educational Studies	18	37	24	5	16
Mathematics	20	38	20	5	17
Science	43	39	9	1	7
Technology	33	43	14	2	8
All courses	27	40	18	4	12
RADIO					
Arts	25	38	16	4	17
Social Sciences	15	33	23	7	22
Educational Studies	16	36	21	7	20
Mathematics	5	19	25	14	38
Science	6	24	30	13	27
Technology	8	31	26	10	25
All courses	13	32	23	9	22

Thus about two-thirds of the students rated television as fairly or very helpful, and just under half the students found radio fairly or very helpful.

Factors influencing viewing and listening figures

We have seen that there is considerable variation between viewing and listening figures for different courses. Some factors related to the students themselves, rather than to the the programmes, however, might have unduly influenced the viewing and listening figures for individual courses. For instance, if students who drop out watch less than those who do not, this might explain why courses with a higher drop-out rate, like a number of Mathematics courses, have comparatively lower viewing and listening figures. Secondly, during

our evaluation of individual programmes, we have noticed that there are strong individual differences in attitudes to Open University television and radio and in the ability of students to use such media. While in this survey we can only look at gross factors, we can nevertheless identify those which do or do not correlate with high or low viewing or listening figures. (Generally we have ignored differences of less than 5%, as being unreliable).

The greatest differences we found were related to the age of the student, as Table 9 (below) indicates.

We found this result surprising. One might have anticipated that older people would be less accustomed to using television, and to a lesser extent, radio, for education, and hence might be more resistant to using it in the Open University situation. In fact, it appears that the reverse is true - the older the students, the more likely they are to watch, and in particular, listen to Open University programmes. The difference is probably strongly influenced by younger students tending to have more social activities and interests outside of the Open University than older students.

TABLE 9: Viewing and Listening Figures - by age
Average percentage of programmes viewed or heard

	Under 21	21-30	31-40	41-50	51-60	Over 60	All students
Television	47%	60%	64%	70%	72%	75%	64%
Radio	35%	41%	48%	58%	65%	70%	50%

Women were also more likely to watch and listen than men, as Table 10 (over) indicates.

TABLE 10: Viewing and Listening Figures - by sex

Average percentage of programmes viewed or heard

	Men	Women
Television	63%	68%
Radio	47%	56%

The television figures are surprising because viewing is generally heavier on Science and Technology courses which have a preponderance of men. It is likely, therefore, that women watch much more frequently than men on Arts, Social Science and Educational Studies courses, although we do not have direct evidence for this assumption.

There was only one occupational group whose viewing and listening figures were substantially different from the rest. Transport and communication workers, because of shift work and unusual working hours, saw an average of only 19% of television programmes. (The equivalent figure for radio was 16%). Viewing or listening figures were slightly down (by 5%-10%) for members of the Armed Forces, shops, sales and service workers, workers in farming, mining and manufacturing, and for people in institutions. Viewing and listening figures were slightly up (by 5%-12%) for housewives and retired people. Regional differences were very slight, and there were no significant differences related to when students completed their full-time education.

Students who found it difficult to attend a Study Centre once a month or more frequently (25% of students in all) tended to have lower viewing and listening figures as well, as Table 11 (overleaf) indicates.

Since, as can be seen from Table 11, only a very small proportion (2%) of the 11,670 students who find it difficult to attend a Study Centre once a month or more live outside the range of BBC2 transmissions, it is probable that the remainder of such students work awkward hours or spend a considerable time travelling, which would affect both attendance at Study Centre and to a lesser extent, the number of programmes they can see or hear. Whatever the reason, it is a little more difficult for students who cannot easily get to Study

Centres to get the broadcasts as well although the average number of programmes watched and heard, particularly for the majority of this group - those who can attend "sometimes" - is not vastly different from the average.

In fact, it is more surprising that only 277 of the 649 students outside the range of BBC2 were unable to get to Study Centres regularly. Indeed, nearly 20% of the 649 students saw more than half the programmes, and over a quarter of the 518 students outside VHF transmission areas heard more than half the programmes, no doubt mainly at Study Centres overseas for forces, etc.

There was virtually no difference in viewing and listening figures for students with poor quality reception. It is also worth noting, therefore, that most students who miss programmes (whatever the reason) can get to Study Centres at least once a month (75%) and most students who are unable to get to Study Centres can receive the television and radio broadcasts (98%), although this latter group might watch about 10% fewer programmes.

This means that a mixed system of direct transmission (even if only single transmissions) with replay facilities at Study Centres, is likely to make the broadcasts available to nearly all students who wish to watch, although some programmes will inevitably be missed by some students. The number of students who would not be covered by either direct transmission or attendance at Study Centres is 277, or 0.6% of the student total.

The time at which students leave for and get home from work also affected viewing and listening figures, but rather less than we expected. Viewing figures dropped significantly below the average of 64% only for those students who left for work very early, i.e. before 5.50 a.m. (57% of programmes watched, 0.3% of students), for those who returned home from work after 7.30 p.m. (55% of programmes watched, 2.4% of students),

TABLE 11: Viewing and Listening Figures - by ability to attend Study Centres

Possible frequency of attendance at Study Centre	No. of students		Mean % of programmes on a course seen/heard		Nos. living outside the range of:			
					BBC2		VHF	
	No.	%	Viewing figures	Listening figures	Nos.	%	Nos.	%
Sometimes	9639	21	57%	44%	102	16%	74	23%
Not at all	2041	4	48%	39%	175	23%	73	23%
All students	45,159	100	64%	50%	649	100%	518	100%

or worked irregular hours (56% of programmes watched, 18% of students). Similarly, students who replied that they were not prepared or able to view or listen at any time on Saturday (3%) also had lower viewing figures (50%). The results for radio and for Sundays were roughly the same as for Saturdays. Otherwise, the time of leaving and returning home made little difference to viewing and listening figures in 1974. We shall see later (pp.50-67) that the main reason for this factor making so little difference is due to the provision of repeats, and that when repeats are not provided, time home will be an extremely important factor determining viewing and listening figures.

The relationship between drop-out and viewing and listening figures is both obvious and complex: obvious, because as one would expect, students who give up studying the course before the end of the year watch and listen to fewer programmes on a course than those who continue right through the year: and complex because differences in drop-out rates are not sufficient on their own to explain differences in viewing and listening figures between courses, for, as we shall see, on courses with high drop-out rates, even students who do go on to take the end-of-course examination tend to watch and listen less than similar students on other courses. The situation is further complicated by our omission to obtain separate viewing and listening on each course

for students who dropped out.

The reason for not obtaining a breakdown for each of the 58 courses was simply one of cost and timing. In the original analysis we obtained a breakdown for drop-out students across all courses, which showed that taken overall, drop-out students had a marginal effect on viewing and listening figures in that if drop-outs were excluded, the mean viewing figure increased from 65% to 69%. Subsequent detailed analysis has indicated that for courses with very high drop-out rates, this may be a significant factor in explaining the low viewing and listening figures. However, to obtain the data for each course would have required the production of another 116 tables and a delay of at least another month in the main report. If funds for this extra analysis can be found, a full supplementary report on the effect of drop-outs will be issued later.

The reason why drop-outs (and in this report we define drop-outs as those who did not sit the end-of-course examinations) did not have a very great effect on viewing and listening figures overall is that they form a small proportion of students - 16% in the survey. On an individual course, however, the drop-out rate may be much higher (in the worst case, M321, being as high as 56%, although this was very exceptional). Therefore, the impact of drop-outs' reduced viewing and listening figures would presumably be much greater on courses with high drop-out rates. For this reason, we have tried to calculate the likely effect of drop-outs on viewing and listening figures, although the assumptions on which these calculations have been based may need to be changed when viewing and listening figures for drop-outs on individual courses are obtained.

First of all, we need to know whether the results are biased by a lower proportion of drop-out students responding to the questionnaire than were actually in the system in 1974. In fact, in 1974, students sat the end-of-course examination for 77% of the finally registered student-courses, while the equivalent figure for returned questionnaires was 84%. Over all courses, students who dropped out saw on average about 40% of the television programmes compared with 69% of programmes by students who sat their examination. Of the 2,294 non-responding students, 55% would have been drop-outs, and 45% students who took the examination, for the overall drop-out figure for all students in 1974 to be 77%. If we assumed that amongst these non-responding students those 45% who sat the examination also saw 69% of the programmes on average and the 55% who dropped out also watched only 40% on average, this would change the overall mean percentage of programmes seen from 64% to 62%. The effect, therefore, of a slight bias in responders to students who sat the examination is unlikely to have inflated the viewing figures by more than 3%.

Students who dropped out saw, of course, fewer programmes the earlier they dropped out. Students who had dropped out by the end of May for instance (about 6%) would see only about a third of the programmes.

The course with by far and away the largest proportion of students dropping out before the examination was M321, with only 44% of finally registered students sitting the examination. It is also, significantly, the course with the lowest viewing and listening figures (47% and 28% respectively). How much are these reduced viewing and listening figures due to the influence of drop-outs? As it happens, we do have a breakdown of viewing figures of students by whether they dropped out or not by faculty and level of course, and it so happens that M321 was the only third or fourth level Mathematics course available in 1974, so we do have the figures for this course. These are given in full for M321 in Table 12.

TABLE 12: Percentage of programmes viewed by students on M321

All Maths students who took exams	M321 students who took exams	M321 students who dropped out	All M321 students	All students who took exams
62%	59%	38%	47%	69%

First of all, it can be seen that M321 students who survived as far as the examination watched almost as much (59%) as students who survived as far as the examination on other Mathematics courses (62%). Even so, the viewing figures for M321 students who took the examination - as with all Maths. students - are down by about 10% below the average for all students who took their examinations. Therefore, the influence of drop-outs appears to account for only half the differences between the M321 viewing figures and those for other students. Students who do not drop-out still watch less in Mathematics than in other faculties, as Table 13 (over) indicates.

In fact, Table 13 shows that M321 is indeed an exceptional case. Even on the Mathematics foundation course (M100), which had one of the highest drop-out rates (32%), the influence of drop-outs, on overall viewing figures, was not great, pulling down the overall viewing figure for M100 by less than 5%. It appears then that M321 may well be an exception, and that the effect of drop-out students is marginal, although this needs to be confirmed by a subsequent analysis.

In any case, drop-out and viewing and listening figures are not independent factors. The relationship between drop-out and viewing and listening figures is worth examining in a little more detail, because it is revealing of students' attitudes towards television and radio. On the evaluation of individual

TABLE 13: Comparison between Viewing Figures in different Faculties when drop-outs are excluded

Level	Faculty	No. of Courses	Drop-out rate before exam.	Mean % of Programmes as seen per Course: All students (i.e. including drop-outs)	Mean % of Programmes as seen per Course: Students who took examinations (i.e. excluding drop-outs)
Found.	Arts	1	16%	70%	73%
	S. Sciences	1	15%	66%	69%
	Maths	1	32%	63%	67%
	Science	1	19%	77%	81%
	Technology	1	23%	64%	69%
Second	Arts	5	18%	67%	66%
	S. Sciences	8	23%	59%	64%
	Ed. Studies	5	22%	61%	65%
	Maths	7	24%	54%	59%
	Science	7	16%	70%	74%
	Technology	5	17%	64%	67%
Third	Arts	5	10%	65%	67%
	S. Sciences	4	28%	61%	67%
	Ed. Studies	3	27%	58%	62%
	Maths	1	56%	47%	59%
	Science	3	18%	75%	80%
All		58	23%	65%	69%

programmes (Bates and Gallagher, 1975), it was found on several of the studies that students who missed the television programme being evaluated, although still following the course at the time of the evaluation, were more likely subsequently to drop out or fail the examination. In the case of radio, the chances were that students who missed the programme were twice as likely to drop out as those who listened. Furthermore, on some of the evaluation studies, it was also found that students who heard most of the radio programmes were students who achieved significantly higher grades in the end of the course examination than students who did not regularly listen. Finally, the evaluation studies showed that students who were way behind schedule on a course were less likely to watch or listen, or if they did, were less likely to find the programmes helpful.

If we look at the courses with high drop-out rates, we find that there were six courses with 30% or more drop-outs. We can also see from Table 14 that with one or two exceptions, their viewing and listening figures were clearly below average, and we also suspect from our earlier analysis that this would apply to those who did not drop-out, as well as those that did.

It can be seen that a high drop-out rate is not a feature of Mathematics courses alone. In the case of D331, this did not make a lot of difference to viewing and listening figures, but it certainly did in the case of D342. Secondly, the effect of drop-outs is much more marked on listening than on viewing figures.

From these results, several deductions might be made. First of all, students who are on top of a course generally appear to benefit more from the programmes, particularly radio, than those who are struggling. Students who are struggling, particularly in a subject area like Mathematics, which tends to build on previous skills and knowledge, find it difficult to understand or follow programmes which are transmitted when they may still be working several weeks behind schedule. Also, because of the course teams' policy of making in particular radio, but also television to some extent, not directly

TABLE 14: Relationship between high drop-out rates and low viewing and listening figures

Course	Drop-outs	% of programmes viewed	% of programmes heard
M321	56%	47%	28%
D331	42%	57%	47%
D342	36%	52%	37%
M100	32%	63%	34%
M251	31%	53%	33%
MST 282	30%	53%	32%
All courses	23%	64%	50%

essential to success in completing a course, students who are struggling may assume that their time would be better spent catching up on the correspondence texts rather than following programmes for which they are not yet ready. Indeed, the pressure put on a weak student who is struggling with a course by the extra work and thinking involved in coping with new ground or a different approach covered in the programmes may in a subject like Mathematics be counter-productive. At the same time though, students who are already on schedule, or are almost on schedule, are obtaining the extra stimulation and learning from the programmes which appears to pay off, as measured by: examination results; the students own rating of the programmes; and an analysis of student responses to test-type questions set on evaluation questionnaires. We are therefore once again in the classical educational dilemma of more able or better prepared students being able to benefit more from the provision of broadcast media than students who are struggling. (It should be emphasised that the comments here are limited to "difficult" courses, as measured by drop-out rates).

The results also emphasise the danger of regarding viewing

and listening figures in isolation from the rest of the course. Low viewing and listening figures are just one symptom of a course which is causing problems for a lot of the students. The programmes themselves may be excellent, but if the student cannot cope with the rest of the course, it is unlikely that the student will be able to make the most of the programmes, even if he or she does watch or listen. Indeed, from a production point of view, more attention may be needed for courses with relatively high viewing and listening figures, but which are nevertheless less than one would expect, given the reaction of students to other components of the course.

One factor which appears to have a slight effect on the number of programmes watched or heard is the number of courses a student is taking at any one time. Students who are taking four courses at once watch 8% and hear 13% fewer programmes than students taking only one course, no doubt due to work-load problems or the difficulty of remembering or fitting in the transmissions. On the other hand, the more courses students have taken previously, the more likely they are to watch and listen. Again, the tendency is very small - a difference of no more than 5% to 7% - but at least it supports the view that students who do remain in the system are prepared to continue to watch and listen. In fact, this tendency would probably have been greater, except that viewing and listening figures are very slightly higher on average for foundation courses than for courses at other levels. Again, though, the difference is very small (less than 5%).

Again, not surprisingly, students who rated the programmes as being very helpful watched much more than those who did not. The interesting point here though is that students who rated the television programmes on their course as being not at all helpful (4% of the total) nevertheless watched more than a third of the programmes, and students who rated the programmes as being not very helpful (18% of the total) still watched over half. Only 5% of the students did not watch any. With radio, though, students who rated the programmes as not at all helpful (9% of the total) heard less than a quarter of the programmes, and

those who rated the programmes as not very helpful (23% of the total) heard less than a half. 17% heard none at all, and interestingly, 12% of the students who said they did not find the programmes at all helpful on their course had not, in fact, listened to any (compared with 4% for television). This suggests that students were answering on the basis of their experience of radio on previous courses. The figures also indicate a greater willingness to watch television than radio, even if students do not find the programmes very helpful. This conclusion is further reinforced by comparing viewing with listening figures, which showed that 20% of the students watched more than half the television programmes but heard less than a quarter of the radio programmes compared with 6% who heard more than half of the radio programmes but watched less than a quarter of the television programmes. For all courses, nearly a quarter of students (23%) watched and listened to more than three-quarters of the programmes on both media. On the other hand, 4% of the students neither watched nor heard any programme (compared with 6% who claimed to watch and hear every programme), and 12% heard and watched less than a quarter of the programmes.

With regard to the frequency of the transmissions, this appeared to make very little difference to the viewing and listening figures. Courses for instance with a transmission every third week or every month had the same viewing and listening figures as courses with a transmission every fortnight. Courses with a transmission every week had slightly higher viewing figures (about 5%), but all these were foundation courses, with the exception of M201 and M202, whose viewing figures were nearer to those courses transmitted fortnightly. No course, except M321, had transmissions less frequently than once a month. M321 - only four television programmes, the transmissions of which were spread over a period of roughly seven months, and this may be

another factor which contributed to its low viewing figures.

Finally, we examined the extent to which students were advised by the course team about the essentiality of watching television on the course. We did this by examining the entry for each course in the Courses Hand-book for 1974 courses, and by examining the introduction and guide to each course, where this was available. On the basis of this information, courses were classified as follows:

1. Television essential - students advised not to take the course unless they can watch the television programmes.
2. Television strongly recommended - e.g. students told that the broadcasts are an integral/essential part of the course.
3. Television recommended.
4. No guidance given.

This question is important because the Broadcast Sub-Committee has been considering using this as a criterion for deciding on whether a course should or should not be allocated repeats. The relationship between viewing figures and the guidance given by the course team on the essentiality of the television programmes is very interesting, as Table 15 indicates.

Looking at the overall figures, there does seem to be a correlation between viewing figures and the extent to which course teams have advised students that broadcasts are essential. There is a clear trend from 56% of programmes seen on courses where no guidance is given to 73% where programmes are stated to be essential. Closer examination of the figures though show that this classification, unfortunately, is misleading. The first thing to be noted is that students are astute. They appear well able to distinguish between extravagant claims made by the course team about the role of television on a course and its actual use. For instance, for all courses in Educational Studies, students are strongly recommended to watch the programmes, or are told that the programmes are essential, yet viewing figures for Educational Studies courses are amongst the lowest. The pass rate in Educational Studies, nevertheless, is if anything slightly above average, despite

TABLE 15: Relationship between Viewing Figures and Course Teams' Guidance on the essentiality of television

	Essential	Strongly recommended	Recommended	No guidance
Arts	67	69	63	61
S. Science	-	64	65	55
Ed. Studies	58	61	-	-
Maths	-	47	60	55
Science	75	74	-	-
Technology	-	74	63	56
All	73	67	64	56

the fact that a high proportion of the students will have missed "essential" programmes. It is clear that students recognise the difference between courses where they would find it hard to succeed without watching the programmes and those where students can, without doubt, manage without them. For broadcasts to be an essential part of a course, they must contain material which is clearly seen by the students to be of central importance to a course and without which the course would not be viable. The Arts course where television was considered to be essential was, in fact, A301 ("War in Society") where archive film was used as primary historical source material, but even with this course it was clear from the viewing figures that many students did not treat the material as essential. The only Mathematics course which strongly recommended students to watch was the unfortunate M321. This has so many problems affecting the viewing figures that a verbal recommendation is unlikely to change student behaviour very much. The two faculties where the guidance by the course team is most closely matched by student behaviour are Science and Technology. Course claims for the essentiality of television are therefore an unreliable guide. Student ratings or viewing figures would seem to be more dependable, although it is interesting to note that where courses

gave no guidance, viewing figures were consistently lower.

To summarise therefore:

1. Older students, and to a lesser extent women, watch and listen more than younger students and men.
2. Lack of access to broadcasts makes very little difference to viewing and listening figures. Most students could either watch and listen off-air or get to a Study Centre, if replay facilities were to be made available.
3. The proportion of students dropping out of a course does affect slightly the overall viewing and listening figures, but even students who do not drop out tend to view and listen less than average on courses with a high drop-out rate. Viewing and listening figures therefore appear to be influenced by the general situation surrounding a course, rather than by just simply the policy set for broadcasting or by the quality of the programmes themselves.
4. Students who are frequent watchers also tend to be frequent listeners, and vice-versa, although television appears to be a generally more acceptable medium to students.
5. Course team's guidance to students on the essentiality of television in a course is not always reliable.
6. In general, the factors examined do not have a major influence on differences between viewing and listening figures. It is clearly factors intrinsic to the courses themselves which cause the widest variation in viewing and listening figures.
7. The evidence suggests that over a whole course, student viewing and listening figures, or even better, their overall rating of the helpfulness of the programmes for their learning, are good measures of the success or otherwise of a course in using broadcasting.

Reasons for missing, watching and listening to programmes

Students were asked to choose from a pre-coded list reasons for missing television and radio programmes. Full details of student

responses are given in Appendix XII, Tables 1-2. For television, over a third of students on Science courses, and over a quarter on Arts, Social Science and Technology courses, hardly ever missed. The main reason given for missing was "forgot", by over a quarter of the students. Students on Educational Studies courses were more likely to "forget" than any other (37%). The next most common reason offered was "away on holiday", also by over a quarter of the students. "Away on business" was given by over 20% of Social Science and Technology students, and over 20% of Technology students also gave Summer School as a reason for missing. Otherwise, no other reason was given by more than 20% of students within any single faculty. It is, though, worth noticing that although students were offered these categories, less than 5% chose "not worth watching on this course", "not worth watching on previous courses", "television is inappropriate for University teaching", or "television is difficult for studying".

With radio, 17% of the students hardly ever missed, rising to nearly a quarter on Arts faculty courses. Once again, the main reaon given was "forgot", by over a third of students, and once again students on Educational Studies courses were more likely to forget (39%). Being "away on holiday" was given by a quarter of the students on Arts courses, and a fifth on Social Science courses. Otherwise no other single reason was given by 20% or more of students on courses in any faculty. It is interesting though that over 10% said that they found radio difficult to use for studying, and nearly 10% found radio not worth listening to in Mathematics, although generally student reaction to the "not worth it" categories was similar to that for television.

One should, of course, be cautious about taking reasons offered by students at their face value. The degree of forgetfulness amongst Educational Studies students is not likely to be greater than that amongst other students. Whether a student forgets

or not to watch a television programme is inevitably related to what value the student is likely to attach to watching. Certainly what evidence there is suggests that Educational Studies students, the great majority of whom are teachers, more than any others feel, rightly or wrongly, that the broadcast media have less to offer them. We cannot from this study determine how much this is due to the preconceived notions of the students themselves, the nature of the subject matter, or the way television and radio are used in Educational Studies. Certainly the reasons offered by students throw little light on this, but since so few students directly rejected the value of the broadcast media when given the opportunity to do so on this question, it seems that students may well feel that the reasons for not watching or listening more than they do lie fairly deep within them. If this is so, it will need a lot more than a pre-coded questionnaire to winkle out such causes of student behaviour. Indeed, the deductions that can be made from cross-course comparisons, and the insights provided by the more specific evaluations of individual programmes, appear to be more promising and powerful means of explaining student behaviour.

This point is even more firmly emphasised by an analysis of the responses to the questions asking students to give reasons for watching and listening. It will be remembered that this question was put in to provide "balance" for the question asking students to give reasons for missing programmes. In asking for reasons for missing programmes, we had the benefit of previously defined response categories derived from other enquiries. In asking students to give reasons for watching and listening, we had no such previous studies to provide pre-coded answers. For this reason, we left the question open-ended, and took a 10% sample of questionnaire returns - a total of 1,053 - and hand-coded the open-ended responses. The actual wording of the question was important. This was:

Q.17b/22b: Please indicate the <u>main</u> reasons for watching (listening to) the television (radio) programmes

As it turned out, the wording of the question provided problems of

analysis. There was an implication in the wording of the question that there were reasons for watching or listening other than that the programmes were an integral part of the course - in other words, students would have assumed that they would need to watch or listen because the programmes were part of the course, but specifically asking why they watched or listened led some of them to assume that there might have been some other purpose behind the programmes. Secondly, some students' answers suggested that they had answered the question in terms of why they had switched on in the first place. Finally, there was another set of answers in terms of the value students placed on the programmes - which was the main underlying purpose of the question. Even this group of students, however, answered on a continuum from very negative ("After I switched on, I wished I hadn't") to very enthusiastic ("I am more easily able to absorb concepts in Science when they are presented visually"). It can be seen, therefore, that the validity of the responses to this question is rather suspect.

The most commonly occurring reason given by students for watching emphasised the integral nature of the broadcasts, stating that the programmes provided additional understanding or clarification of the texts, the consolidation of facts learned elsewhere, or merely that the programmes were a part of the course. Comments of this kind were made by between a quarter and a half of the students. Between 10% and 15% of the students mentioned that the programmes provided extra information or background, or new insights, and between 5% and 10% mentioned the interest or stimulation provided by the programmes. A further 5% mentioned that visual material was more easily absorbed, understood or remembered, and 5% also mentioned that the programmes made the course more personal or alive, or broke down their isolation a little. Nearly 20% of the students did not answer this question.

With regard to radio, the reasons given for listening were somewhat similar. About the same proportion of students emphasised the integral nature of the programmes. In addition, 10% mentioned the added interest or stimulation the programmes gave to the course. Just under 5% mentioned the value of a different viewpoint being provided through the programmes, and a similar proportion mentioned that they were not very helpful. About a third of the students did not answer this question.

Perhaps a more revealing insight into the subjective views of students regarding broadcasting can be obtained from letters sent in by students with respect to the questionnaire. These letters are reproduced in full (with permission of the authors) in Appendix XIII.

The problem

Of all the questions tackled in this survey, working out the extent to which various transmission times have been or will be used is the most difficult and complex. This was the situation in 1974. Roughly 27 different television programmes of 25 minutes length were transmitted each week. Each programme received a repeat transmission in the same week, requiring a total weekly transmission time of 22 hours 30 minutes. Table 16 summarises the times of transmission for television.

TABLE 16. Summary of 1974 Open University television transmission times

	Times	No. of transmissions per week
Weekdays: early morning	06.40 - 07.30	9
" evening	17.25 - 19.30	20
Saturday and Sunday	07.40 - 13.05	25

(Note: not all times in the time-bands were available for OU broadcasts - for instance, five evening slots were used by BBC Further Education programmes.)

For radio, there were 28 programmes, generally of 20 minutes each, transmitted twice in the same week, requiring a total of 19 hours 20 minutes transmission time per week. There were special arrangements for students in certain parts of Scotland and Wales. In these areas, the medium wave frequencies, which normally carry BBC general broadcasts, are subject to heavy interference. Consequently, on Saturdays a number of the general broadcasts are switched to the VHF channel in these areas, with the Open University programmes being transmitted early in the morning or late at night instead (although in the rest of Great Britain, OU radio programmes are able to be transmitted on VHF

during the day). Table 17 summarises the times of transmission for radio. (Again, not all slots in these time-bands are used for OU broadcasts.)

TABLE 17. Summary of 1974 Open University radio transmission times

		Times	No. of trans. per week
Weekdays:	early morning	06.40 - 07.00	3
	evening	17.45 - 19.30	25
Saturday		07.00 - 08.00	3
		09.05 - 12.00	8
		14.00 - 17.00	9
Sunday		06.40 - 10.30	8

During 1974, it was anticipated that by 1976, the number of courses on offer would have increased to such a level that more than 30 hours a week transmission time for television would be required, thus exceeding the then current agreement with the BBC. Even if the BBC agreed to provide more than 30 hours each week it would be difficult to find this increase at times suitable both to the BBC and to the Open University. If suitable times could not be found this would mean the progressive dropping of repeats each year. Consequently the University's Broadcast Sub-committee not only wanted to know which times used in 1974 would be suitable for courses with single transmissions, but also what other times not yet used might be suitable, at least for repeats. (As it happened, the BBC were able to allocate early morning slots on BBC1 as well as BBC2 for 1976, so that most programmes can continue to be repeated. There will though still be some courses without repeats in 1976. Full transmission details, both for 1974 and for 1976, are given in Appendix VI.)

Therefore, answers were required to two different types of questions: what proportion of students actually make use of different transmission times, when repeats are available; and what proportion of students could we expect to make use of different times (including times not yet used) either for repeats or for single transmissions? With regard to the actual use of transmission times, the key questions in the 1974 broadcast survey were:

17(a)	Please give an estimate of the number of television programmes you saw on this course.
18	About how many programmes on this course did you see twice?
19	About how many programmes on this course did you see on the first transmission only?
20	About how many programmes on this course did you see in the second transmission only?

Similar questions were asked for radio.

Early morning transmissions

In 1974, the programmes on 28 courses were broadcast before 8.00 a.m. For 14 of these courses, this early morning transmission was the first. For the other 14 courses, the early morning transmission was the repeat. Table 18 (over) summarizes the viewing figures on these 28 courses (using adjusted figures) for each transmission, and enables us to answer a basic planning question: does it make any difference to viewing figures whether an early morning transmission time is the first transmission or a repeat?

The first thing to notice is that whether an early morning transmission is a first transmission or a repeat appears to make little difference to the overall viewing figures, (i.e. whether a programme was viewed at least once). The average number of programmes watched

per course is 63% when the early morning transmission is the first, and 62% when it is the repeat.

However, if an early morning slot is the first transmission for a course, this does seem to improve the chances of students watching twice, particularly in the Science faculty, than when the early morning slot is the repeat. In other words, if students watch the early morning slot, they seem more prepared also to watch the repeat in the evening or at the weekend. There is, not surprisingly, less inclination to get up early to watch the repeat, when the first transmission in the evening or at the weekend has already been seen. Apart from in the Science faculty, this tendency is not very great, because on few courses in other faculties are more than 20% of the programmes watched twice, but in the Science faculty, putting the early morning transmission first almost doubles the number of programmes viewed twice (from an average of 16% to 28% for Science courses). Therefore, where courses use television in such a way that two viewings of each programme are considered important, it would be preferable that the early morning transmission slot is for the first transmission.

At first sight, the figures in Table 18 also appear to indicate that if the early morning transmission is the first, as many programmes (44%) are viewed in the early morning, as in the evening or at the weekend (43%). If this was correct, this result would be somewhat surprising. It needs however to be treated with great caution. Because we were surprised by this result, we decided to check against other independent sources of information. Each of the individual programme evaluations carried out by the Audio-Visual Media Research Group in 1974 provided information on which transmissions were watched by students. Since these studies generally had high response rates, were concerned with specific programmes, and the data collected within one week of the transmission, we consider these studies to have high reliability. Unfortunately, this is almost the

APPENDIX VI

TABLE 18: Early morning transmission: a comparison between viewing figures for first and repeat transmissions.

% of programmes viewed on average (adjusted figures)

Course	First transmission Early morning	Second transmission Weekend or evening	Both	Viewed at least once	Course	First transmission Weekend or evening	Second transmission Early morning	Both	Viewed at least once
A301	42	45	20	67	A201	51	22	11	61
A302	38	40	15	64	A202	49	21	10	61
A401	39	29	10	57					
D281	39	32	12	59	D222	44	19	9	56
D283	39	28	11	56	D282	44	17	8	55
DS261	35	39	11	63	D342	42	17	8	52
DT201	48	32	14	66	DT352	57	26	16	67
D301	39	30	11	58					
MST282	32	35	14	53	MST281	45	21	13	53
ST285	43	47	24	66	S22-	54	32	16	70
S323	53	52	28	77	SDT286	49	28	12	66
SM351	43	58	31	70	S321	67	29	20	76
T242	36	30	10	56	E221	49	21	10	60
T291	43	45	16	72	E341	49	23	13	59
TS251	49	57	28	78	E352	45	26	14	55

N.B. Figures for each transmission include programmes watched twice. Thus the A301 early morning figure of 42% includes 20% of programmes seen twice.

only alternative source of data on early morning transmission times collected in 1974. Only one course (TS251) collected information on viewing figures for different transmission times through the CMA (Computer-Marked Assignment) system. Course Unit Report Forms (which also provide this information) were only available for seven courses in 1974, and unfortunately the number of returns was too low (<50%) to provide reliable data, except for the first programme on one course (A304).

We have therefore made comparisons between survey data and data mainly from the individual evaluation studies (for full details of comparison, see Appendix VII.)

Our suspicions do appear to have some substance. There were six courses where the early morning transmission was the first, for which there is comparative information. The data based on individual programme evaluations show a more marked tendency than the survey data for students to watch the repeat, at the evening, or weekend, rather than the early morning programmes, on four of the six courses. (One course (SM351) actually showed a reverse of the tendency in the evaluation study and in DT201, both survey and evaluation data showing a marked preference for the early morning slot. This last result is very surprising, since the first transmission was at 7.40 on a Sunday morning, and the repeat was at 6.15 on a Thursday evening.) The probable reason for the inaccuracy in the survey data is that a number of students never watched the early morning transmission, and were probably unaware that this was in fact the first transmission, and assumed that the evening/weekend transmission was the first. Perhaps more significant though than the discrepancy in the data is the confirmation that on nearly all the courses, when the early morning transmission was first, at least a third of the students watched the programme at that time, and for some programmes on some courses, more than half the students on a course would be watching at that time.

When the early morning slot was the repeat, about 20% of the students were likely to be watching, and this was confirmed by the evaluation studies, which suggests that the survey figures are accurate for the 14 courses where early morning transmissions were the repeats.

To summarise, therefore, it looks as if the early morning television slots were substantially used by students, particularly when these slots were used for first transmissions, although whether the early morning slot was the first or the repeat made little difference to the overall numbers viewing. Students were more inclined to watch twice when the early morning transmission was the first. There were no significant differences in viewing figures between the various early morning slots (6.40 to 7.05, and 7.05 to 7.30 on weekdays, and 7.40 to 8.05 on Saturdays and Sunday).

Transmissions at weekends and evenings

While 28 courses had television programmes with an early morning transmission, the remaining 30 courses had one transmission during a weekday evening (Monday to Friday) and one at the weekend (Saturday or Sunday morning.) It was fortunate that with the early morning transmissions, courses were divided evenly within each faculty between those courses where the early morning transmission was the first, and those where it was the second. This allowed comparison to be made between courses within the same faculty. Unfortunately, as an examination of Table 19 (over) indicates, this is not the case with courses with weekend/evening combinations.

Arts and Maths courses had their first transmission in the evening, and the repeat at weekends, while Social Sciences, Educational Studies, Science and Technology courses had the opposite arrangement. We have already noted a general pattern of course differences: Science courses with clearly the highest overall viewing figures, followed by courses in Arts, but with some overlap with Technology, Social Sciences and Educational Studies courses,

TABLE 19: Weekend and weekday evening transmissions: a comparison between viewing figures for first and repeat transmissions.

% of programmes viewed on average (adjusted figure)

Course	1st transmission (evening)	2nd transmission (weekend)	Both	Viewed at least once
A100	52	33	16	70
A291	53	33	21	65
A303	41	31	15	58
A304	54	41	23	73
AMST283	46	30	15	61
AST281	48	33	17	65
M100	48	30	16	63
M201	39	33	13	58
M202	38	34	17	55
M231	35	24	11	48
M251	32	26	10	53
M321	36	23	11	47
MDT241	37	23	9	52

Course	1st transmission (weekend)	2nd transmission (evening)	Both	Viewed at least once
D100	50	33	17	66
D203	43	24	12	55
D231	52	21	12	61
D331	46	21	9	57
E262	47	29	14	62
E281	48	29	16	61
E282	42	25	13	58
E283	52	28	15	65
E351	50	22	14	58
S100	56	48	27	77
S23-	62	37	24	75
S24-	62	35	20	76
S25-	61	34	20	75
S26-	56	37	22	71
T100	51	26	13	64
T241	45	32	18	59
TS282	46	36	20	62

and Maths with clearly the lowest. This pattern appears to be maintained in the overall viewing figures, irrespective of the combination of transmission times for any course. Thus, without the benefit of a multiple-regression analysis - for which time and resources are not available - inspection of the data suggests that it makes no difference to overall viewing figures for a course whether the first transmission is in the evening or the weekend or even in the early morning. Indeed, if the means of the overall viewing figures for the 28 courses with early morning transmissions are compared with the same figures for the 30 courses without early morning transmissions, there is no significant difference (Table 20)

TABLE 20: Comparison between overall viewing figures between courses with and without an early morning transmission.

Faculty.	Early morning trans.		Without early morning trans.	
	No. of courses	Faculty mean (% programmes seen)	No. of courses	Faculty mean (% programmes seen)
Arts	5	62	6	65
Social Sciences	9	59	4	60
Educational Studies	3	58	5	61
Maths	2	53	7	54
Science	6	71	5	75
Technology	3	69	3	62
All courses	28	63	30	62

On all courses, except those where an early morning transmission was the first, more students watched the first transmission than the repeat. Depending on the course, about half to two-thirds of the students would watch the first transmission (except for Maths courses, where just over a third of the students watched the first transmission). For the second transmission, between a quarter and a third of the students on

each course would watch, except where the first transmission was in the early morning, when up to half the students might be watching the repeat. On no course did more than two-thirds of the students watch - on average - any single transmission (or put another way, on no course were more than two-thirds of the programmes seen on average on any single transmission). This figure has important implications for the Open University, as we shall see later.

Also of significance is the importance of course factors compared to transmission times. While repeats are available, and while the combinations have been weekend/evening, weekend/early morning, evening/early morning, no course appears to have been penalised by the combination of transmission times given to it. Even for courses with the earliest morning slot (6.40 - 7.05 a.m.), and the earliest evening slot (5.25 - 5.50 p.m.) in 1974, the transmission times made no difference to the overall viewing figures, because of the provision of the repeat facility.

Second, this makes the ranking of individual transmission times on the basis of viewing or listening figures exceedingly hazardous when each programme is broadcast twice. More important than the time is the use made of broadcasting by the course, and whether it is a first or second transmission. These are the main sources of variation, and therefore it is not possible to predict from viewing figures alone the relative convenience of each slot, for a situation when there are no repeats. Extrapolation from a past situation to a totally new and different situation is extremely risky. The difficulty of assigning a value to individual transmission slots can be seen by an examination of the viewing figures for each transmission slot used by each Faculty, in Figures 1-6 in Appendix VIII. An inspection of these graphs shows that it is almost impossible to give a meaningful weighting to a transmission slot on the basis of viewing and listening figures, when there are repeats. Any time appears to be almost as good as any other.

In general, students' use of radio transmission times tends to follow the same pattern as for television, although there are some differences. (Full details are given in Appendix IX, Tables 1-2). For a start, listening figures are much lower. As with television, it is likely that the early morning "first" transmission figures are a little exaggerated, but it would seem reasonable to estimate that when the first transmission is in the early morning, about 20% to 30% of students will be listening, and between a quarter and half the students will be listening when the first transmission is in the evening (all Saturday and Sunday radio transmissions were repeats). Apart from four Arts courses, which had the first transmission early in the morning, repeat transmissions were never heard by more than a quarter of the students on a course. It was also unusual for more than 10% to listen to both broadcasts, and on many courses more students recorded programmes than actually listened to the repeats (between a fifth and a third of the students recording programmes). However, as with television, there was very little difference on overall listening figures between courses with different transmission times, as Table 21 indicates.

TABLE 21: Comparison between overall listening figures between courses with and without early morning transmissions.

	Early morning trans.		Without early morning trans.	
Faculty.	No. of courses	Faculty mean (% programmes seen)	No. of courses	Faculty mean (% programmes seen)
Arts	5	56	6	56
Social Sciences	5	46	8	48
Educational Studies	2	47	6	48
Maths	6	34	3	32
Science	-	-	11	48
Technology	5	46	1	47
All courses	23	45	32	48

Implications of Viewing and Listening Figures from Different Transmission Times

From the Academic Planning point of view, there must be some satisfaction that at least as far as 1974 (and probably for 1975, when repeats were still available), no course appears to have been discriminated against because of the transmission times allocated to it. Secondly, although viewing and listening figures for individual slots were sometimes low (the lowest being 10%), the availability of a repeat time did appear to boost overall viewing and listening figures, even if one transmission was at an apparently inconvenient time. The importance of a repeat transmission becomes evident when it is realised that no single transmission was viewed or listened to on average by more than two-thirds of the students. The repeat facility appears to boost overall viewing and listening figures by between 10% and 20%, as an average figure, and for individual programmes, particularly at the beginning of the year, by an even greater amount. However, because of students' ability to record programmes, the provision of repeats is perhaps not quite so imperative for radio as it is for television.

The other main point to emerge is the influence on viewing and listening figures of the use made by different courses of television and radio, compared with the actual time of transmission. It is the course's use of broadcasting which has been the crucial factor up to now. Courses with apparently less convenient transmission times which have nevertheless used television and radio well have drawn the students. But, as we have already said, while there are repeats available at other times, for Open University purposes no transmission slot available in 1974 could be considered "bad".

Transmission Times for 1976 and beyond

We have seen the viewing and listening figures for times

available in 1974 do not help very much in predicting how students will use these times if there are no repeats. Overall viewing and listening figures do not appear to be influenced by transmission times, while repeats are available. The most we can say is that for the first transmission only, viewing figures drop by about 20%, and listening figures by 15%, when the first transmission is early in the morning. However, this does not tell us how students would behave if the early morning transmission was the only one.

Up to now, we have been reporting how students have behaved in the past. Since the student population does not markedly change from year to year, this provides a good base for future prediction of student behaviour, while conditions remain the same, and in particular, while repeats are available. As soon as we move into new conditions, though (e.g. no repeat provision), we are moving from prediction into prophecy. There is enough evidence from other aspects of Open University student behaviour to show that our students are unusually adaptable, and under pressure of events, in particular their motivation to obtain a degree, will change their behaviour to a remarkable extent. Although we shall therefore attempt to prophesy how students might behave in new conditions, we are less confident in this section than when we are reporting on actual behaviour.

When we came to design the questionnaire, we were aware that two major surveys had already been made, which provide information from which predictions of student behaviour could be derived. We did not wish to duplicate these studies, so the present study was designed to complement rather than duplicate these previous studies.

At the end of 1972, the Survey Research Department carried out a survey of a sample of students continuing into 1973 (the Forward Planning Survey). In this survey, students were asked the following question:

3. It is likely that in future years we may not be able to repeat all programmes. On this basis would you say for (a) TV and (b) Radio, whether you would find the following days and times:

(i) possible and convenient

(ii) possible but not convenient

(iii) just possible with effort

(iv) absolutely impossible

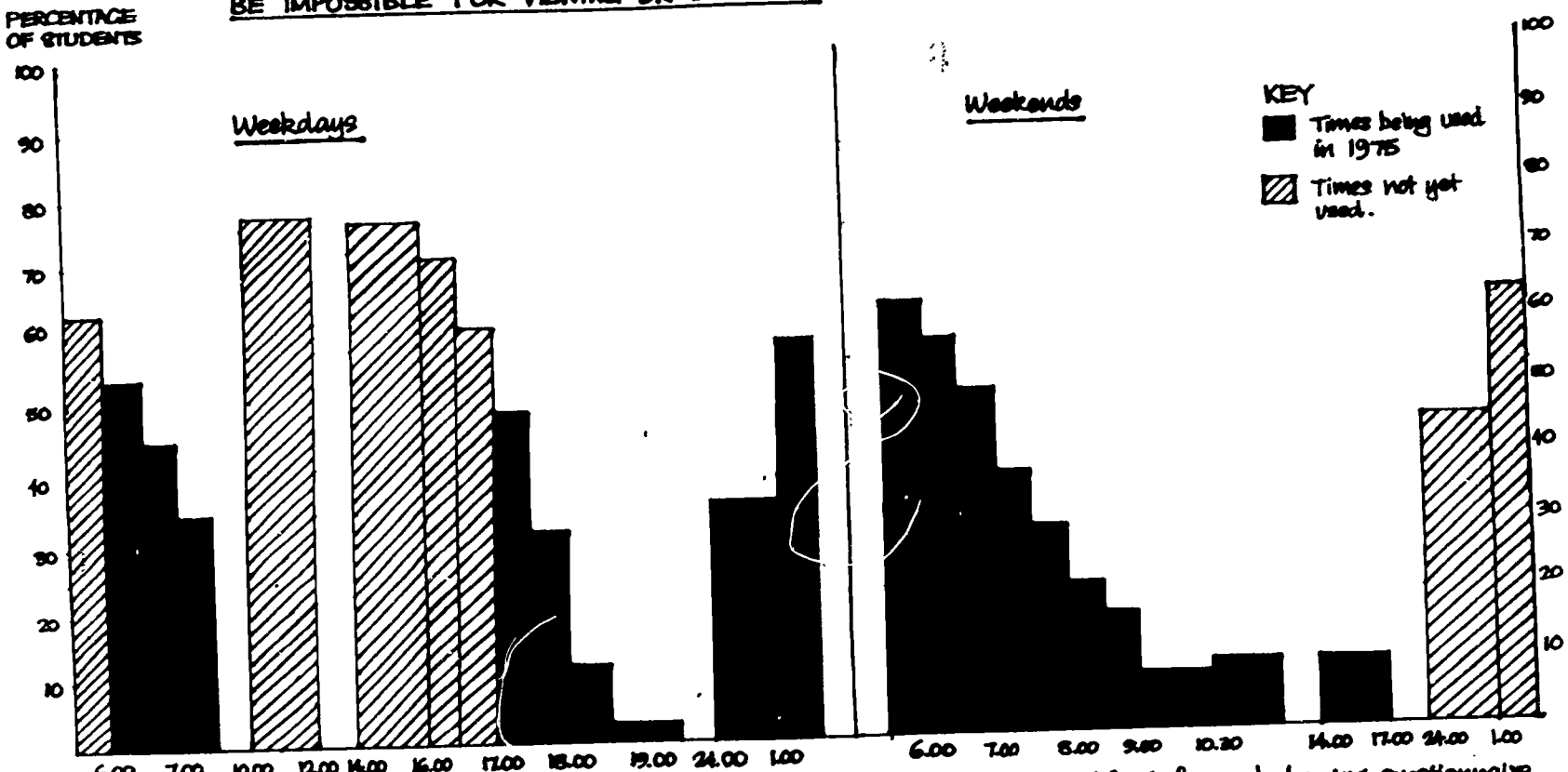
for regular watching and listening to broadcasts?

A list of times then followed. That survey, based on a sample of 1,362 students, also had an 82% response rate. Figure 12 (over) shows the proportion of students in 1972 claiming various times to be impossible for viewing and listening, and the dark areas indicate times actually being used by 1975. (There was little difference in the answers to radio.)

It can be seen that already in 1975, there are a few time slots being used which according to students in 1972, would be impossible for more than half of them. These times are 6.00 to 6.30 in the morning, after 1.00 a.m. at night (weekdays), and before 7.00 a.m. at weekends. Even in 1975, though, all courses using these slots have another transmission at a more convenient time, and some of these slots in any case have been made specially available just for the special group of students in Scotland and Wales who cannot receive OU radio programmes on a Saturday. Nevertheless, virtually all other slots available on BBC2 not used so far are impossible for more than half the students. Another significant point from the 1972 survey is that the only times then rated as being possible (but not necessarily convenient) by about 90% or more of students (perhaps a minimum target figure for a course

FIGURE 12

PERCENTAGE OF STUDENTS IN 1971 CLAIMING VARIOUS TIMES TO BE IMPOSSIBLE FOR VIEWING OR LISTENING



Source: Open University Survey Research Dept. forward planning questionnaire.

with a single transmission) were between 6.30 and 7.30 p.m. weekdays, and between 9.00 a.m. and 1.00 p.m. on Saturdays and Sundays. (Unfortunately, the 1972 questionnaire did not collect information on the possibility of Saturday and Sunday afternoon slots.) Full details of student preferences for transmission times from this survey are given in Appendix X.

The Survey Research Department also carried out a base-line survey of the first intake of students in 1971. In this survey, involving 19,600 finally-registered students, with a response rate of 77%, students were asked - before they had really started their Open University studies - the times at which they would normally leave home in the morning for work, and return home from work in the evening. This showed that it was not until 7.00 p.m. that 90% of OU students were regularly home, although 87% were home by 6.30 p.m. Similarly, by 7.00 a.m., more than 10% of the students had already left for work. (Full details are given in Appendix XI).

However, although a student may be home by 6.30 p.m., it may not be convenient or even possible to watch an OU programme immediately on arriving home, particularly if there is a family. In the 1974 survey, therefore, it was decided to ask a slightly different question:

> 9a. What is the earliest time a broadcast could begin for you to be able to see it or hear it conveniently after you get home?

A similar question was asked for the latest convenient time in the morning. An attempt was also made to allow for housewives, who although home, might have family responsibilities which prevented them from watching or listening at particular times.

However, when we try to use these figures to predict the latest and earliest times to catch students, there are problems. Both on the S.R.D. 1971 survey, and in the 1974 broadcast survey, students were asked to choose the latest time (in the morning) and the earliest (in the evening). Thus a student might answer 8.00 a.m. as the latest time in the morning. It is then assumed that he is at home at earlier times, so to obtain the percentage of students home by 8.00 o'clock, to those who gave 8.00 a.m. in their response are added as well those who indicated that they left home or could watch at times later than 8.00 a.m. One category students could give was "irregular hours/shift work." For evenings, the number giving this category rose from 9% in the 1971 S.R.D. survey to 18% in 1974 (no doubt due to their actual experience of trying to get home for certain programmes). However, although a teacher, for instance, may quite correctly answer "irregular hours" if sometimes he was home at 4.30 and other days at 6.00, he might always be home before 6.00, yet this student would not be included in those home by 6.00. Thus only 2.4% were always home after 7.30 p.m. but 18% worked shift work or came home at irregular hours in the evenings. It is this 18% which makes prediction of the numbers home at certain times in the evening extremely difficult. Thus, in the graph shown on page 60 (Figure 13, based on the 1974 broadcast survey), the figures given are minimum percentages of students able to watch at certain times. Even so, this figure of 18% does indicate the danger of assuming that more than 80% of students will be able or willing to watch at any time before 7.30 p.m., and it is perhaps important to note that, even when the other transmission is at a bad time, viewing figures in 1974 for any single transmission never exceeded, on a regular basis, more than two-thirds of the students on the course.

FIGURE 13.

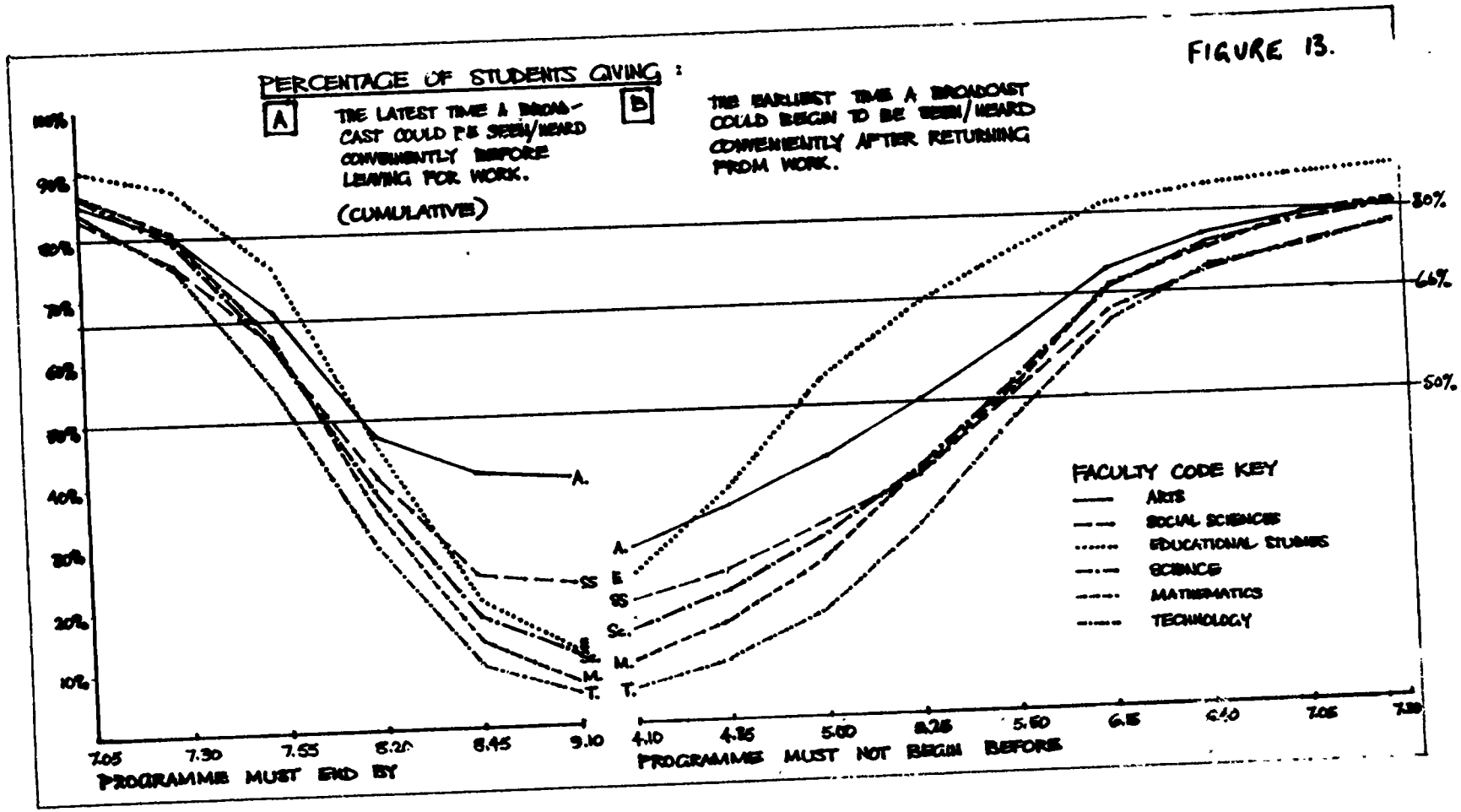

PERCENTAGE OF STUDENTS GIVING :
A
THE LATEST TIME A BROADCAST COULD BE SEEN/HEARD CONVENIENTLY BEFORE LEAVING FOR WORK.
(CUMULATIVE)
B
THE EARLIEST TIME A BROADCAST COULD BEGIN TO BE SEEN/HEARD CONVENIENTLY AFTER RETURNING FROM WORK.
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
80%
66%
50%
A.
SS
Sc.
M.
T.
FACULTY CODE KEY
ARTS
SOCIAL SCIENCES
EDUCATIONAL STUDIES
SCIENCE
MATHEMATICS
TECHNOLOGY
7.05
7.30
7.55
8.20
8.45
9.10
PROGRAMME MUST END BY
4.10
4.35
5.00
5.25
5.50
6.15
6.40
7.05
7.30
PROGRAMME MUST NOT BEGIN BEFORE

TABLE 22: Times by which programmes must begin or end to catch different proportions of students

		MORNING			EVENING			
		Transmission must end by:			Transmission must not begin before:			
To catch following % at home:		80%	75%	67%	80%	75%	67%	% home at 5.30
Arts	SRD 1971	7.50	8.00	8.10	6.30	6.15	6.00	55
	Broadcast 1974	7.30	7.45	8.00	7.30	6.40	6.10	52
Social Sciences	SRD 1971	7.50	8.00	8.10	6.50	6.30	6.10	45
	Broadcast 1974	7.10	7.30	7.50	after 7.30	7.20	6.25	41
Educational Studies	SRD 1971	8.00	8.10	8.15	6.00	5.40	5.30	67
	Broadcast 1974	7.45	7.55	8.05	6.15	6.00	5.25	67
Maths	SRD 1971	7.40	7.50	8.00	6.30	6.15	6.00	43
	Broadcast 1974	7.30	7.40	7.50	7.30	6.55	6.15	41
Science	SRD 1971	7.30	7.45	8.00	6.30	6.15	6.00	43
	Broadcast 1974	7.30	7.40	7.50	after 7.30	6.55	6.15	42
Technology	SRD 1971	7.30	7.40	7.50	6.50	6.30	6.15	30
	Broadcast 1974	7.15	7.30	7.45	after 7.30	7.30	6.35	33

From this diagram, and from the S.R.D. 1971 survey, we can estimate the proportion of students home and able to watch at certain times, for courses in different faculties. (Table 22, p.61).

The morning figures from the two surveys are remarkably consistent. There is no more than a ten-minute difference between the two sets of figures for Science, Maths, and Technology students, and 15 minutes for Educational Studies students. The differences are larger for Arts and Social Science students, possibly because although these students generally leave home a little later than Maths., Science and Technology students, they have a greater proportion of women, who may require time for clearing up, etc. before leaving. Therefore they need some time between watching or listening and leaving for work.

There are considerable differences between the two sets of figures for evenings, though. The 1974 broadcast survey figures are obviously influenced by the 18% of students who arrived home at irregular hours or were on shift-work. Furthermore, although 80% of students may be home at 6.30 a.m., will they actually watch at such an hour? The S.R.C. 1972 Forward Planning Survey asked students when they would watch or listen. The faculty figures were not available at the time of writing, and there was no category for students working shifts or irregular hours. Table 23 below abstracts the main figures from this question on the S.R.D. 1972 Forward Planning Survey (for full details, see Appendix X).

TABLE 23. Students' rating of the suitability of different times for regular viewing and listening to OU programmes (1972)

	% of students			
Weekdays/mornings	Possible and convenient	Possible but not convenient	Just possible	Impossible
Before 6.30 a.m.	5	24	13	54
6.30 - 7.00 a.m.	11	24	15	45
7.00 - 7.30 a.m.	20	23	15	38
Weekdays/evenings				
Before 5.30 p.m.	20	15	12	48
5.30 - 6.00 p.m.	30	20	14	32
6.00 - 6.30 p.m.	54	18	13	11
6.30 - 7.30 p.m.	80	8	5	3

Thus 80% of responding students rated the 6.30 to 7.30 p.m. slot possible and convenient (unfortunately, this category is rather broad, and so we do not know whether the figures apply to the whole of this or just to the last half-hour), and only 11% rated 6.00 p.m. as impossible, although according to both the 1971 and 1974 surveys only two-thirds of students are normally at home by then.

Students were also asked in the 1974 broadcast survey to indicate the times they would usually be at home on Saturdays and Sundays, to see or listen to OU broadcasts. These results, and the results from the 1972 Forward Planning Survey, are given in Table 24.

TABLE 24. Proportion of students prepared to watch/listen at different times at weekends

Saturday	1974 Broadcast Survey	% of students: Possible and convenient	Possible and convenient	Just possible	Impossible
Before 6.00 a.m.	9	3	22	9	60
6.00 - 7.00 a.m.	17	6-11	24	12	45-54
7.00 - 9.00 a.m.	43	21-60	20-25	9-15	21-34
9.00 - 1.00 p.m.	56	61	19	16	11
1.00 - 5.00 p.m.	43	45	16	5	10
After 5.00 p.m.	41	No information			
At no time	3				
Shift work/irregular	5				
Sunday					
Before 6.00 a.m.	10	3	21	8	63
6.00 - 7.00 a.m.	17	5-10	23	11	50-57
7.00 - 9.00 a.m.	40	19-53	22	13	17-38
9.00 - 1.00 p.m.	64	72	12	4	8
1.00 - 5.00 p.m.	52	No information			
After 5.00 p.m.	45				
At no time	2				
Shift work/irregular	5				

It looks therefore as if students in the 1974 broadcast survey were answering this question on the basis of the convenience of such times, but not on the basis of whether they would watch if these were the only times of transmission for a programme (as on the 1972 Forward Planning Survey). There was very little difference between students in different faculties regarding weekends, but Saturday afternoons were definitely less popular with men than with women (40% compared with 50%).

To see whether there were alternative times not currently used which might nevertheless be suitable for repeats, students were asked to indicate times at which they could watch or listen, other than at home. The only time when more than 10% of the students could watch was during the lunch period (15%). The main groups (but never exceeding 20%) were teachers and members of the armed forces. It was surprising that less than 10% of teachers were able to watch at times between 4.10 and 4.35 p.m., considering the number of schools with television sets. Similarly, the lunch period was clearly the most popular for radio, more than 25% of students claiming they would be able to listen elsewhere than at home at this time, no doubt because of the portability of radios. If the BBC were willing to make transmission time available to the University during lunch periods, it might be worth the University using this for radio repeat purposes, especially since it appears equally as convenient to all occupational groups, and students who have lunch at home (e.g. housewives) are not counted in the figure of 25%. Again, the numbers able to listen to radio away from home at times other than lunch-times never exceeded 10% for any occupational group.

One final possibility in what is now becoming a desperate search for alternative transmission times is late night (after midnight), when general broadcasts have closed down. It has already been mentioned that in parts of Scotland and Wales, Open University programmes were not broadcast in 1974 on Saturday afternoons, but late at night (between 12.00 midnight and 1.00 a.m.). It was thought that this might provide a clue as to the numbers listening late at night. Unfortunately, it did not, for a number of reasons. First of all, all broadcasts were repeated in 1974, so there was less urgency to listen late at night. Secondly, the numbers who live in areas not reached by the Saturday afternoon transmission must be very small -

probably less than 500. Probably because of these reasons, and the fact that many students were on courses without a transmission on a Saturday afternoon (only 19 courses were affected in 1974), far more students (4583 - or 10%) said they lived in areas where there were no OU transmissions on a Saturday afternoon than could have been possible. (Of that 4583, only 905 lived in Scotland or Wales, and not all those would have been affected.) In addition, students in other areas would have been able to pick up the late night transmissions. Despite this, on no course did more than 3% of the students listen at these times. This situation though is too bizarre for these actual listening figures to be used for prediction of how students would react in a very different situation. The only figures that can be used are those from the 1972 Forward Planning Survey. As many as 20% claimed that between midnight and 1.00 a.m. was possible and convenient, and only 35% claimed it was impossible. Not surprisingly, 58% of the students thought transmissions after 1.00 a.m. would be impossible for them. It does though still seem worth experimenting with radio repeats between midnight and 1.00 a.m., on a national basis, in the light of the Forward Planning Survey figures.

It can be seen then that the University has almost approached (at least by 1976) the limits of usable time likely to be made available by the BBC, and that a good proportion of the time available is suitable only for repeats, and not for single transmissions. However, from 1976 it is going to be necessary to use single transmissions for radio for 25% of the courses, and the situation will get rapidly worse year by year. It is important then to have some idea of what are likely to be the best times for single transmissions. We regret that the figures, being drawn from hypothetical questions and different sources over a number of years, are not clear cut, but taking all the figures into consideration, and using our own judgement, the best estimates would appear to be as follows:

TABLE 25 Times at which programmes are likely to reach students

		Maximum % of students likely to watch/listen to a single transmission		
		About 80% (PRIME)	Over 66% (Good)	Over 50% (Repeat)
Weekdays:	morning	7.00 - 7.30 am	6.30- 7.50 am	6.30 - 8.00 am
	evening	After 7.00 pm	After 6.00 pm	After 5.45 pm
Weekends	(Saturday and Sunday)	9.00 am - 5.00 pm	7.00 am onwards	6.30 am onwards

By making a number of assumptions, it should be possible on this basis to calculate the number of courses which can be offered repeats when the University is at the steady state of 87 full undergraduate credits. By varying each of the assumptions, the number of courses with repeats will vary, so we have listed the assumptions below.

Assumption 1. Since we know that it is unlikely that any single transmission can reach more than 80% of the students on a course, whereas with a repeat facility a programme might reach 95% +, as many courses as possible should be given a repeat facility.

Assumption 2. The proportion of programmes per course will remain roughly as at present, i.e. an average of 21 programmes per 32 unit course (television and radio). With 87 full credits per year, this would require a minimum of $\left(87 \times \frac{21}{32}\right) = 57$ programmes per week to be transmitted.

Assumption 3. Courses without repeats should have their single transmissions at "prime" times, i.e. when 80% or more of the students can watch or listen.

Assumption 4. If at all possible, no transmission, even for a repeat, should go out at times when less than 50% of the students can watch of listen, because if there were two transmissions at such times, it would still be impossible to reach 100% of the students, even with the two transmissions.

Assumption 5. There will be a maximum of 87 slots available per week for television, and 66 slots per week for radio, at times which BOTH:

(a) are acceptable to the BBC

(b) meet assumption 4 above.

These two figures are reached on the following basis of times available from the BBC (accepting that there are no guarantees of times beyond 1976): (see Table 26)

TABLE 26. Maximum usable time likely to be available

	TIMES WHEN MORE THAN 50% CAN WATCH/LISTEN	NO. OF SLOTS PER DAY	NO. OF DAYS	NO. OF SLOTS LIKELY TO BE AVAILABLE	NO. OF PRIME SLOTS
TV					
BBC1 Weekdays/morning	6.30 - 8.00am	3	5	15	5
Weekends/morning	6.30 - 8.00am	3	2	6	-
BBC2 Weekdays/morning	6.30 - 8.00am	3	5	15	5
evening	5.45 - 7.05pm	3	5	15	-
Weekends/morning	6.30 - 2.00pm	18	2	36	24
Radio.					
Weekdays/morning	6.30 - 8.00am	4	5	20	5
evening	7.00 - 7.30pm	1	5	5	5
Weekends/morning	6.30 - 12 noon	16	2	32	18
afternoon	2.00 - 5.00pm	9	1	9	9

Assumption 6. After single transmissions have received priority on "prime" times, courses with repeats should use up any remaining prime time for one transmission, then "good" time for any remaining courses for one transmission, with the second transmission for any course coming out of the "repeat" times.

Assumption 7. At least two additional slots per week will be required for post-experience and Open Forum programmes, on each medium. (Any additional expansion in the continuing education area is not included in these calculations.)

On these assumptions, we can calculate the maximum number of courses likely to get repeats in the steady state for television as follows:

1. No. of slots in week = 87 (from Table 25) - 2 (for PE/Open Forum) = 85.
2. No. of programmes per week = 57 (from assumption 2).
3. The minimum number of single transmissions (hence maximum number of repeats) needed to cover all 57 programmes = 2B - A, where A = No. of programmes in a week (57) and B = No. of slots in a week (85), thus:

   $$(2 \times 57) - 85 = 29.$$

   Thus in any week, 29 courses would have single transmissions, and 28 would have repeats.

So we can say that at the very maximum, no more than half the courses will be able to have repeats of television when the University is at its steady state of 87 F.C.E's. Fortunately, each week there would be more than 29 "prime" slots, so courses without repeats could anticipate reaching at a maximum about 80% of those on the course.

With regard to radio, the situation is much more serious.

1. No. of slots in a week: 66 - 2 = 64
2. No. of programmes per week: 57
3. Minimum no. of programmes with single transmissions:
   2B - A = (2 x 57) - 64 = 50
4. Maximum no. of programmes with repeats: 7

Thus for all 87 full-credit equivalents, only $\left[\frac{7}{57} \times 87\right] = 11$ would receive repeats at a maximum. In addition, unfortunately, there are only 37 prime slots, which means that if 7 programmes a week received repeats, the equivalent of 19 full-credit courses would be unable to reach more than two-thirds of the students on their courses with the radio broadcasts.

Of course, the number of courses getting repeats can be varied by varying the assumptions. For instance, if we were prepared to use times for repeats which are not likely to reach 50% of the audience, we could increase the number of slots available and hence the number of courses with repeats. For instance, if we were prepared to transmit a repeat at a time when it was likely to reach only one-third of the students, we could increase the number of programme slots per week. It should be noted though that the 87 television slots per week reaching more than 50% of the students is 36½ hours of television, well exceeding the original agreement of the BBC. However, 66 slots would use only 22 hours of radio time, so it will probably be worthwhile using radio slots before 6.30 a.m., during lunch hours, and after midnight, if these are available. The problem though with using slots which reach less than 50% of a course population is that there is no guarantee that the repeat will reach students who were unable to get the first transmission. For instance, two slots each of which reach only 40% could, with mutually exclusive target audiences, reach only 80% of the whole target audience. In practice, there would be considerable overlap between the two audiences, the number of "new" listeners picked up on the repeat being probably less than half of the 40%. Dropping to times where less than 50% could listen would only be justified if these times were used in conjunction with prime times. Since at least 13 programmes a week would not get prime times even for a single transmission on radio, increasing the number of courses with repeats will not help the situation greatly, with regard to radio.

In any case, to believe that the situation can be avoided by changing the assumptions to any extent is to live in a fool's paradise. We have made in effect estimates of the maximum number of programmes likely to be repeated. It is unlikely that scheduling can be arranged to reach the optimum combination of times to ensure that the maximum number of courses get repeats in the time available. The two slots per week for post-experience and other programmes not directly linked to courses is also probably a large underestimate. It would be unwise for a system as complex as the Open University to plan to operate at the extreme of its efficiency. It has to be faced therefore that without the fourth channel, over half the courses will not get repeats on television, and virtually no courses beyond foundation level will get repeats on radio. Courses in such a situation can be virtually certain that substantial numbers of their students (20% or more in the case of television, and over 30% in the case of radio) will be unable to make use of the broadcasts.

Therefore, with regard to transmission times beyond 1976:

1. With regard to television, the BBC might be able to make available up to 36½ hours a week of transmissions at times that are suitable to Open University students.
2. Even with this arrangement, when the University reaches its undergraduate course target, more than half the courses will not have repeat transmissions of television programmes, unless further extensive transmission facilities, such as a fourth channel, are made available to the Open University.
3. Courses without repeat transmissions of television programmes should nevertheless be able to reach up to 80% of their students with a single transmission.
4. By 1976 virtually all times likely to be suitable for 50% or more of students on a course will be in use.
5. With regard to radio, it appears that only 22 hours a week of times likely to be suitable for more than 50% of students on a course can be made available by the BBC, under present circumstances.
6. When the University reaches its undergraduate course target, virtually no course beyond foundation level will get repeats of radio programmes, and on over 20% of courses, it is unlikely that even two-thirds of the students will be able to hear the transmissions.
7. It will be almost impossible within the current transmission situation for the University to use any substantial time for programmes in the continuing education area without seriously damaging the undergraduate provision.

SUMMARY OF RESULTS

The main conclusions drawn from these results are not included in this section. The page numbers in brackets refer to the pages of the main report where the results are covered in more detail.

The Survey

1. The survey, based on 10,537 returned questionnaires (a response rate of 82%) provides an accurate, reliable and comprehensive analysis of broadcasting across all courses, and for the student body as a whole, provided that small differences (5% or under) are ignored (pp 7-12).

Access

2. Apart from for about 250 students in the more remote areas of Scotland and Northern Ireland, BBC2 and VHF radio coverage within the British Isles is now comprehensive (pp 13-17).

3. 97% of students have easy and regular access to BBC2 television receivers, and 93% to VHF radio sets (pp 13-17).

4. 39% of students have colour television sets (p. 17).

5. 71% of students have a tape recorder of one kind or another. Nearly half the students had access to cassette recorders, including 7% issued with cassette recorders by the Open University. Students with recorders listen to 15% more programmes than students who do not have tape recorders (p. 17).

6. 88% of students had access to a record player (pp. 17-18).

Viewing and Listening Figures

7. Over the whole year, a student will watch on average about two-thirds of the television programmes and hear about half the radio programmes (pp. 18-21).

8. On most courses, more than 80% of students will watch individual television programmes, and 60% hear individual radio programmes, in the early part of the year (up to Summer School period) (pp. 18-21).

9. Most students try to watch most television programmes, but students are much more evenly divided on the value of radio, just as

many hearing very few or none as hear most or all (p. 18).

10. There were large variations in viewing and listening figures between courses in different faculties. In particular viewing figures on Science courses and listening figures on Arts courses were generally higher, and Maths courses generally lower, than on courses in other faculties (pp. 21-24).

11. There were some considerable variations within faculties between different courses, particularly regarding listening figures (pp.21-24).

12. Courses which had comparatively low viewing figures also tended to have comparatively low listening figures (p.21-24).

13. Just over 5,000 students on average are likely to watch each Open Forum television programme on average, and just over 3,000 will listen to each Open Forum radio programme (pp.27-29).

14. 47% of students saw no Open Forum programmes, and 60% heard none (pp.27-28).

15. The proportion of first-year students watching Open Forum programmes has remained the same over the last few years, but students in their second year or beyond watch far less (p.29).

Student Rating of Components

16. The correspondence texts were clearly the most valued components of the courses, three-quarters of the students finding them very helpful in their learning, followed by Summer Schools and set books, rated very helpful by over half the students (pp.31-33).

17. Television was found very helpful in Science and Technology, surpassed by only correspondence texts and Summer Schools and was on a par with class tutorials and correspondence tutoring in other faculties (p.31).

18. Home Experiment Kits and class tutorials were found very helpful by about 25% of the students, and correspondence tutoring by about 20% (pp.34-35).

19. Radio was not generally found very helpful by many students on most courses except Arts. (pp.34-36).

20. Student ratings of helpfulness are probably a slightly more accurate indicator of the value of broadcasts than viewing or listening figures. On this basis, Maths television programmes are slightly more valuable to students who watch than viewing figures suggest, and Educational Studies television programmes are clearly rated the least valuable by their students. (p.36).

Factors Influencing Viewing and Listening Figures

21. The main factors influencing viewing and listening figures were related to the courses themselves. Low viewing and listening figures are probably influenced both by problems students are having with the course as a whole, and by the actual policy for the use of broadcasting adopted by a course team(pp.39-47).

22. The other two main factors were the age of the student (p.39) and the drop-out rate (pp. 41-45). The older the students the more programmes they were likely to watch and listen to. On courses with high drop-out rates, the drop-outs dragged down the overall viewing and listening figures, but on such courses, even students who did not drop out watched and heard fewer programmes than such students on other courses.

23. Women were slightly more inclined to watch and listen than men (pp. 39-40) and students who worked in transport and communication industries found it extremely difficult to watch or listen regularly (p. 40).

24. Students who were unable to get to Study Centres watched and listened to about 5%-10% fewer programmes than other students. Even so, most students (over 75%) can get to Study Centres at least once a month, and nearly all students (98%) who cannot get to Study Centres can get BBC2 and VHF transmissions. A mixed system of direct single transmission and replay facilities at Study Centres would probably provide at least as convenient a broadcast service to students as the present system of repeat transmissions. Only 277 students (0.2%) would

not be able to benefit at all from such a mixed system (pp.40-41).

25. Apart from in Science and Technology, the course team's recommendation to students as to the essentiality of the broadcasts was not always a reliable guide, particularly with regard to Educational Studies courses (pp46-47). Over a whole course student viewing and listening figures, or even better, their overall rating of the helpfulness of the programmes for their learning, are good measures of the success or otherwise of a course in its overall use of broadcasting.

Reasons for missing, watching or listening to broadcasts

26. The main reason given for missing both radio and television programmes was "forgot", but this is probably a superficial response to a much more complex situation. Very few students (less than 5%) rejected broadcasting as a useful teaching component, in principle (p.47).

27. The main reasons given for watching and listening were that the programmes were integral part of the course, providing additional understanding within the context of the course (pp46-47).

Transmission Times: 1974

28. No course up to 1975 appears to have been discriminated against because of the transmission times allocated to it (pp 50-54).

29. The availability of a repeat facility appears to increase overall viewing and listening figures by between 10% and 20% throughout the year (p 56).

30. There is no single transmission time likely to be available when more than 80% of students will be able to watch or listen, and in 1974 no single transmission was seen or heard by more than two-thirds of the students on the course (p 55)

31. Early morning transmission slots were used by substantial numbers of students, particularly when the early morning transmission was the first (i.e., in this situation, between a third and just over a half of students would be using the early morning slots) (p 53)

32. Students were more inclined to watch twice when the early morning transmission was the first, although whether the early morning transmission was the first or the repeat made no difference to the overall number of students watching or hearing a programme(p.51)

33. There were no significant differences in overall viewing or listening figures between courses with one apparently "poor" transmission time (e.g. before 7.00 a.m. or 6.00 p.m.) and those with two apparently "good" transmission times, due to the provision of a repeat facility(p 53)

34. There were no significant differences in overall viewing or listening figures between courses with early morning transmissions and those without. While repeat facilities were available transmission times made no difference to overall viewing and listening figures(p 55)

35. It is not possible to predict from 1974 viewing and listening figures, when all courses had repeats, how students will behave when there are only single transmissions(p.55).

Transmission times: 1976 and beyond

36. By 1976, virtually all times likely to be suitable for 50% or more of students on a course will be in use(pp. 57-58)

37. After 1976, the BBC might be able to provide up to 36½ hours a week of television transmission time suitable for Open University students(p.65).

38. Even with 36½ hours available, more than half the courses will not have repeats of television programmes when the University reaches its undergraduate course target(pp 64-66)

39. Courses with repeat transmissions of television programmes should nevertheless be able to reach up to 80% of their students with a single transmission(pp. 64-66).

40. With regard to radio, it appears that only 22 hours a week at times likely to be suitable for more than 50% of students on a course can be made available by the BBC, unless a fifth radio network can be created(pp 64-66)

41. Consequently, virtually no course beyond foundation level will get repeats of radio programmes, and on over one fifth of the courses, it is unlikely that radio programmes will be able to reach even two-thirds of their students with a single transmission(pp 64-66)

42. Even with the predicted low level of repeat facilities for undergraduate courses, it will be almost impossible for the University to use any substantial time for programmes on the continuing or post-experience education area without seriously damaging even further the undergraduate provision(pp 64-66)

CONCLUSIONS

Introduction

The conclusions that will be drawn from this report will depend to a large extent on each individual's frame of reference. There is also often a big step from a research finding to deciding on appropriate action. For instance, transport workers are usually unable to watch programmes at home, and also have lower than average ownership of colour television sets. It does not follow though that the University should provide free colour sets in transport cafes! Consequently, this section is much more of a personal opinion than the rest of the report.

The main conclusion that I would draw from this study is that television has been on balance a very successful component of the Open University teaching system up to now, but from 1976 onwards there will be major problems for students and the University in using broadcasting successfully. Indeed, it may well turn out to be that conditions for the successful use of broadcasting within the University are at their maximum at this moment in time, but from 1976 onwards it will become more and more difficult to continue to use broadcasting successfully for Open University teaching. If broadcasting is to remain a major and integral part of Open University courses in the future, I believe that some radical changes in current University policy will be needed, and consequently in this section some of the implications of the survey will be spelt out in a little more detail.

A success and a disappointment

Television has been heavily used by students - and found helpful to their learning - for a number of reasons. It is no accident that television has been found of most help in Science and one or two Technology courses. In these courses the course teams have adopted

an uncompromising policy towards television, assuming that all students will be able to get it, and making it an integral part of the course, even to the extent of regularly basing assignments or parts of assignments on the broadcast material. As it turns out, virtually all students can now get television and radio, if the programmes are transmitted at suitable times, as they were in 1974. Where students have not used television so heavily, as in Mathematics, this has been in part related to general difficulties of a course, although there is no doubt that where television has been seen by the students to be relevant to the main themes of a course, this attracts higher viewing figures, in Arts and Social Science as well as Science and Technology. Therefore in every faculty area there have been courses where programmes have been found very helpful by significant numbers of students.

With regard to radio, the situation in 1974 was far less satisfactory. Frankly, radio is not used very much by students outside the Arts faculty, although on most courses there are devotees who rarely miss a radio programme. It does appear that substantial numbers of students have dismissed radio as a useful teaching medium. There is therefore a decreasing use by students of a medium which still has immense potential in the Open University situation, since radio can reach virtually all students, and is still the University's cheapest teaching component.

It is perhaps its cheapness and simplicity which has caused its neglect. Very few course teams give much consideration to radio. Decisions about programmes are often left very late, and programmes have insufficient preparation. The problem lies as much with the BBC as with the academics. The BBC producers are responsible for both television and radio programmes on a course, but

television programmes require much more preparation, and much more co-ordination between different production departments (graphics, film, etc.). Producers have a heavy workload, and television without doubt is seen by many producers as being more interesting and of more importance than radio in terms of career and status within the BBC. All these factors, therefore, tend to reduce the time and consideration given to radio. This has resulted in a lack of enterprise in its use, many programmes being straight lectures or ill-organised discussions, the easiest kind of programme to organise, although by no means the easiest kind of programme to do well. Fortunately, with such a large output, there are examples of uses of radio which do appear to be more successful, such as radio-vision - where students are "talked through" detailed diagrams, notes, formulae, etc. - and the use of specially written dramas to provide a wider context for the application of academic principles. However, it is disappointing that even on courses where a new and stronger role for radio has been planned, such as on M231, many students, probably from experience on other courses, do not switch on in the first place.

Consequently, it might be worth considering whether organisational changes in the BBC's Open University department might not be made to strengthen the role of radio - for instance, the appointment at Editor level of someone responsible specifically for radio, who would encourage producers to put more pressure on course teams to consider at the beginning of a course a coherent and explicit policy for radio, who would assure that producers devoted sufficient time to the production of radio programmes, and who would also ensure that for promotion purposes radio production is taken into consideration as well. On the academic side, more course teams might consider the setting up of a broadcast policy sub-group, consisting of academics and producers, which would set an overall policy for television and radio on the course, and propose and monitor programme ideas and

integration with the rest of the course. This should help radio to play a more integral role in the course, essential if students are to be encouraged to use radio. Perhaps a more difficult area, and one which requires more research, would be experimentation with more varied types of programmes, but ones which particularly place demands on student activity. This may take the form of radio-vision, or short questions or activities during or following a programme, or even low or zero marked CMA questions, provided of course that the broadcast material is relevant. More student participation in programmes might also be encouraged, such as the broadcasting of edited tutorials from a study centre (with perhaps the course author's comments interspersed), or live broadcast phone-in sessions with the course unit author or authors . Ultimately, of course, the problem has to be resolved by the academics and BBC working in conjunction, but it is clear that current arrangements are not producing a satisfactory situation regarding radio.

The role of broadcasting in course design

Although the implications are clearer for radio, the survey findings do emphasise the importance of making both television and radio broadcasts central to the structure of a course, not so much by the broadcasts carrying the main burden of the teaching - this will always, in the Open University situation, fall on print media - but by the broadcasts being given a distinctive role by the course team which is recognised by students as well as the course designers as being relevant and necessary to their mastery of the subject. While it is true that a reasonably high proportion of students at least in Arts and to a lesser extent Social Science courses have been prepared to watch television programmes which merely enrich or enliven a course, there has been less willingness by students to do this in Mathematics and Educational Studies courses,

and even less willingness to do this with regard to radio programmes. It is unlikely in any case that students will go on watching programmes which they perceive as being peripheral, when the programmes are transmitted only once, at more inconvenient times. More importantly, as the University increases the number of courses on offer, and hence the number of programmes produced and transmitted, the policy of making programmes which students could manage without will come increasingly into question. It would be difficult for the University to justify the annual expenditure of £3½ million on broadcasting, if even only a small proportion of this amount went on interesting but unnecessary programmes. It would be irresponsible to put out "enrichment" programmes at times which are inconvenient for students to watch or listen, because very few students are likely to make the effort to watch or listen at such times if they find they can manage without the programmes. It would be indefensible to put such programmes on at convenient times, if this forces into inconvienient times programmes which students find necessary for their studies.

The University's dilemma

However, if courses are designed so that broadcasting is an essential feature - and this is increasingly happening even in Arts and Social Science courses - then the University will have to face some very difficult problems from 1976 onwards. The main difficulty will stem from the large number of programmes to be transmitted, and the limited time available at hours suitable for Open University students. This means that to fit in all the programmes that are currently being planned, half the courses will have to manage without repeats of the television programmes, and virtually all courses without the repeats of radio programmes, by the time the University's undergraduate plan is reached (in 1984). However, the more essential

the role of broadcasting, the more essential it becomes to provide a repeat viewing or listening facility. This is not just because a second viewing or listening is often essential for full comprehension, but because it is virtually certain that a single transmission can reach at a maximum only 80% of the target audience, on account of work commitments, travel, and other obstacles. Now if a course team cannot be sure of reaching most of its students, it dare not allocate too important a role to the broadcasts. But if the broadcasts do not have an important role in the courses, there can be no justifications for spending £3½ million, or probably much more on broadcasting, by 1984. It is important therefore that the University accepts the policy that:

(a) future broadcast resources will only be allocated to courses where broadcasting will be relevant and necessary to students' mastery of the subject;

(b) broadcasts must be made available in one form or another to all students.

Inadequate or partial solutions

How can the University do this? The University has already submitted to the Annan Committee on the future of broadcasting the need for over 50 hours a week television time, and 40 hours a week radio time. The only way this could be provided at times suitable for Open University students would be through the provision of a fourth television and fifth radio channel. There is no doubt that should the government agree to this recommendation, it would enormously ease the Universits's transmission problems. However, even if the Annan report recommends this, and the government speedily agrees to implement the decision - both of which are very uncertain decisions at this moment in time - it is unlikely that such networks would be available much before 1984. However, the transmission

problem will be reaching critical levels within the University by 1978 at the latest. The University cannot afford to wait for the fourth channel. It may never come, and even if it does, it will be too late to avoid the coming crisis over the next six years.

The question therefore must seriously be asked: are we making too many programmes? At the moment, most Science courses receive one television programme per unit, and most Arts, Social Science and Educational Studies courses receive one per two units, although some Arts, Social Science, Maths. and Technology courses have approximately two programmes for every three units. For radio, Arts, Social Sciences and Educational Studies generally receive one programme per unit, and Science, Mathematics and Technology one per two units. Taken overall, for a 32 unit course, there is an average of about 20 television and 20 radio programmes, although for scheduling reasons (courses have to alternate in different weeks), courses are allocated 8, 11, 16, 22 or 32 programmes. With a course spread over roughly nine months, the minimum allocation given has been eight programmes (one per month), on the basis that less frequent transmissions are likely to be overlooked or forgotten by students, although at the course team's request, a fourth level philosophy course (The Philosophy of Wiltgenstein) presented for the first time in 1976 will have no television programmes. It may be necessary to reconsider the minimum allocation of eight programmes, but this would make only a marginal difference to the transmission problem, since more than half the number of courses planned up to 1984 have already been given allocations.

Also, because it has taken longer to develop Science and Technology courses than Arts and Social Science courses, the bulk of new courses to be developed between now and 1984 is likely to be in Science and Technology, but this is precisely the most successful

area in using television, and any policy to reduce Science allocations would be difficult to justify, given the results of this survey, although some Science, Maths. and Technology course teams may be willing to manage without radio. To achieve any significant reduction, then, would require a nil allocation of television to many if not most of the new courses in Arts, Educational Studies and Social Science and to some of their old courses coming up for remake.

However, certainly in Social Sciences, and also to some extent in Arts, there are signs that course teams are increasingly learning how to make broadcasting more relevant and integral to their courses. Even so, there is a difference between such courses which would genuinely be strengthened by such a use of broadcasting, and courses in the Science area, where the subject could not be meaningfully taught at a University level without the use of television. In other words, it would probably still be possible to put on most courses without television in Arts, Social Sciences, Educational Studies and Mathematics.

Even so, the survey does clearly suggest that most students do try to watch most television programmes on nearly all courses, and the pressures on Open University students are such that they would not do this unless they believed that there was some advantage to them in doing so. Indeed, combining the results from the survey and our studies of individual programmes, and although the conclusions at this stage are still tentative, the balance of the evidence is that students do learn from the broadcasts - even though students themselves may not always be aware of this learning. It seems that broadcasts increase the students' opportunity to develop learning skills, such as analysis, application of principles to new situations, interpretation and synthesis of new information,

and the placing of facts and principles in a wider context, and these skills are necessary in a broad spectrum of courses. In a University where the traditional face-to-face contacts are very much reduced, television and radio therefore become extremely important assets for improving the quality of the teaching.

Certainly, the Broadcast Sub-Committee ought to be much more ruthless than it has been in the past in refusing to allocate any television or radio programmes to courses where the course team has given little systematic thought about the function of the programmes or where it is obvious that the course would not suffer from a loss of broadcasting. However, an indiscriminate and large-scale reduction of allocations to future courses of sufficient severity to solve the transmission problem not only is likely to be unacceptable to academic opinion within the University, but also would be a policy of despair, since if our findings are correct, this would lead to a drop in the quality of the teaching, and eventually to a reduction in the quality of the graduates. Therefore, massive reductions in allocations is not a satisfactory solution to the problem.

One avenue that has been previously explored to some extent, then abandoned, has been the use of low-cost alternatives to broadcasting. These include film-loops, super 8 mm. film cassettes, video-discs or cassettes, telephone teaching, electronic blackboards, CEEFAX, ORACLE, audio discs or cassettes, etc. The main disadvantage though of all these low-cost alternatives ironically is that compared to the direct transmission of television and radio programmes, these low-cost technologies are all too expensive! Another serious shortcoming is the considerable logistic problems involved in the organisation of the distribution, maintenance, collection, replacement and storage of equipment, cassettes, tapes, etc., the problems of

accountancy, and the need for such materials to be available when students need them.

Let us examine alternative technologies a little more closely. Other distribution systems would require the University or the student to purchase additional equipment. For combined audio and visual signals, this is not likely to work out less than £60 for even the simplest piece of equipment anywhere near the standard of a television transmission. It is not so much the equipment though as the cost of the materials on which audio-visual signals are to be carried, such as film or tape. Students receive on average about 10-12 hours of television programmes per year. A 30 minute blank video cassette or super 8mm. film now costs about £12-15. All other systems except direct transmission involve packaging and postage. Postal costs are increasing much more rapidly than transmission costs, and the service is decreasing in speed and frequency of delivery. The cost of posting - just outwards - a video cassette is 25 pence. Also, direct transmission is much simpler to administer. Distributing film or cassettes, especially if they are "recycled" (i.e. returned and reissued) provides the University with a very big administrative problem. It is labour-intensive and consequently expensive, and would require additional and substantial building facilities and ancillary services. Finally, the technology of other systems of distribution is often not fully developed even in prototype (such as video-discs or the data-pad), or reliable on a mass scale (e.g. video-cassettes). Even with the most optimistic low-cost estimates, a course with 100 students, using say a cheap film projection system (super 8mm.) and audio-cassette, would require £10,000 per year for alternative distribution cost alone, as follows:

Projection and sound equipment:	£60
10 hours of film and tape;	£140
	£200
Amortised over 4 years	£50
Postage	£10
Administrative costs, per student (one man-year per 100 students)	£30
Other costs (extra buildings, etc.)	£10
PER STUDENT	£100

Just 20 half-credit courses therefore with 100 students would require an additional cost of £200,000 - which is the total cost at present for transmission of all 30 hours a week television and radio programmes, or twice the cost of a replay system in study centres for all courses and programmes. (See below).

This does not mean though that some experiments could not be carried out. For instance, some high-level courses with a heavy Maths. base - Economics, Physics, and some Engineering subjects - would lend themselves to telephone teaching, if this could be combined with data-pad and television. By linking with television, using a low-scan system, the 40% of students without telephones could be brought into the system. However, such a development would need the approval of the Post Office.

Alternatives to radio however are much more practical. For many courses with numbers less than say 500, alternative means are likely to be economically feasible. Nearly 90% of students already have record players. A "floppy-disc" record can be treated (packed and mailed) as print-material. This would still be slightly more expensive than radio, but would save scarce transmission time, and might indeed by used more by students than radio programmes. Again, though, the cost

will need to be carefully calculated.

I think on balance that it is now time to re-open the issue of alternatives to direct transmission for courses with low student numbers given the approaching transmission crisis and the recent rapid developments in audio-visual technology. Such an enquiry would be particularly important for Science courses, because although these have clearly the greatest demand for audio-visual support, student numbers on future higher-level Science courses are likely to be comparatively low.

To do such a study properly, however, not only must the range and cost of available alternative technologies be very carefully investigated, but the reliability and ease of operation of the equipment, the production and course design implications and most important of all, the best ways of organising distribution, delivery and collection of equipment and programmes, will all need to be closely examined. This kind of study cannot be done properly on a part-time basis through a loose committee arrangment or by individuals making calculations on backs of envelopes. (Both these methods have already been tried). It requires a full-time, carefully worked out study, and the University would be well advised to put aside resources for such a study, which should look across the range of technologies that might be suitable. Even then, it is unlikely that alternative technology, on an individual student basis, will be suitable for anything other than courses with very low student numbers, given the inherent advantages to students of direct transmissions.

An interim solution

The main problem is to find a solution which will see the University over at least the next six years. By that time,

developments in technology or the provision of extra broadcasting channels might provide more permanent solutions. The University has already considered, and deferred a decision on, a proposal which would allow broadcasts to be made available to almost all students at the rate of production and transmission required over the next six years. This is the proposal to combine single transmissions of broadcasts with the availability at study centres of a video-cassetteand audio-cassette replay facility, based on a library system (Gallagher and Marshall, 1975). We have seen from the survey that such a system will be convenient for nearly all students. If students have difficulty in getting to study centres, they can watch or listen to the direct transmission at home. If they miss a transmission at home, they will be able to send a card to the University library at Milton Keynes, which will post the cassette to a study centre of the student's choice, where they will watch or listen to the programme. The scheme has been piloted for nearly two years now in selected study centres in the South Region, and is popular with students, and increasingly heavily used.

The main drawback is the cost. Original estimates of the cost of a system with replay facilites in each of the 270 study centres came to £100,000 a year, although lower-cost replay machines and cartridge tapes are now available, so in fact some of the costs are actually decreasing. In any case, this amount represents less than 3% of the total broadcasting budget. Not only would it enable course teams to design courses on the assumption that most students will continue to be able to get the broadcasts, but it will also allow programmes to be watched several times, or even more importantly, for students who are behind schedule to watch programmes when they are ready for them. In other words, this provision will enable broadcasting to remain a key feature of the Open University's teaching system. Without it, it would be irresponsible of courses to give broadcasting an important role in their course design, unless they could be sure that a repeat facility for the course at suitable times will be available for the whole life of the course.

It is no exaggeration therefore to say that the whole justification for the University using broadcasting revolves around its decision on the provision of replay facilities in study centres. Without such a provision, it might as well give up broadcasting for the majority of its courses.

Implications for course design

Courses now being designed or planned must face up to the seriousness of the situation. If a decision is not made quickly regarding replay facilities in study centres, the Broadcast Sub-Committee will have to work out precisely the transmission situation over the next eight years, and work out exactly how many and which courses will be able to have repeats. It will be necessary to plan this in detail over eight years, because courses which have their first presentation in 1977 already have been given their allocation, and the anticipated life of a course is about six years. Unless a course is sure of a repeat facility over that period, or that replay facilities will be available in every study centre, it would be irresponsible to give broadcasting an important role in the course, because at least 20% of the students will not be able to watch or listen on a regular basis. Courses which are already running which have given broadcasting an important role will also need to be assured of a repeat facility.

Secondly, the transmission situation for the University's undergraduate programme has serious implications for the Venables Committee on continuing education. The University's plans at present will simply gobble up all available transmission time for the undergraduate programme.

Summary

The University has had five fat years of broadcasting. From next year though, it will be entering at least five years of lean. In fact, none of the solutions suggested in this paper is likely on its own to be sufficient. The University in fact will have to use a combination of strategies, within an overall plan, including the extension of times on existing channels, the provision of replay facilities at study centres, a reduction in the number of courses given broadcasts, a more strict allocation policy, the development of alternative methods of distribution for courses with low student numbers, the maximum effort to provide as many courses as possible with repeats, and an indication to individual courses as to whether they can expect repeats or not.

The responsibility for the development of a coherent broadcasting policy lies with the Broadcast Sub-Committee. This report, if nothing else, brings out the magnitude of the problems it faces. The question must be asked though whether its present method of operation and very limited technical and administrative support is sufficient for the tasks it faces.

REFERENCES

BATES, A.W. and GALLAGHER, M.	1975	Summary of 1974/75 Broadcast Evaluation Programme: Milton Keynes, Open University
CALDER, J.	1973	Open Forum Programmes: Milton Keynes, Open University
GALLAGHER, M, and MARSHALL, J.	1975	Broadcasting and the need for Replay Facilities at the Open University, British Journal of Educational Technology, Vol. 6, No. 3.
McINTOSH, N.	1975	A Difference of Degree: Milton Keynes, Open University
McKENZIE, A.	1974	Report of a Study of Geographically Remote Students in the Open University in Scotland: Edinburgh, Open University in Scotland
PERRY, W.	1973	The First Teaching Year of the Open University: Milton Keynes, Open University

APPENDICES

DESIGN OF SAMPLE

- Judith Calder -

Survey Research Department

APPENDIX 1

The population for this study comprised all students who were finally registered for at least one undergraduate course in 1974. In all, there were 45,159 students registered for at least one of 58 courses. As students can study more than one course at a time, (first year students can study up to two courses while second year and later students can study up to four courses;) there are more student-courses than students. In 1974 there were 63,373 student-courses being studied.

As described in the report, two types of data were wanted for this study, namely student-based information and course-related information. The course-related information was to be course-specific with all 58 courses being covered. A major problem in designing the sample was the need to reconcile the conflicting requirements of a sample which was representative of students and a sample which was representative of student-courses. A sample of students would need a series of supplementary samples to provide large enough numbers on the many smaller courses for course specific analyses; while a sample of student-courses would need reweighting at the analysis stage to avoid bias towards students taking more than one course. In the event, the time constraints on the production of the sample meant that a selection of student-courses was the more feasible approach.

A complete sampling frame of student-courses was available which allowed a single stage random sample design to be used. As many cross-course analyses were planned it was desirable that student-courses had a uniform probability of selection across all courses; however, as student numbers on courses varied considerably this would have resulted in an extremely inefficient and therefore costly sample.

This is because the overall probability of selection would then be determined by the size of sample needed by the smallest course. For example, working on an assumed maximum error of 5% at a 95% level of confidence, we used the following formula to calculate the required sample size n:

$$SE(p) = \left\{ \frac{pq}{n} \quad (1-f) \right\}^{\frac{1}{2}}$$

which can be written as:-

$$n = \frac{pq}{(SE(p))^2} \quad \text{where } n = \frac{1}{\frac{1}{n} - \frac{1}{N}}$$

If we take the course with the lowest student numbers, D342 with 184 finally registered students, and apply the formula, we get n = 126. In other words, the probability of selection of students on that course is 1 in 1.46. If this figure was taken as the probability of selection across all courses, we would end up with a sample of 3,640 students from D100 alone (the largest course), rather than the 372 needed.

It is clear then that the most efficient sample would involve different probabilities of selection being applied to students on each individual course. This introduces a second set of weights for some of the data at the analysis stage. At the design stage the contract for the data processing had not been awarded, so it was felt reweighting work should be kept to a minimum. This was achieved by grouping courses into size strata. Probabilities of selection would be uniform within strata, but would vary between them.

It was decided that six strata were the minimum number within which a realistic range of probabilities of selection could be achieved. The strata were formed by calculating for each course the sample size and hence the probability of selection for a maximum error of 5% at the 95% level of confidence, and then grouping the courses so that within each stratum, the probability of selection would produce a sample size which would give a maximum error of between 4% and 6% at the 95% level of confidence (see table 1). A small allowance was made for non-response.

TABLE 1

Probabilities of selection (f) and error ranges for each size stratum

Population range	f. range at 2.5% SE(p)	Final f_s	Sample Sizes	Max SE(p) at 95%
184-243	1 in 1.46-1.61	1 in 1	184-243	-
341-596	1 in 1.85-2.49	1 in 2.04	167-292	5.5%-4.2%
631-896	1 in 2.58-3.24	1 in 3.06	206-293	5.7%-4.8%
967-1411	1 in 3.4 -4.5	1 in 4.07	238-347	5.6%-4.7%
1515-2412	1 in 4.79-7.03	1 in 6.1	248-395	5.8%-4.6%
3115-5314	1 in 8.79-14.28	1 in 12.2	255-436	6%-4.6%

A computerised random selection process was used to select students on each course using the probability of selection for the stratum in which the course was located. Selection was without replacement within courses, but students finally registered for more than one course had a chance of selection for each of the courses for which they were registered.

The weighting procedure to be applied to the responses varied with the analyses. There were two major implications for weighting accruing from the sample design.

1. Students registered for courses in different size strata had varing probabilities of selection.
2. Students registered for more than one course had varying probabilities of selection and could be selected for more than one course. Again these courses could be different size strata.

For individual course analyses there was no problem as no weighting of the results was necessary. For cross-course analyses, the responses for each of the 58 courses had to be weighted by the appropriate stratum reweighting factor W_{cs}. These were calculated as follows:-

Let f_s be the probability of selection in any stratum
Let f be the base probability of selection
Then $W_{cs} = f. \, {}^{1}/_{fs}$

We took $f = \frac{1}{12.2}$. The resultant figures for W_{cs} are shown in Table 2. The weighting procedure for student data analyses was a little more complex. Each student had an individual weight combining weights which corrected for both stratum differences and student differences in number of courses registered for. The individual weights W_s were calculated as follows:-

Let t be the number of courses a student is selected for
Let c_r be the number of courses a student is finally registered for

Then $W_s = \sum_{1}^{t} W_{cs} \frac{1}{Cr}$

TABLE 2

Weights by size - strata by type of analysis

Population range	184-243	341-596	631-896	967-1411	1515-2412	3115-5314
Individual course-based	none	none	none	none	none	none
Cross-course analyses: W_{cs}	0.08	0.17	0.25	0.33	0.50	1.00
Student data: W_{es} t=1	$0.08/_{Cr}$	$0.17/_{Cr}$	$0.25/_{Cr}$	$0.33/_{Cr}$	$0.50/_{Cr}$	$1/_{Cr}$
t>1	$\sum_{1}^{t} \left(\frac{W_{cs}}{Cr} \right)$					

APPENDIX II Table 1

VIEWING FIGURES: ARIS

Percentage of programmes seen on average on each transmission

UNAMENDED					AMENDED	
COURSE	First transmission only	Second transmission only	Both transmissions	Viewed at least once	First transmission only	Second transmission only
A100	39.3	20.7	15.8	69.8	36.3	17.7
A201	40.6	11.9	11.2	61.4	39.8	11.1
A202	41.2	13.2	10.3	60.7	39.2	11.2
A291	35.9	15.4	20.6	65.5	32.7	12.2
AMST 283	32.1	15.3	14.9	61.2	31.5	14.7
AST 281	33.8	19.0	16.6	64.9	31.5	16.7
A301	25.3	27.9	20.3	66.7	21.9	24.2
A302	25.8	27.8	15.0	63.5	23.3	25.3
A303	28.4	18.4	15.5	57.7	26.1	16.1
A304	35.5	20.5	23.0	73.0	31.5	18.5
A401	29.9	20.0	10.4	57.0	28.2	18.3

APPENDIX II Table 2

VIEWING FIGURES: SOCIAL SCIENCE

Percentage of programmes seen on average on each transmission

UNAMENDED					AMENDED	
COURSE	First transmission only	Second transmission only	Both transmissions	Viewed at least once	First transmission only	Second transmission only
D100	34.6	17.0	17.1	66.4	33.4	15.8
D203	33.2	14.0	12.0	55.0	31.1	11.9
D222	38.8	12.4	8.7	55.8	36.7	10.3
D231	41.5	11.0	11.9	61.2	39.9	9.4
D281	28.6	21.4	12.0	59.3	27.2	20.0
D282	38.8	11.5	8.0	55.3	37.3	10.0
D283	28.7	18.3	10.9	56.0	27.7	17.3
DS261	24.8	28.6	11.4	62.9	23.8	27.6
DT201	36.7	20.0	14.1	66.3	34.4	17.7
D301	30.1	20.5	10.9	58.4	28.5	18.9
D331	37.7	12.9	9.4	57.5	36.4	11.6
D342	35.4	10.5	7.6	52.2	34.7	9.8
DT352	43.4	11.8	16.2	67.3	41.3	9.7

APPENDIX II Table 3

VIEWING FIGURES: EDUCATIONAL STUDIES

Percentage of programmes seen on average on each transmission

UNAMENDED					AMENDED	
COURSE	First transmission only	Second transmission only	Both transmissions	Viewed at least once	First transmission only	Second transmission only
E221	41.0	12.6	9.8	60.1	39.3	10.9
E262	35.0	16.9	13.9	62.3	33.2	15.1
E281	35.4	16.0	15.6	61.5	32.6	13.2
E282	35.5	14.5	13.2	58.0	32.9	11.9
E283	38.5	15.2	15.4	64.8	36.3	13.0
E341	28.3	12.1	12.6	59.5	31.6	15.4
E351	37.0	8.7	14.3	57.9	35.9	7.6
E352	32.6	11.0	14.0	55.5	31.5	9.9

APPENDIX II Table 4

VIEWING FIGURES: MATHEMATICS

Percentage of programmes seen on average on each transmission

UNAMENDED					AMENDED	
COURSE	First transmission only	Second transmission only	Both transmissions	Viewed at least once	First transmission only	Second transmission only
M100	34.0	15.6	15.9	62.7	32.6	14.2
M201	26.9	21.0	13.5	58.4	25.4	19.5
M202	22.9	18.7	16.8	54.7	21.0	16.8
M231	25.4	14.2	10.7	48.4	24.5	13.3
M251	28.5	16.9	10.3	52.7	27.0	15.4
MDT 241	29.3	15.2	8.6	51.7	28.6	14.5
MST 281	33.3	9.8	13.1	53.1	31.7	8.2
MST 282	18.2	22.2	14.3	52.7	17.2	21.2
M321	26.2	12.5	11.5	47.5	24.8	11.1

APPENDIX II Table 5

VIEWING FIGURES: SCIENCE

Percentage of programmes seen on average on each transmission

UNAMENDED					AMENDED	
COURSE	First transmission only	Second transmission only	Both transmissions	Viewed at least once	First transmission only	Second transmission only
S100	30.9	23.4	27.4	77.0	28.5	21.0
S22-	39.1	16.9	16.0	70.1	38.6	15.4
S23-	40.4	15.8	24.2	75.0	37.5	12.9
S24-	43.1	15.7	20.4	76.4	41.7	14.3
S25-	43.6	16.9	20.5	75.3	40.7	14.0
S26-	36.9	17.3	22.0	71.3	34.4	14.8
SDT 286	38.9	17.8	12.0	66.0	37.5	16.4
ST285	21.9	26.5	23.9	66.4	18.9	23.5
S321	49.0	11.7	20.3	76.1	46.5	9.2
S323	27.9	27.1	28.5	76.8	24.5	23.7
SM351	19.3	33.9	31.3	70.1	12.1	26.7

APPENDIX II Table 6

VIEWING FIGURES: TECHNOLOGY

Percentage of programmes seen on average on each transmission

UNAMENDED					AMENDED	
COURSE	First transmission only	Second transmission only	Both transmissions	Viewed at least once	First transmission only	Second transmission only
T100	40.0	14.6	13.1	63.9	38.1	12.7
T241	29.0	16.3	18.3	59.0	26.7	14.0
T242	27.4	21.8	10.0	56.2	25.9	20.3
T291	30.2	32.3	16.3	71.6	26.6	28.7
TS251	23.6	31.6	28.5	77.8	20.6	28.6
TS282	27.8	18.1	20.0	62.3	26.0	16.3

APPENDIX II Table 7

LISTENING FIGURES: ARTS

Percentage of programmes heard on average on each transmission

UNAMENDED								AMENDED	
COURSE	First transmission only	Second transmission only	Record only	Both transmissions	Heard at least once	Recorded	Late night	First transmission only	Second transmission only
A100	29.3	20.5	6.2	13.2	62.6	21.6	0.2	26.0	17.2
A201	36.7	6.9	5.5	9.9	54.5	20.5	0.4	34.4	4.6
A202	30.2	13.5	5.4	10.8	55.5	17.9	1.5	28.0	11.3
A291	27.3	11.7	5.3	14.3	54.9	26.1	0.7	25.4	9.8
AMST 283	18.8	22.1	3.2	9.7	50.6	18.5	0.8	17.2	20.5
AST 281	22.1	19.8	4.1	9.0	51.6	28.5	0.5	20.4	18.1
A301	26.5	18.7	5.9	13.3	57.1	30.7	2.2	22.8	15.0
A302	31.5	17.5	8.0	13.7	61.2	30.7	1.3	36.3	12.7
A303	15.6	24.4	3.8	11.5	49.6	19.6	0.5	12.7	21.5
A304	22.6	27.1	6.7	22.8	72.9	50.8	0.2	19.4	23.9
A401	26.9	13.7	2.6	7.6	47.9	17.5	1.4	25.4	12.2

APPENDIX II Table 8

LISTENING FIGURES: SOCIAL SCIENCE

Percentage of programmes heard on average on each transmission

UNAMENDED								AMENDED	
COURSE	First transmission only	Second transmission only	Record only	Both transmissions	Heard at least once	Recorded	Late night	First transmission only	Second transmission only
D100	29.1	15.9	3.6	9.4	52.9	17.6	0.7	26.5	13.3
D203	28.7	8.1	3.2	8.0	45.1	15.3	0.5	27.2	6.6
D222	22.9	11.8	4.9	6.5	41.6	18.5	0.8	20.6	9.5
D231	30.5	12.1	4.0	7.6	51.3	22.2	1.1	29.0	10.6
D281	22.0	16.2	5.1	8.6	46.7	18.0	0.9	19.4	13.6
D282	23.9	10.8	6.2	4.6	41.6	19.5	2.2	21.9	8.8
D283	21.2	10.7	4.5	9.5	41.7	16.7	1.1	19.1	8.6
DS261	19.4	19.4	5.4	6.1	46.9	20.4	0.5	17.7	17.7
DT201	32.7	10.3	6.5	6.5	50.7	16.6	0.7	30.0	7.6
D301	28.2	18.4	6.6	7.3	54.3	28.7	0.1	24.9	15.3
D331	25.4	13.2	4.2	8.4	46.6	22.8	0.7	23.1	10.9
D342	26.1	6.3	4.1	3.4	37.1	18.3	0.0	24.7	4.9
DT352	34.6	16.4	7.8	13.5	61.1	35.2	2.0	29.0	10.8

142

APPENDIX II Table 9

LISTENING FIGURES: EDUCATIONAL STUDIES

Percentage of programmes heard on average on each transmission

UNAMENDED								AMENDED	
COURSE	First transmission only	Second transmission only	Record only	Both transmissions	Heard at least once	Recorded	Late night	First transmission only	Second transmission only
E221	28.9	9.1	5.9	9.9	47.1	23.5	0.8	25.5	5.7
E262	24.8	11.7	7.6	14.3	49.9	24.5	0.8	20.5	7.4
E281	29.1	8.4	6.4	9.2	47.1	22.2	0.5	26.1	5.4
E282	24.3	8.9	5.9	10.4	44.0	18.4	0.9	22.0	6.6
E283	23.6	10.2	10.9	11.3	46.7	26.3	0.5	18.9	5.5
E341	26.7	12.7	3.8	10.6	48.5	22.5	0.5	24.0	10.0
E351	29.7	10.7	4.6	9.3	51.3	28.4	0.6	28.2	9.2
E352	25.2	10.2	3.5	14.8	48.0	25.5	0.7	22.3	7.3

141

APPENDIX II Table 10

LISTENING FIGURES: MATHEMATICS

Percentage of programmes heard on average on each transmission

UNAMENDED								AMENDED	
COURSE	First transmission only	Second transmission only	Record only	Both transmissions	Heard at least once	Recorded	Late night	First transmission only	Second transmission only
M100	17.8	10.1	4.5	4.2	34.2	12.9	0.9	16.6	8.9
M201	17.9	7.7	3.1	3.1	29.6	10.8	0.7	16.8	6.6
M202	14.0	11.3	1.6	6.3	32.1	12.6	0.4	13.4	10.7
M231	21.6	12.6	3.1	5.6	39.8	12.6	0.7	20.0	11.0
M251	16.7	11.3	3.5	2.7	33.2	12.5	0.4	16.2	10.8
MDT 241	24.3	9.9	2.6	3.2	39.0	12.1	0.9	23.8	9.4
MST 281	24.8	6.1	4.2	4.4	37.2	17.7	1.7	23.6	4.9
MST 282	19.9	7.6	2.6	2.7	31.8	14.5	0.9	19.4	7.1
M321	14.7	6.8	2.4	6.6	28.2	13.8	0.0	13.5	5.6

APPENDIX II Table 11

LISTENING FIGURES: SCIENCE

Percentage of programmes heard on average on each transmission

UNAMENDED								AMENDED	
COURSE	First transmission only	Second transmission only	Record only	Both transmissions	Heard at least once	Recorded	Late night	First transmission only	Second transmission only
S100	26.5	16.7	5.6	7.5	51.4	20.2	0.4	24.5	14.7
S22-	21.6	8.0	3.4	3.5	34.6	12.1	0.5	19.6	6.0
S23-	34.4	17.3	6.2	10.3	60.2	25.7	0.3	30.4	13.3
S24-	33.2	12.0	6.7	6.0	53.0	30.3	1.8	30.7	9.5
S25-	33.3	16.9	6.7	5.7	52.6	30.2	1.4	28.3	11.9
S26-	28.1	17.5	3.1	8.3	54.0	40.3	1.6	26.6	16.0
SDT 286	22.6	9.5	5.0	3.1	36.9	13.4	0.5	20.9	7.8
ST285	21.8	14.6	6.1	7.7	44.1	21.5	0.3	18.7	11.5
S321	25.0	17.4	6.3	5.4	50.4	21.5	1.3	23.1	15.5
S323	24.7	13.8	5.7	7.1	45.8	27.2	2.7	21.9	11.0
SM351	26.8	15.7	8.8	10.8	52.7	29.2	2.1	22.1	11.0

143

APPENDIX II Table 12

LISTENING FIGURES: TECHNOLOGY

Percentage of programmes heard on average on each transmission

UNAMENDED								AMENDED	
COURSE	First transmission only	Second transmission only	Record only	Both transmissions	Heard at least once	Recorded	Late night	First transmission only	Second transmission only
T100	27.7	12.3	3.9	6.9	47.5	21.5	0.3	26.0	10.6
T241	26.8	11.2	2.4	8.7	45.6	20.1	0.8	25.0	9.4
T242	23.3	11.7	3.5	5.2	39.8	17.5	0.8	21.3	9.7
T291	29.6	14.9	5.5	5.6	50.5	23.9	0.9	27.0	12.3
TS251	25.4	12.7	4.4	8.3	46.9	23.1	0.3	23.4	10.7
TS282	30.4	12.3	3.9	4.6	48.1	21.5	1.6	28.8	10.7

APPENDIX III

THE QUESTIONNAIRE

The Open University,
Walton Hall, Walton,
Bletchley, Buckinghamshire.
Telephone: Bletchley 4066

THE OPEN UNIVERSITY

Pro Vice-Chancellor
Planning
Professor Ralph C. Smith
MSc., PhD., FIMA., FRMets.

7th November, 1974.

Dear Student,

Survey of Broadcast facilities and student use

I realise that questionnaires are an additional burden on your time, but I would urge you to complete the one enclosed since it will provide the University with a better picture of the student use of broadcast facilities. The reasons for this urgency are two-fold.

Firstly, as you probably know the Annan Committee on Broadcasting is enquiring into the future of broadcasting in Britain and the University intends to make a submission to it. The outcome of this enquiry could have direct implications for the Open University.

Secondly, in any event the University is faced with some extremely difficult planning decisions in the next few years, regarding the allocation of programmes and appropriate time-bands for different courses. This is due to the increase in the numbers of courses available and the limitation on convenient transmission times. Many of you have already taken part this year in enquiries mounted by the University's Media Research Unit and the Survey Research Department. This information is already being used for improving the use of broadcasting on new courses. On this occasion, what we are looking for is comprehensive information on viewing and listening figures for all courses and time-slots and up-to-date information on the availability of sets and other equipment for a sufficiently representative sample of students.

As to the questionnaire - all the questions are pre-coded, and it should not take you very long to complete it. To cut down demands on students as much as possible, a very careful sample has been drawn. It is extremely important therefore that you provide information on just the course(s) indicated, even though you may be taking other courses as well. If you did not finish a course, your response is still needed.

If therefore you are willing to help us, the completed questionnaire should be returned as soon as possible in the enclosed pre-addressed envelope. This information will enable planning over the next few years to be more precise, and it should not be necessary to repeat this survey. Clearly, the use to which the information will be put is of importance to all students. I would be most grateful if you can co-operate.

With thanks,

Yours sincerely,

Ralph C. Smith

Professor R.C. Smith

(2)

Col. 1-3
6 6 2

THE OPEN UNIVERSITY

SURVEY OF BROADCAST FACILITIES AND USE

Cols. 4. 5. 6. 7. 8. 9. 10. 11.

STUDENT NUMBER. [ ] [ ][ ][ ][ ][ ][ ][ ]

Please ring the appropriate code, e.g. (3)
Unless otherwise stated, ring only ONE code for each question.

SECTION A

			Col. 12 Code
1.	Can BBC 2 television transmissions be received in the area in which you live?	Yes, good reception	1
		Yes, but poor reception	2
		No	3
		Don't know	4
			Col. 13
2.	Do you have a set, or regular and easy access to a set, on which you can watch BBC 2 television programmes?	Yes, black and white only	1
		Yes, colour	2
		No	3
			Col. 14
3.	Can BBC VHF radio transmissions be received in the area in which you live?	Yes, good reception	1
		Yes, but poor reception	2
		No	3
		Don't know	4
			Col. 15
4.	If "yes", do you live in an area where OU programmes are transmitted on Saturday afternoons?	Yes	1
		No	2
		Don't know	3
			Col. 16
5.	Do you have a set, or regular and easy access to a set, on which you can hear BBC VHF radio programmes?	Yes	1
		No	2
			Col. 17
6.	Do you have a tape-recorder, or regular and easy access to a tape recorder? (Ring more than one code, if appropriate.) Please answer both sections (a) and (b).	Yes - cassette (OU's)	1
		Yes - cassette (not OU's)	2
		Yes - open reel	3
		Yes - cartridge	4
		None of these	5
	(b) With play-back and record		6
		Play-back only	7
		No recorder	8

-98-

7. Do you have a record player, or regular and easy access to a record-player?

Col. 18

Yes 1
No 2

8(a) Do you usually leave for work at about the same time each weekday morning?

Col. 19-20

Yes 01
*No - could be at home most of morning 02
No - shift work/irregular hours . . . 03

(b) IF YES. What is the latest time a broadcast could end for you to be able to see or hear it conveniently before you leave for work?

LAST TIME before leaving for work (a.m.)

(Please ring one only)

	Before	5.50	04
Between	5.50 and	6.15	05
"	6.15 "	6.40	06
"	6.40 "	7.05	07
"	7.05 "	7.30	08
"	7.30 "	7.55	09
"	7.55 "	8.20	10
"	8.20 "	8.45	11
"	8.45 "	9.10	12
	After	9.10	13

*Note: If you are a housewife who does not go out to work in the morning, but who must get the family off to work or school, please ring 02 AND the latest time you could watch or listen before you have to stop to see to the family. If your time is flexible, ring 02 only.

9(a) Do you usually arrive home from work at about the same time each weekday afternoon/evening?

Col. 21-22

Yes 01
*No - could be at home most of afternoon 02
No - shift work/irregular hours 03

(b) IF YES. What is the earliest time a broadcast could begin for you to be able to see or hear it conveniently after you get home?

FIRST TIME after returning from work (p.m.)

(Please ring one only)

	Before	4.10	04
Between	4.10 and	4.35	05
"	4.35 "	5.00	06
"	5.00 "	5.25	07
"	5.25 "	5.50	08
"	5.50 "	6.15	09
"	6.15 "	6.40	10
"	6.40 "	7.05	11
"	7.05 "	7.30	12
	After	7.30	13

*Note: If you are a housewife who does not go out to work in the afternoon, but must get a meal for the family in the evening at a regular time, please ring 02 AND the earliest time you could watch or listen to an OU broadcast after you have seen to the family. If your time is flexible, ring 02 only.

10. Please indicate the times you usually could be at home on Saturdays and/or Sundays, when you would be prepared to see or listen to OU broadcasts. (Please ring more than one, if necessary.)

	Col. 23 Saturday	Col. 24 Sunday
Before 6.00 a.m.	1	1
Between 6.00 a.m. and 7.00 a.m.	2	2
Between 7.00 a.m. and 9.00 a.m.	3	3
Between 9.00 a.m. and 1.00 p.m.	4	4
Between 1.00 p.m. and 5.00 p.m.	5	5
After 5.00 p.m.	6	6
At no time	7	7
Shift work/no regular pattern possible	8	8

11/12. There may be other times when you might be able to view or listen to OU programmes, even though it would be impossible to view or listen to them at home at such times. For instance, there may be a study centre near your work where you can go (or could go, if the necessary arrangements were made) immediately after work or during the lunch-hour; you may have a television set in your school or works' social club where you could watch after work; or you may be able to take a transistor radio to work and listen to programmes during the lunch-hour, if OU programmes were broadcast at such times. If for these or any other reasons there are ways in which you would be able to listen or watch elsewhere at times when you cannot watch at home, please indicate in the appropriate box. (Please ring more than one code, if necessary.)

	Col. 25-26 Television	Col. 27-28 Radio
Before 9.00 a.m.	01	01
Between 9.00 a.m. and 12 noon	02	02
" 12.00 noon and 2.00 p.m.	03	03
" 2.00 p.m. and 4.10 p.m.	04	04
" 4.10 p.m. and 4.35 p.m.	05	05
" 4.35 p.m. and 5.00 p.m.	06	06
" 5.00 p.m. and 5.25 p.m.	07	07
" 5.25 p.m. and 5.50 p.m.	08	08
" 5.50 p.m. and 6.15 p.m.	09	09
" 6.15 p.m. and 6.40 p.m.	10	10
" 6.40 p.m. and 7.05 p.m.	11	11
" 7.05 p.m. and 7.30 p.m.	12	12
After 7.30 p.m.	13	13
None of these times	14	14

13. Please give an estimate of the number of Open Forum television programmes you saw this year (there were approximately 15). Col. 29-30

Please enter no. ☐☐

(If none, enter 0)

14. Which transmission of Open Forum television did you normally watch?

Col. 31

Both	01
Saturday morning	02
Friday evening	03
Saturday and Friday about equal	04
None	05

15 Please give an estimate of the number of Open Forum radio programmes you listened to this year (there were approximately 36).

Col. 32-33

Please enter no. ☐☐

(If none, enter 0)

15(b) Which transmission of Open Forum radio did you normally hear?

Col. 34

Both	01
Wednesday evening	02
Saturday morning	03
Wednesday and Saturday about equal	04
None	05

16. With the increase in the number of courses, transmission time may become so scarce in the future that it may become impossible to transmit every programme. Please indicate how regularly you would be able to attend your present study centre if recordings of the programmes were available and there was no other means of hearing/seeing them.

Col. 35

Once a week	01
Once a fortnight	02
Once every three weeks	03
Once a month	04
Sometimes, but on no regular basis	05
Not at all	06

SECTION B The questions on this part refer only to course [| | | | | | |] CARD 2

PLEASE ENTER ONE NUMBER ONLY FOR EACH QUESTION FOR QUESTIONS 17 to 20. (Col. 12-18)

(If none, enter 0)

17(a) Please give an estimate of the number of television programmes you saw on this course. (You may like to remind yourself by checking through the list of programme titles in the Broadcast Schedule or Course Guide). Col. 19-20 [| |]

(If none, go to Q.21)

17(b) Please indicate the main reasons for watching television programmes on this course. (Please write in answer).

18. About how many television programmes on this course did you see at least twice? Col. 21-22 [| |]

19. About how many did you see on the first transmission only? Col. 23-24 [| |]

20. About how many did you see on the second transmission only? Col. 25-26 [| |]

(Your answers to questions 18, 19, 20 should add up to your answer for question 17 - but don't worry if they don't)

21. If you missed some of the television programmes on this course, please give the main reasons. (Please ring more than one, if appropriate.) Col. 27-28

-102-

Never or hardly ever missed	01
Not in BBC 2 transmission area	02
No BBC 2 television set	03
Faulty set/power cuts/transmission failure	04
Couldn't get home from work on time	05
Transmission at difficult time with family around	06
Away from home on business	07
Away from home on holiday	08
Away from home at summer school	09
Early morning transmission too early for me	10
Forgot	11
Family wanted to see something else	12
Conflicting social/leisure activities	13
Sick/illness/accident (own or family)	14
Would like to have seen, but too much other OU work to do	15
Programmes on this course are not worth watching	16
Television programmes on previous OU courses were not worth watching	17
Television generally is not an appropriate medium for University-level teaching	18
I find television a particularly difficult medium to use in studying	19
Other (please specify)	20

PLEASE ENTER ONE NUMBER ONLY FOR EACH QUESTION FOR QUESTIONS 22-26.

(If none, enter 0)

22(a) Please give an estimate of the number of radio programmes you heard on this course. Col. 29-30 ☐☐

(If none, go to Q.29)

22(b) Please indicate the main reasons for listening to the radio programmes. (Please write in answer).

23. About how many radio programmes on this course did you hear twice? Col. 31-32 ☐☐

24. About how many did you hear on the first transmission only? Col. 33-34 ☐☐

25. About how many did you hear on the second transmission only? Col. 35-36 ☐☐

26. Please state the number of radio programmes that you did not hear on transmission, but did hear later on a recording of some kind. Col. 37-38 ☐☐

(The answers to q.23, 24, 25 and 26 should add up to your answer to q. 22 - but again don't worry if they don't!)

27. About how many programmes altogether on this course did you record? Col. 39-40 ☐☐

28. About how many of the programmes on this course did you hear transmitted late at night? Col. 41-42 ☐☐

-103-

29. If you missed some of the radio programmes on this course, please give the main reasons. (Please ring more than one, if necessary.) Col. 43-44

Never or hardly ever missed	01
Not in BBC VHF radio transmission area	02
No VHF/FM radio set	03
Faulty set/power cuts/transmission failures	04
Couldn't get home from work in time	05
Transmission at difficult time with family around	06
Away from home on business	07
Away from home on holiday	08
Away from home at summer school	09
Early morning transmission too early for me	10
Late night transmission too late for me	11
Forgot	12
Family wanted to listen to something else	13
Conflicting social/leisure activities	14
Sick/illness/accident (own or family)	15
Would like to have heard, but too much other OU work to do	16
Programmes on this course are not worth listening to	17
Radio programmes on previous OU courses were not worth listening to	18
Radio generally is not an appropriate medium for university-level teaching	19
I find radio a particularly difficult medium to use in studying	20
Other (please specify)	21

-104-

30. Please indicate for this course the extent to which the various components of the course have assisted your learning. Please answer once for each component.

Component	Very helpful	Fairly helpful	Not very helpful	Not at all helpful	Did not use/not applicable	Col.
Class tutorials	1	2	3	4	5	45
Correspondence texts	1	2	3	4	5	46
Correspondence tutoring	1	2	3	4	5	47
Counselling	1	2	3	4	5	48
Home experiment kit	1	2	3	4	5	49
Radio	1	2	3	4	5	50
Set book(s)	1	2	3	4	5	51
Summer school	1	2	3	4	5	52
Television	1	2	3	4	5	53

31.	Did you take the final examination at the end of <u>this</u> course?		Col.54
		Yes	1
		No	2

32.	If <u>no</u>, when did you decide not to continue with this course?		Col. 55
		In February	1
		March	2
		April	3
		May	4
		June	5
		July	6
		August	7
		September	8
		October	9

PLEASE RETURN COMPLETED QUESTIONNAIRE AS SOON AS POSSIBLE TO:

DR. TONY BATES,
IET,
OPEN UNIVERSITY,
WALTON HALL,
MILTON KEYNES.
MK7 6AA

(PRE-PAID, ADDRESSED ENVELOPE SUPPLIED.)

SECOND REMINDER

The Open University,
Institute of Educational Technology,
Walton Hall,
Milton Keynes,
MK7 6AA.
Telephone: Milton Keynes 74066

THE OPEN UNIVERSITY

INSTITUTE OF
EDUCATIONAL TECHNOLOGY

January, 1975.

Dear Student,

Survey of Broadcast Facilities and Student Use

You may remember that in December Professor Smith, Pro-Vice Chancellor, Planning, wrote asking for your co-operation in filling in and returning a questionnaire on your broadcast facilities and the way you have used broadcasts. At the time of sending this letter, we have not yet received your questionnaire, although it may have crossed in the post. If this is the case, please ignore this letter. Similarly, if your questionnaire has only recently arrived, due to the Christmas backlog, I apologise for troubling you so soon. If you have not sent in your questionnaire, yet, though, could you do so as quickly as possible?

-106-

We need every possible questionnaire returned, because we wish to be sure of the representativeness of the information we submit to the Annan Commission on the Future of Broadcasting. We will also be basing decisions about broadcast allocations and transmission times in 1976, on the results of this survey.

EVEN IF YOU ARE NO LONGER AN OU STUDENT, OR DID NOT COMPLETE THE COURSE(S) LAST YEAR, OR SAW OR HEARD NO PROGRAMMES, WE WOULD STILL LIKE YOU TO COMPLETE THE QUESTIONNAIRE.

Just in case the original letter went astray, or in case you have mislaid the original questionnaire we sent you, I enclose another copy. Please answer just for the course(s) indicated on the questionnaire.

I really am sorry to pester you further, but your help is important.

Yours sincerely,

Tony Bates

Dr. A.W. Bates,
Senior Lecturer in Media Research Methods.

Enc

APPENDIX IV

With a sample of over 12,000 students, the survey was a large one, by any standards. It posed particular problems for a small research group, already committed to the on-going evaluation of individual programmes in 1974 and 1975. This appendix lists briefly the main organisational problems that had to be overcome, and the main costs involved, as a guideline for others who may be concerned with the production of a large scale survey in the University. Anyone considering mounting an excercise of this scale should contact from the very beginning either Mrs Naomi McIntosh or Dr. Jack Field, of the University's Survey Research Department (ext.3717), which is extremely experienced in this area.

Planning and organisation

The idea of a large-scale survey originated in April, 1974. As mentioned in the main report, it arose from the need of the Broadcast Sub-Committee to make certain planning decisions regarding the use of broadcasting. At about the same time, the Government had announced the setting up of the Annan Committee to look into the future of broadcasting in the United Kingdom, and it was thought that it might help the University's case for increased access to broadcast media if there were reliable data on actual student use of broadcasting. The idea therefore originated from a researcher who was also a member of a policy-making group, (The Broadcast Sub-Committee), arising from the problems being faced by that group. The proposal for a survey was put to the Broadcast Sub-Committee at its May, 1974, meeting, and received strong support.

A rough estimate of the likely cost of the survey then had to be made. Initial discussions with the University's Data Processing Division indicated that the bulk of the data-processing would have to

be carried out by an outside agency. Data Processing at that time did not possess a suitable survey research programming package. More important, however, was the impossibility of guaranteeing that the data processing could be carried between the beginning of December and mid-February, when the print-out would be required. (The February deadline was set to enable time to pull out data for the University's submission to the Annan Committee in March.) A rough draft of a questionnaire and a summary of the analysis required was prepared, plus a rough estimate of the sample size. This allowed Data Processing to advise on the likely cost of going outside to another agency. Also at this stage, we worked out a schedule for the study and, in broad outline, how the questionnaires would be mailed and checked in, so that an estimate could be made of the extra clerical staff required. Rough estimates of printing and stationery costs were also obtained.

Armed with this information, a bid, supported by the Broadcast Sub-Committee, for £5,260 was made to the October 22nd meeting of the Evaluation Committee. The total amount available to this Committee for 1974 was £20,000, but the money for the broadcast survey was voted in full. At the same time, three different companies, suggested by the Survey Research Department, were approached, asking for quotations for the punching, programming and computer analysis of the questionnaire data. The lowest quotation, which was accepted, was from Gallup Polls Ltd. for £2,300, but this was increased to £2,650 (including VAT at 8%) when it was discovered that the University could not produce background data for the students sampled on compatible tape. (The background data had to be printed out, then manually repunched.) We approached commercial companies rather than other Universities because of the speed required in carrying out the job.

The final design of the questionnaire was then completed early in November, after consultation with Gallup Polls Ltd., and printed, together with a covering letter from the Chairman of the Broadcast Sub-Committee, through the University's Central Reprographic Unit, ready for despatch on November 11th (the paper and envelopes having been ordered on October 23rd). The timing of the mailing of the questionnaire was crucial. The aim was to send out the questionnaires immediately after the examinations finished, but before the results had come through. This was considered the best time to get a high response rate and reliable data, with sufficient time for the questionnaire to be returned and the data processed. Previous experience (the Forward Planning Survey in 1972) had indicated that response rates were high at this time. The course would still be fresh in the students' minds, and those who were to fail the examination would not (by that time at any rate) be so depressed. Even more important, though, we knew that it would take at least two weeks to mail over 12,000 questionnaires, with the correct student number entered, and the correct questionnaire (one-course, two-course etc.) chosen, packed together with a pre-paid envelope, and the correct label stuck on to the envelope, and the date of mailing entered against each students' number, for reminder purposes. Reminder letters had to be sent out 10-14 days after mailing if the questionnaire had not been returned during that period, and we were anxious to avoid getting caught up in the Christmas mailing and holiday period.

The University's Data Processing Division was to produce three sets of labels for each of the 12,831 students sampled, in order of student number, together with a print-out, also in number order, indicating the courses for which they had been sampled. Unfortunately, although the programme was ready on time (November 11th), the labels were not produced until November 27th (16 days late), because of lack of operational time on the computer. (Examination results were taking

longer to process than had been anticipated.) This meant the first mailing was delayed until November 28th. In fact, despite using six temporary clerks, hired for the purpose from the University's Central Secretarial Services and an outside agency, as well as our own staff, it took until 16th December before the first mailing of all the questionnaires was completed. The University was closed for the Christmas period from 21st December, inclusive. (Indeed, for three days reminders for some students were being despatched before first mailings for others.) This meant that a small percentage of students who did not return questionnaires did not get second reminders, but since 82% of the students sampled responded, this probably had only a small effect on the overall response rate.

Each questionnaire was checked in against the students' number on the print-out. There were only 28 duplications or incorrect numbers, and these were not included in the analysis or response rate. Questionnaires were bundled into batches of 100 on their return, and transported to Gallup Polls Ltd. for punching. The planned cut-off date for the return of questionnaires was January 17th, but since the bulk had been punched by then, the cut-off date was extended until January 30th.

During this period, details of the analysis required - in the form of "mock" tables, with headings -were drawn up by myself, and converted into computer programmes by Gallup Polls Ltd. Since the majority of the tables were standard cross-analyses, it was possible to use a sophisticated survey research package of programmes ('Super Stan') which cut down considerably on the programming. Gallup Polls produced the bulk of the tables in the form of a computer print-out on schedule (by February 17th), and the main results were abstracted directly from the print-outs and included in the final submission of the University to the Annan Committee on March 26th.

Costs

	£
Stationery and printing (questionnaires and envelopes)	906.66
Data-processing (Open University: labels, sample, background data)	451.90
Data-processing (Gallup Polls Ltd) (including VAT)	2700.00
Coding	34.86
Clerical (typing of report, packing and mailing of questionnaires)	802.92
Printing and paper for report (estimate)	250.00
	5152.34
Balance (to be used for further anlysis of drop-outs)	107.66
	5260.00

Other costs (not rechargeable - these are estimates)

Postage	1000.00
Senior Lecturer's time: 5 man-months (full time)	2300.00
Research assistant/research consultant's time: 3 man-months	600.00
	3900.00

Schedule

1974	April	Idea originated.
	May	Idea approved by Broadcast Sub-Committee.
	September	Rough estimate of costs and preliminary planning completed.
	October	Money approved by Evaluation Committee. Stationery, printing, and clerical help ordered.
	November	Gallup Polls Ltd contracted. Labels produced. First mailings.
	December	Questionnaires checked in. Reminders sent. Background data to Gallup.
1975	January	Questionnaires punched. Analysis prepared and programmed.
	February	Dummy run on print-out. Main bulk of tables printed out.
	March	Remaining tables produced. Data abstracted for Annan.
	April	Preliminary paper written and distributed.
	August	Full report finally written.
	September	Printed and distributed.

A further analysis was obtained in May, to provide separate figures for drop-outs.

Distribution and Dissemination

A preliminary analysis of the data was used as the basis for a paper at a University Seminar on April 23rd, and this preliminary paper[1] was circulated to the Broadcast Sub-Committee, Deans of Faculty, IET staff, and BBC producers and management engaged on Open University production. A summary of the preliminary results was also circulated in the University's May issue of the Institutional Research Newsletter (distributed to all central and regional academic staff) and in the September issue of the University's journal, "Teaching at a Distance." A special report on Open Forum programmes was also produced in July for the Open Forum Policy Group. The full write-up of the report took place between April and the end of August (except for a period of five weeks' lost for leave), and the full report is being distributed during September to all central academic staff, staff tutors, regional directors, members of the Broadcast Sub-Committee and Evaluation Committee, and BBC production staff working on Open University productions.

In addition, each of the 58 course teams will receive a copy of the print-out of data for the course, with a brief explanatory note.

Side-Effects

The amount of work involved in the study was, perhaps not surprisingly, greater than anticipated. The main side-effect has been to delay five evaluation reports of individual programmes, scheduled to be completed by the end of March, until the end of December, 1975.

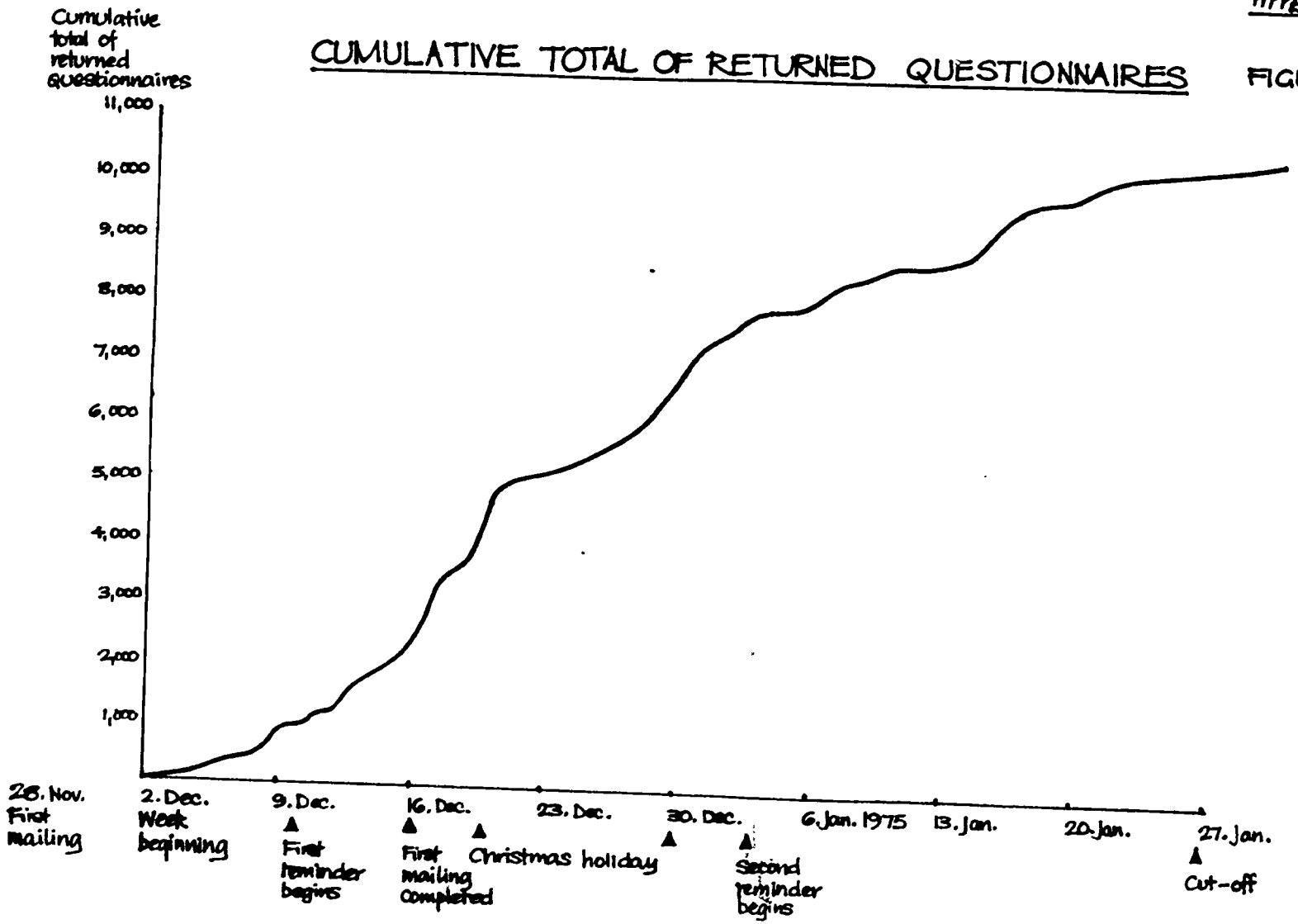
We hope the course teams involved will understand that while clerical help can be drafted in from Evaluation Committee funds, the design, analysis and interpretation of such a survey inevitably must fall on the full-time academic staff of the research group, with the subsequent delay to the evaluation reports.

[1] BATES, A.W. 1975 The future of broadcasting at the Open University, Milton Keynes, Open University.

APPENDIX IV

CUMULATIVE TOTAL OF RETURNED QUESTIONNAIRES

FIGURE 1.



APPENDIX V Table 1

STUDENT RATING OF VARIOUS COMPONENTS AS BEING VERY HELPFUL: ARTS

% of students

COURSE	CLASS TUTORIALS		CORRES-PONDENCE TEXT		CORRES-PONDENCE TUTORING		COUNSELLING		HOME EXPERI-MENT KIT		RADIO		SET BOOKS		SUMMER SCHOOL		TELEVISION		NO. OF ACTIVE COMPONENTS
	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	
A100	33	21	88	2	28	17	25	29	-	-	28	11	45	3	48	12	23	4	8
A201	29	35	89	3	37	16	13	53	-	-	32	15	62	4	-	-	32	12	7
A202	33	31	86	3	31	20	14	52	-	-	30	15	59	4	-	-	23	12	7
A291	27	39	83	4	36	18	9	67	-	-	29	15	65	7	-	-	35	12	7
AMST 283	16	44	65	7	17	28	4	76	-	-	13	18	33	8	-	-	23	13	7
AST 281	16	36	79	4	18	25	2	74	-	-	16	22	45	8	-	-	37	11	7
A301	31	34	82	5	36	15	6	62	-	-	20	19	59	7	50	11	31	10	8
A302	38	29	77	5	40	15	8	68	-	-	27	17	75	7	62	14	22	13	8
A303	29	31	71	6	39	16	6	65	-	-	22	22	54	8	62	13	18	15	8
A304	27	32	78	5	31	21	11	73	-	-	38	13	34	10	60	14	28	11	8
A401	29	47	48	4	45	13	6	70	-	-	17	18	50	4	-	-	18	14	7
MEAN	28%	34%	77%	4%	33%	19%	9%	63%	-	-	25%	17%	53%	6%	56%	13%	26%	12%	

APPENDIX V Table 2

STUDENT RATING OF VARIOUS COMPONENTS AS BEING VERY HELPFUL: SOCIAL SCIENCES

% of students

COURSE	CLASS TUTORIALS		CORRES-PONDENCE TEXT		CORRES-PONDENCE TUTORING		COUNSELLING		HOME EXPERI-MENT KIT		RADIO		SET BOOKS		SUMMER SCHOOL		TELEVISION		NO. OF ACTIVE COMPONENTS
	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	
D100	26	19	82	2	27	23	27	25	-	-	13	16	35	5	48	10	26	5	8
D203	30	36	83	6	30	27	9	56	-	-	16	22	44	8	-	-	24	15	7
D222	21	46	79	4	22	26	5	69	-	-	11	28	53	6	-	-	15	20	7
D231	34	36	79	6	23	27	0	78	-	-	17	23	63	5	-	-	24	17	7
D281	25	33	60	5	23	33	6	70	-	-	10	22	20	7	46	11	29	18	8
D282	23	46	78	8	19	31	3	77	-	-	15	31	38	9	-	-	21	24	7
D283	23	43	70	6	28	27	8	63	-	-	14	27	56	8	-	-	11	17	7
DS261	25	31	74	3	20	24	3	66	13	11	11	23	59	4	51	12	23	11	9
DT201	27	31	80	6	25	26	8	64	-	-	12	19	31	5	-	-	33	8	7
D301	34	24	71	6	39	21	6	68	-	-	16	14	45	9	-	-	16	12	7
D331	16	64	64	8	31	30	4	83	-	-	23	19	35	13	-	-	15	19	7
D342	13	46	71	8	23	31	2	81	-	-	16	30	35	9	-	-	26	25	7
DT352	25	36	76	4	28	21	5	74	-	-	19	17	50	6	-	-	36	12	7
MEAN	25%	38%	74%	6%	26%	27%	7%	67%	13%	11%	15%	22%	43%	7%	48%	11%	23%	16%	

APPENDIX V Table 3

STUDENT RATING OF VARIOUS COMPONENTS AS BEING VERY HELPFUL: EDUCATIONAL STUDIES

% of students

COURSE	CLASS TUTORIALS		CORRES-PONDENCE TEXT		CORRES-PONDENCE TUTORING		COUNSELLING		HOME EXPERI-MENT KIT		RADIO		SET BOOKS		SUMMER SCHOOL		TELEVISION		NO. OF ACTIVE COMPONENTS
	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	
E221	17	44	82	7	23	29	6	76	-	-	14	16	42	7	-	-	15	16	7
E262	23	33	77	4	16	34	6	66	21	29	24	14	44	5	-	-	16	11	8
E281	23	34	80	6	1[illegible]	38	7	65	-	-	16	23	42	7	-	-	20	16	7
E282	18	38	74	5	21	32	5	69	-	-	15	21	48	7	-	-	16	18	7
E283	21	38	75	3	20	35	7	63	-	-	15	16	43	5	-	-	17	9	7
E341	24	42	70	7	14	37	3	77	-	-	10	23	41	9	-	-	17	17	7
E351	13	31	76	7	15	34	7	71	-	-	17	19	50	8	37	14	25	10	8
E352	27	42	68	8	20	34	6	81	-	-	16	25	53	9	-	-	17	21	7
MEAN	21%	38%	75%	6%	18%	34%	6%	71%	21%	29%	16%	20%	45%	7%	37%	14%	18%	16%	

APPENDIX V Table 4

STUDENT RATING OF VARIOUS COMPONENTS AS BEING VERY HELPFUL: MATHEMATICS

% of students

COURSE	CLASS TUTORIALS		CORRES-PONDENCE TEXT		CORRES-PONDENCE		COUNSELLING		HOME EXPERI-MENT KIT		RADIO		SET BOOKS		SUMMER SCHOOL		TELEVISION		NO. OF ACTIVE COMPONENTS
	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	
M100	38	20	69	4	13	46	31	28	-	-	4	29	5	27	54	11	25	7	8
M202	44	35	72	2	30	29	13	58	-	-	10	40	67	2	57	12	24	15	8
M201	34	30	77	4	22	37	7	62	-	-	3	41	59	6	57	13	20	10	8
M231	26	43	67	5	16	37	6	77	-	-	10	34	71	6	-	-	20	22	7
M251	20	41	65	8	17	43	2	74	-	-	1	42	52	9	-	-	24	16	7
MDT 241	20	40	65	6	16	37	4	78	-	-	4	37	59	8	-	-	12	20	7
MST 281	39	34	44	5	23	30	9	65	-	-	3	33	61	5	59	18	22	11	8
MST 282	25	50	56	7	14	38	4	74	-	-	4	43	38	11	-	-	23	15	7
M321	25	39	38	14	14	43	5	72	-	-	6	45	34	16	-	-	10	33	7
MEAN	30%	37%	61%	6%	18%	38%	9%	65%	-	-	5%	38%	50%	10%	54%	13%	20%	17%	

APPENDIX V Table 5

STUDENT RATING OF VARIOUS COMPONENTS AS BEING VERY HELPFUL: SCIENCE

% of students

COURSE	CLASS TUTORIALS		CORRES-PONDENCE TEXT		CORRES-PONDENCE TUTORING		COUNSELLING		HOME EXPERI-MENT KIT		RADIO		SET BOOKS		SUMMER SCHOOL		TELEVISION		NO. OF ACTIVE COMPONENTS
	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	
S100	28	22	87	3	16	34	28	29	25	4	9	16	29	5	56	11	48	3	9
S22-	19	39	79	4	12	38	8	61	23	7	6	26	59	7	54	17	40	8	9
S23-	36	24	72	3	14	35	4	68	62	3	8	24	42	5	74	9	43	9	9
S24-	27	38	75	5	17	37	9	55	15	12	4	36	51	5	63	16	39	7	9
S25-	32	37	89	4	24	39	10	57	18	8	5	37	32	7	52	22	43	7	9
S26-	25	38	87	2	22	34	7	72	-	-	9	28	42	11	32	54	47	8	9
SDT 286	30	29	80	2	16	27	7	53	27	6	2	25	60	2	51	21	37	5	9
ST285	26	38	62	3	16	35	4	70	11	13	6	33	37	13	60	15	38	6	9
S321	35	33	88	4	16	31	5	69	-	-	5	21	8	37	57	10	53	6	8
S323	4	86	81	7	20	25	3	70	14	15	6	28	27	13	77	10	52	6	9
SM351	24	35	63	5	20	28	3	79	12	40	11	27	68	5	60	14	38	11	9
MEAN	26%	38%	78%	4%	18%	33%	8%	62%	23%	12%	6%	27%	41%	10%	58%	18%	43%	7%	

APPENDIX V Table 6

STUDENT RATING OF VARIOUS COMPONENTS AS BEING VERY HELPFUL: TECHNOLOGY

% of students

COURSE	CLASS TUTORIALS		CORRES-PONDENCE TEXT		CORRES-PONDENCE TUTORING		COUNSELLING		HOME EXPERI-MENT KIT		RADIO		SET BOOKS		SUMMER SCHOOL		TELEVISION		NO. OF ACTIVE COMPONENTS
	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	VERY HELP-FUL	NOT USED	
T100	26	22	82	3	15	36	23	30	14	11	13	16	39	4	38	8	29	6	9
T241	15	41	81	5	15	29	6	61	8	14	6	30	38	5	40	13	33	9	9
T242	19	37	76	4	14	29	5	67	4	32	7	29	49	6.	27	39	20	10	9
T291	14	35	83	2	14	27	5	61	38	6	12	21	13	10	46	6	36	6	9
TS251	29	34	85	5	13	42	6	68	20	11	6	29	32	7	70	8	51	4	9
TS282	17	33	73	2	14	31	5	65	60	4	6	27	-	-	46	13	32	7	8
MEAN	20%	34%	80%	3%	14%	32%	8%	59%	24%	13%	8%	25%	34%	6%	44%	17%	33%	8%	

APPENDIX VI

TRANSMISSION DETAILS, 1974 and 1976.

1974

Day	Times	Description	Time per week	No. of transmissions per week
TELEVISION				
Monday - Friday	06.40 - 07.30	Early morning	3 hrs. 45 mins.	9
	17.25 - 19.30	Early evening	8 hrs. 20 mins.	20*
Saturday/Sunday	07.40 - 13.05	Weekend morning	10 hrs. 25 mins.	25**
		TOTAL	22 hrs. 30 mins.	54
RADIO				
Monday - Friday	06.40 - 07.00	Early morning	1 hr. 00 mins.	3
	17.45 - 19.30	Early evening	8 hrs. 45 mins.	25***
Saturday	07.00 - 08.00	Weekend early morning	1 hr. 00 mins.	3
	09.05 - 12.00	Weekend morning	2 hrs. 55 mins.	8***
	14.00 - 17.00	Weekend afternoon	3 hrs. 00 mins.	9
Sunday	06.40 - 08.00	Weekend early morning	1 hr. 20 mins.	4
	09.05 - 10.30	Weekend morning	1 hr. 25 mins.	4***
		TOTAL	19 hrs. 25 mins.	56
Replacement times for students in North Scotland and parts of Wales (radio only)				
Monday	00.15 - 01.15	Late night	1 hr. 00 mins.	3
Wednesday/Friday	00.00 - 01.05	Late night	1 hr. 05 mins.	3***
Thursday	00.00 - 00.45	Late night	- 45 mins.	2***
Saturday/Sunday	00.00 - 01.00	Late night	1 hr. 00 mins.	3
		TOTAL	3 hrs 50 mins.	11

* No transmission on Fridays between 07.05 and 07.30.

** BBC Further Education television programmes occupy 5 slots (one per evening)

*** Some programmes (A100, D100, M100, S100) are of 25 minutes length.

APPENDIX VI

1976

DAY	Times	Description	Time per week	No. of transmissions per week
TELEVISION: BBC1				
Monday - Friday	07.05 - 07.55	Early morning	6 hrs. 10 mins.	10
BBC2				
Monday - Friday	06.40 - 07.55	Early morning	6 hrs. 15 mins.	15
	17.00 - 19.05	Early evening	10 hrs. 25 mins.	25
Saturday/Sunday	07.40 - 13.55	Weekend mornings	12 hrs. 30 mins.	30
		TOTAL	35 hrs. 20 mins.	80
RADIO				
Monday - Friday	06.00 - 07.00	Early morning	5 hrs. 00 mins.	15
	17.45 - 19.30	Early evening	8 hrs. 45 mins.	25*
Saturday/Sunday	06.00 - 08.00	Weekend early morning	4 hrs. 00 mins.	12
	09.05 - 10.30	Weekend morning	2 hrs. 50 mins.	8*
Saturday	10.30 - 12.00	Weekend morning	2 hrs. 00 mins.	6
	12.00 - 15.00	Weekend afternoon	3 hrs. 00 mins.	9
Sunday	00.00 - 01.00	Late night	1 hr. 00 mins.	3
		TOTAL	26 hrs. 35 mins.	78
Replacement times for students in North Scotland and parts of Wales (radio only)				
Tuesday	00.00 - 01.05	Late night	1 hr. 05 mins.	3*
Wednesday	00.00 - 00.50	Late night	- 50 mins.	2*
Thursday/Sunday	00.00 - 01.00	Late night	4 hrs. 00 mins.	12
		TOTAL	5 hrs. 55 mins.	17

* Some programmes (A100, M100, S100) are of 25 minutes length.

Comparison of viewing figures for different transmission times from different sources.

1974 broadcast survey: % of programmes viewed on average

Other sources: % of students viewing each broadcast

A. Early morning transmissions: first transmission

Course and source of information			Early morning (1st)	Weekend/ evening (2nd)	Both	Viewed at least once	Difference between 1st and 2nd transmission
A302	Survey		38%	40%	15%	64%	-2%
	Evaluation	TV9	25%	37%	6%	59%	-12%
DS261	Survey		35%	39%	11%	63%	-4%
	Evaluation	TV4	23%	44%	11%	61%	-21%
		TV6	34%	50%	6%	84%	-16%
DT201	Survey		48%	32%	14%	66%	+16%
	Evaluation	TV7	49%	38%	10%	76%	+11%
SM351	Survey		43%	58%	31%	70%	-15%
	Evaluation	TV7	49%	38%	10%	76%	+11%
T291	Survey		43%	45%	16%	72%	-2%
	Evaluation	TV1	40%	56%	11%	86%	-16%
		TV2	38%	58%	12%	84%	-20%
		TV3	29%	59%	6%	82%	-30%
		TV4	32%	51%	11%	73%	-19%
		TV6	12%	45%	7%	50%	-33%
TS251	Survey		49%	57%	28%	78%	-8%
	CMA	TV1	48%	77%	31%	95%	-29%

APPENDIX VII

(cont.) Comparison of viewing figures for different transmission times from different sources.

1974 broadcast survey: % of programmes viewed on average

Other sources: % of students viewing each broadcast

B. Early morning transmission: second transmission

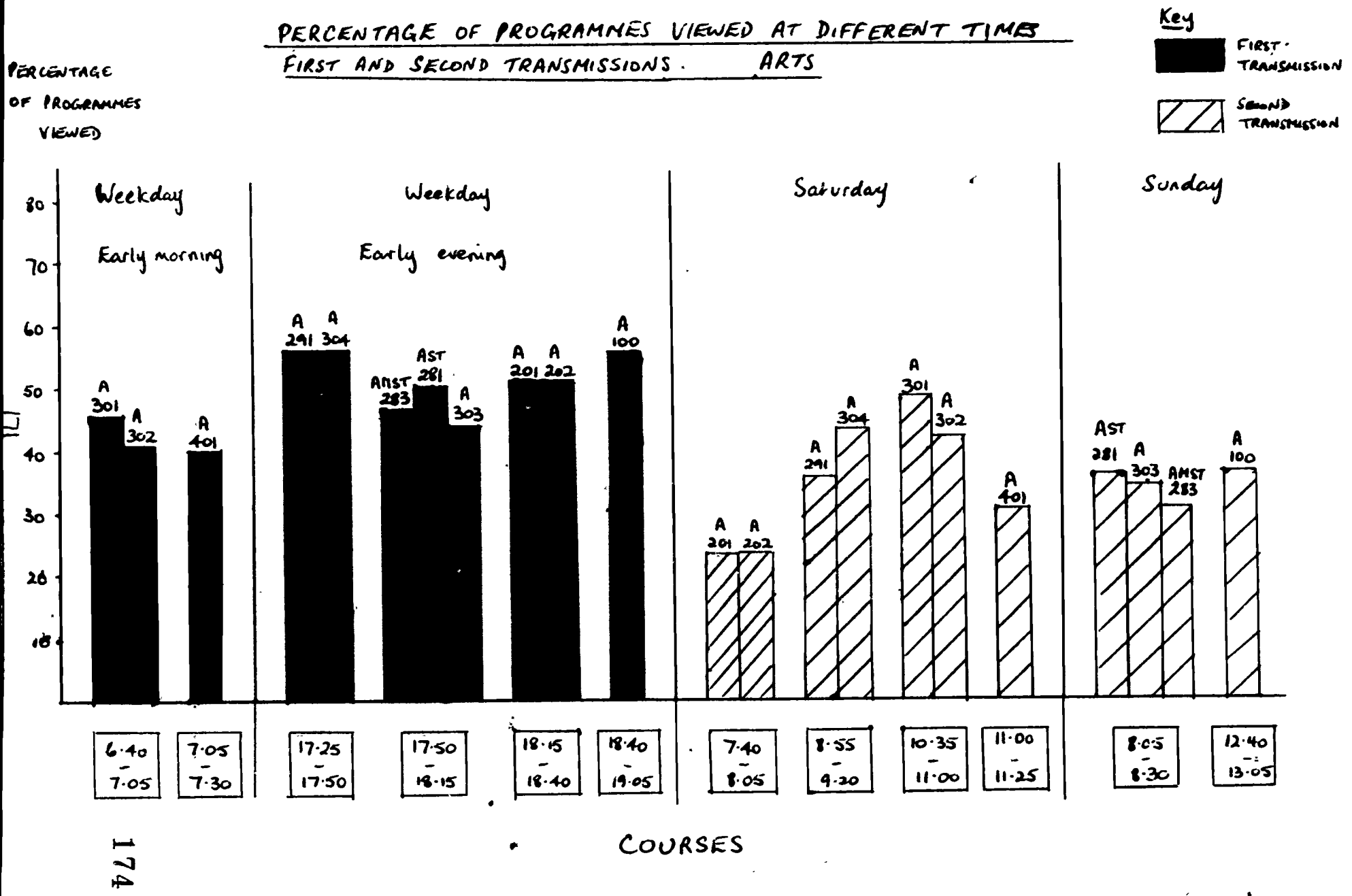
Course and source of information		Weekend (1st)	Early morning (2nd)	Both	Viewed at least once	Difference between 1st and 2nd Transmission
E221	Survey	49%	21%	10%	60%	+28%
	Evaluation: TV3	49%	17%	14%	68%	+32%

C. Weekend/weekday transmissions

Course and source of information		First transmission	Second transmission	Both	Viewed at least once	Ditto
AMST283	Survey	47%	30%	15%	61%	+17%
	Evaluation: TV8	23%	28%	6%	46%	-5%
A304	Survey	54%	41%	23%	73%	+13%
	C.U.R.F. TV1	67%	60%	33%	97%	+7%
E283	Survey	52%	29%	15%	65%	+23%
	Evaluation: TV6					
	TV7					
	TV8					
E351	Survey	44%	22%	14%	58%	+22%
	Evaluation: TV4	57%	24%			+33%
	TV5	52%	27%			+25%
	TV6	52%	28%			+24%

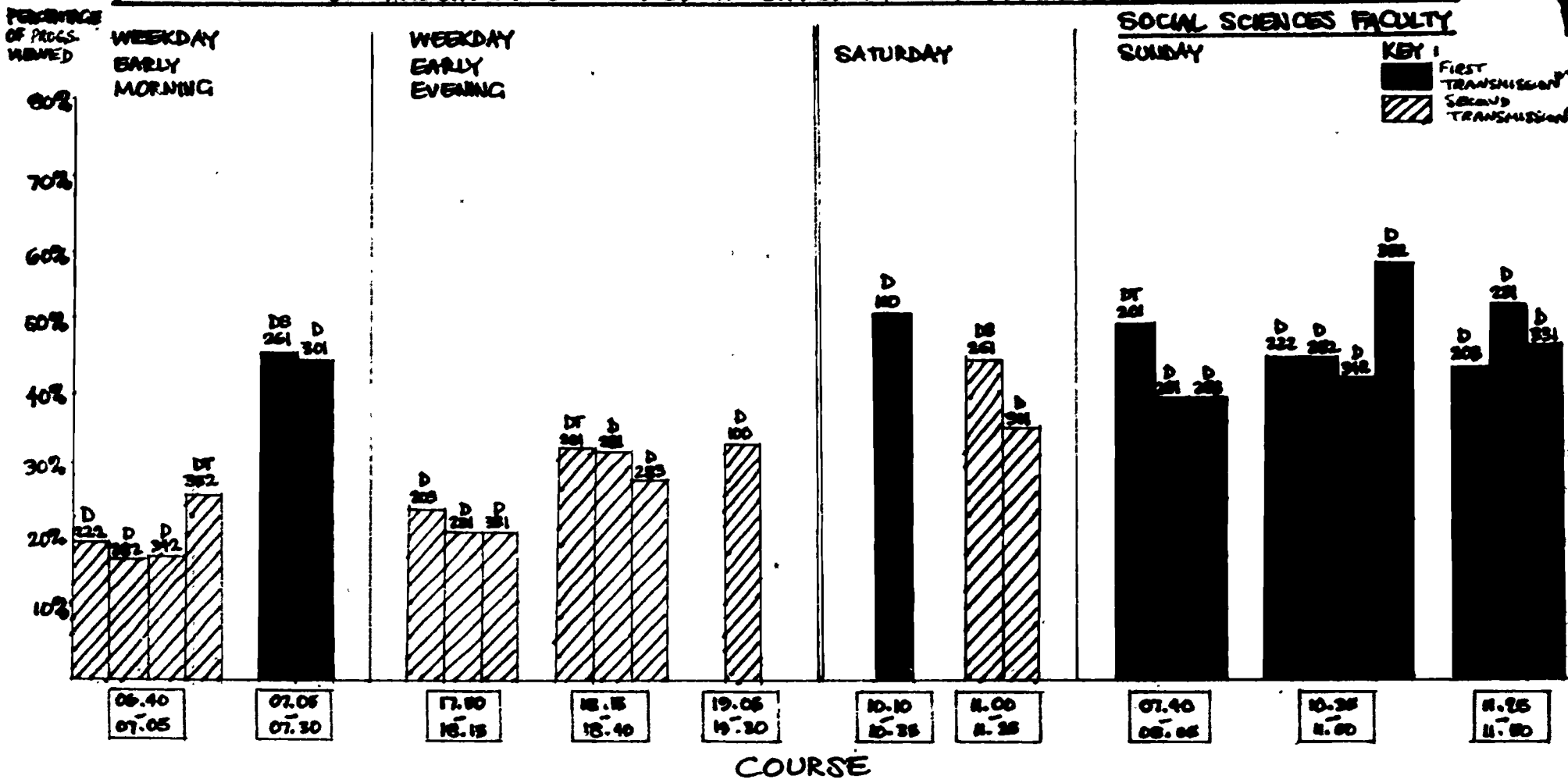
APPENDIX VIII Figure 1

PERCENTAGE OF PROGRAMMES VIEWED AT DIFFERENT TIMES
FIRST AND SECOND TRANSMISSIONS. ARTS



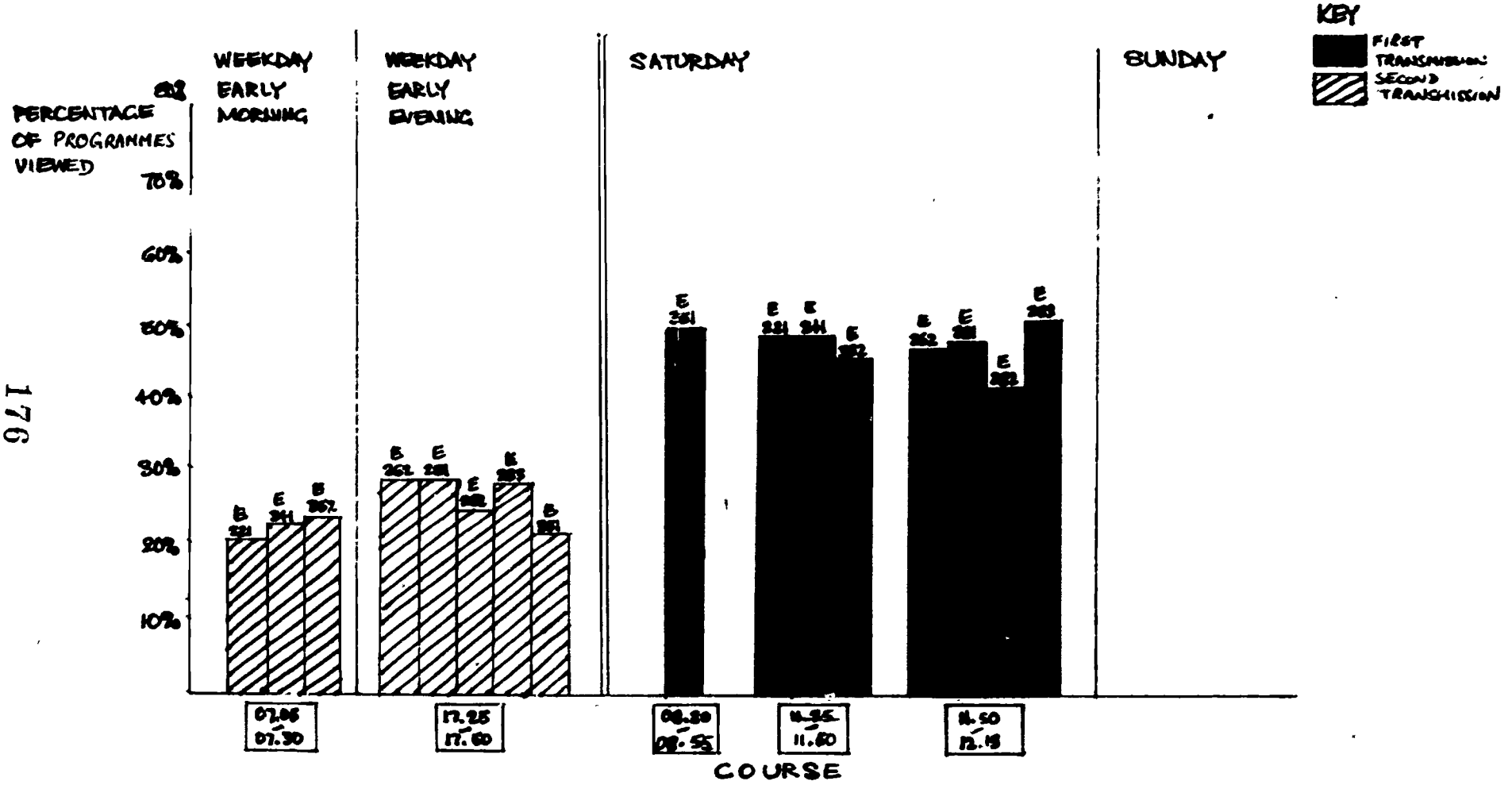
APPENDIX VIII Figure 2

PERCENTAGE OF PROGRAMMES VIEWED AT DIFFERENT TIMES, FIRST AND SECOND TRANSMISSIONS :
SOCIAL SCIENCES FACULTY

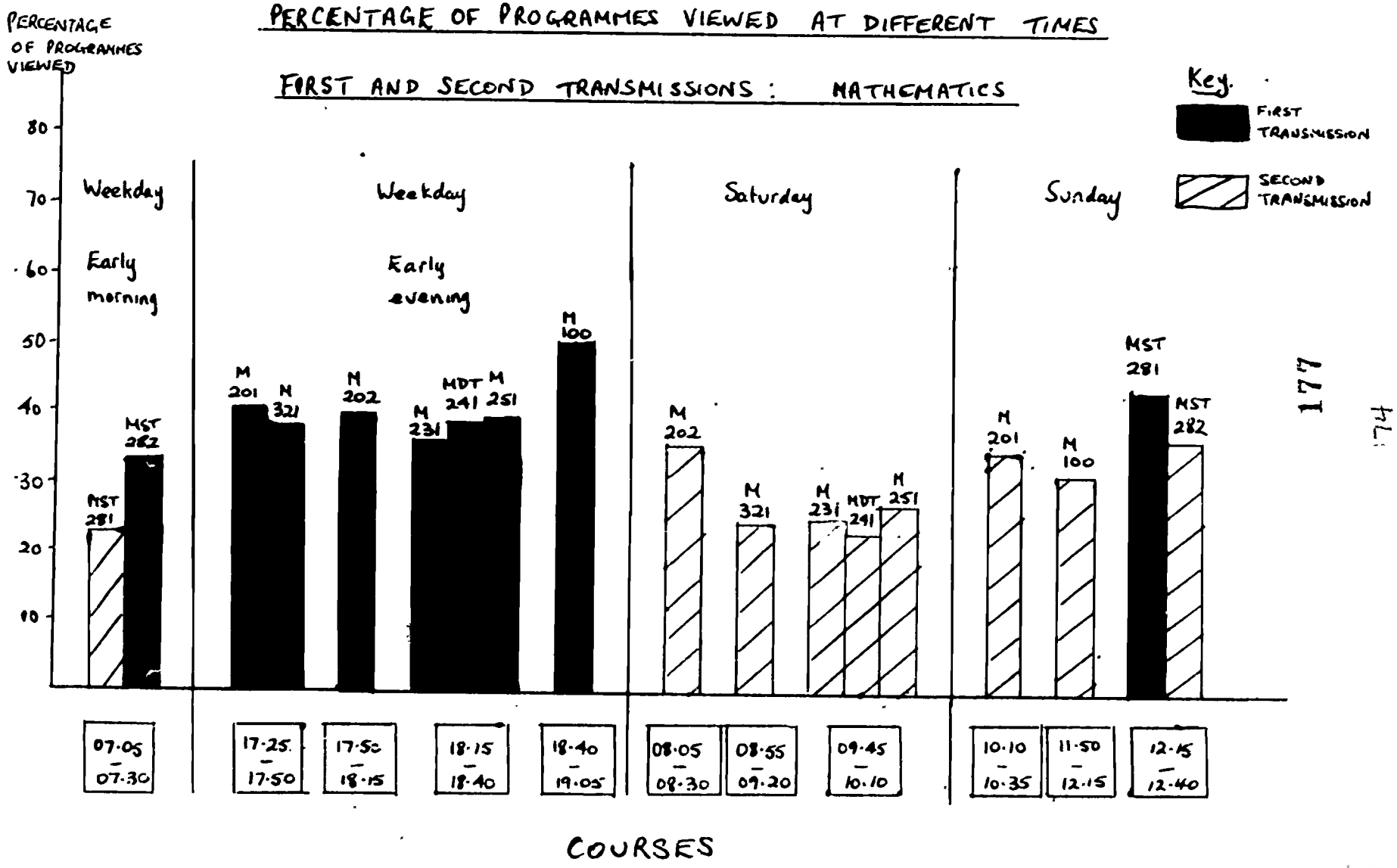


APPENDIX VIII Figure 3

PERCENTAGE OF PROGRAMMES VIEWED AT DIFFERENT TIMES FIRST AND SECOND TRANSMISSIONS : EDUCATIONAL STUDIES.



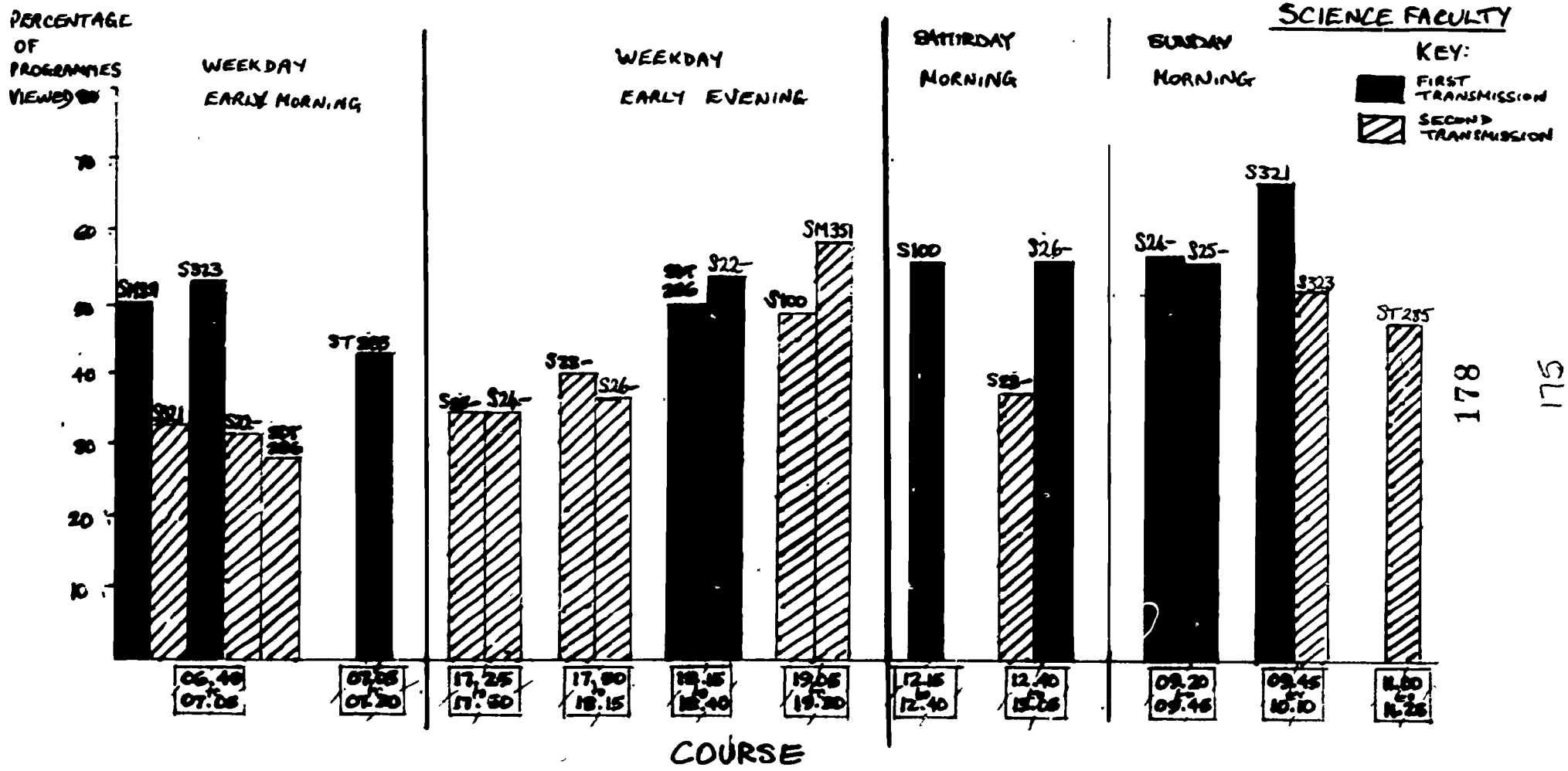
APPENDIX VIII Figure 4



APPENDIX VIII Figure 5

PERCENTAGE OF PROGRAMMES VIEWED AT DIFFERENT TIMES, FIRST AND SECOND TRANSMISSIONS:

SCIENCE FACULTY



178

175

APPENDIX VIII Figure 6

PERCENTAGE OF PROGRAMMES VIEWED AT DIFFERENT TIMES

FIRST AND SECOND TRANSMISSIONS TECHNOLOGY

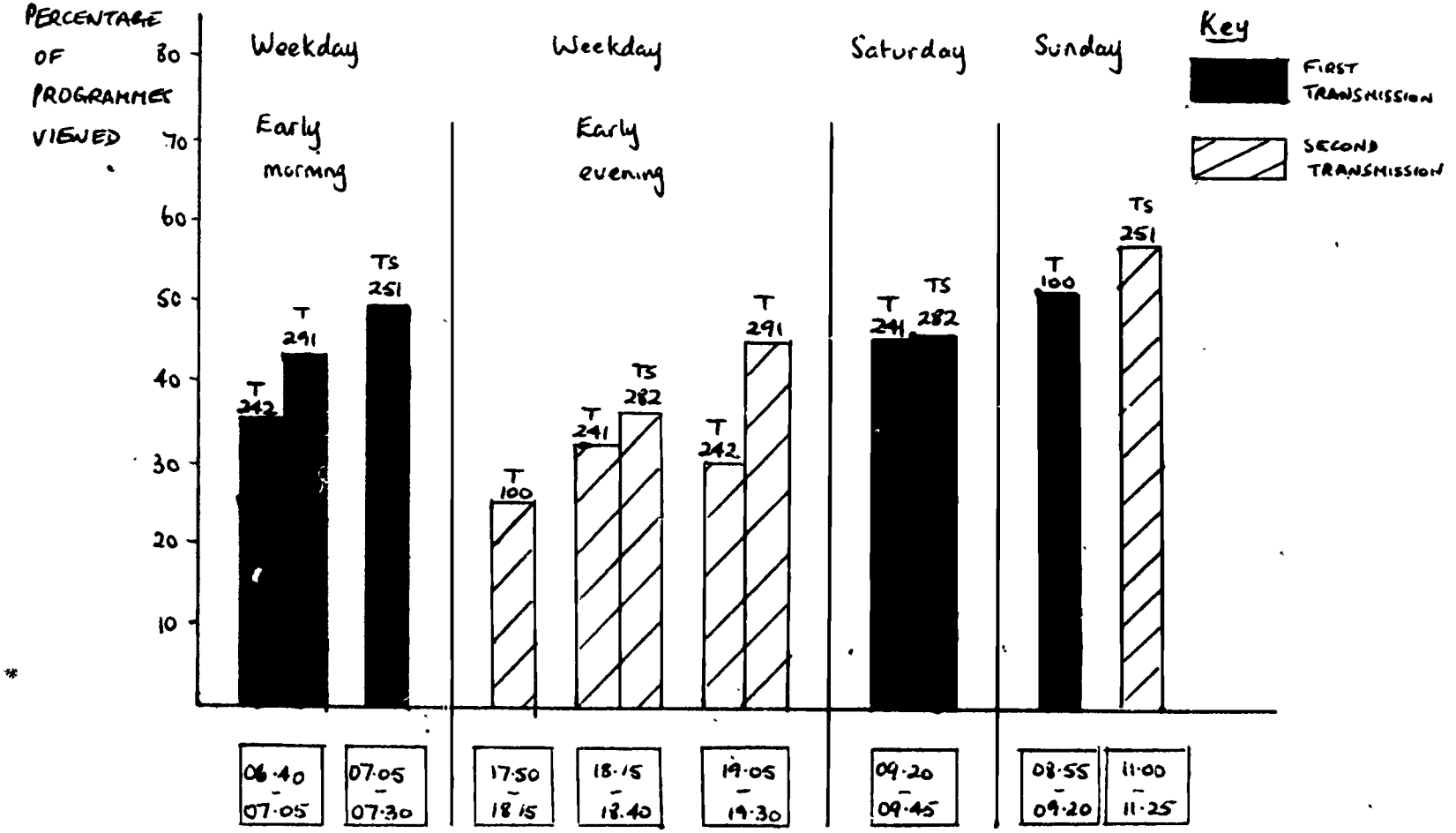


TABLE 1 Early morning transmissions: a comparison between listening figures for first and repeat transmissions.

% of programmes heard on average

Course	First transmission early morning	Second transmission weekend or evening	Both	Recorded	Heard at least once
AMST283	28%	32% +	10%	18%	51%
AST281	31%	29% +	9%	28%	52%
A303	26%	35% +	11%	20%	50%
A304	45%	50% +	23%	51%	73%
D281	31%	25% +	9%	18%	47%
DS261	25%	25% +	6%	20%	47%
D301	35%	26% +	7%	29%	54%
M231	27%	18%	6%	13%	40%
M251	19%	14%	3%	12%	33%
TS251	34%	21%	8%	23%	47%
TS282	35%	17%	5%	21%	48%

Course	First transmission weekend or evening	Second transmission early morning	Both	Recorded	Heard at least once
A201	47%	17%	10%	20%	54%
D203	37%	16%	8%	15%	45%
D342	29%	10%	3%	18%	37%
E281	37%	18%	9%	22%	47%
E283	35%	21%	11%	26%	47%
MDT241	27%	13%	3%	12%	39%
MST281	29%	10%	4%	18%	37%
MST282	23%	10%	3%	14%	32%
M321	21%	13%	7%	14%	28%
T241	35%	19%	9%	20%	46%
T242	28%	17%	5%	17%	40%
T291	35%	20%	6%	24%	50%

TABLE 2 Weekend and weekday evening transmissions: a comparison between listening figures at different times

% of programmes heard on average (all courses had first transmission in evening).

Course	Evening (1st)	Morning Sat. or Sunday (+)	Both	Recorded	Heard at least once
A100	39	30+	13	22	63
D100	36	23	9	18	53
D231	37	18	8	22	51
D331	31	19	8	23	47
DT352	42	23	13	35	61
M100	21	13	4	13	34
M201	20	10	3	11	30
M202	20	17	6	13	32
S100	31	22	7	20	51
S22-	24	10	3	12	35
S23-	41	24	10	26	60
S24-	37	15	6	30	53
S25-	34	18	6	30	53
S26-	35	24	8	40	54
SDT286	24	11	3	13	37
T100	33	17	7	21	47

Course	Evening (1st)	Sat. aft. (2nd)	Both	Recorded	Heard at least once
A202	39	22	11	18	55
A291	40	24	14	26	55
A301	36	28	13	31	57
A302	40	26	14	31	61
A401	33	20	8	17	48
D222	27	16	6	18	42
D282	26	13	5	19	42
D283	29	18	9	17	42
DT201	36	14	6	17	51
E221	35	16	10	23	47
E262	35	22	9	22	50
E282	32	17	10	18	44
E341	35	21	11	22	48
E351	37	18	9	28	51
E352	37	22	15	25	48
S321	28	21	5	21	50
S323	29	18	7	27	46
SM351	33	22	11	29	53
ST285	26	19	8	21	44

- from Survey Research Department Forward Planning Survey -

OPEN UNIVERSITY BROADCASTS:

3. It is likely that in future years we may not be able to repeat all programmes. On this basis would you say for (a) T.V. and (b) Radio, whether you would find the following days and times:

(i) possible and convenient
(ii) possible but not convenient
(iii) just possible with effort
(iv) absolutely impossible

for regular watching and listening to broadcasts?

(please ring an answer for each line) % of students % of students Q13 - 50

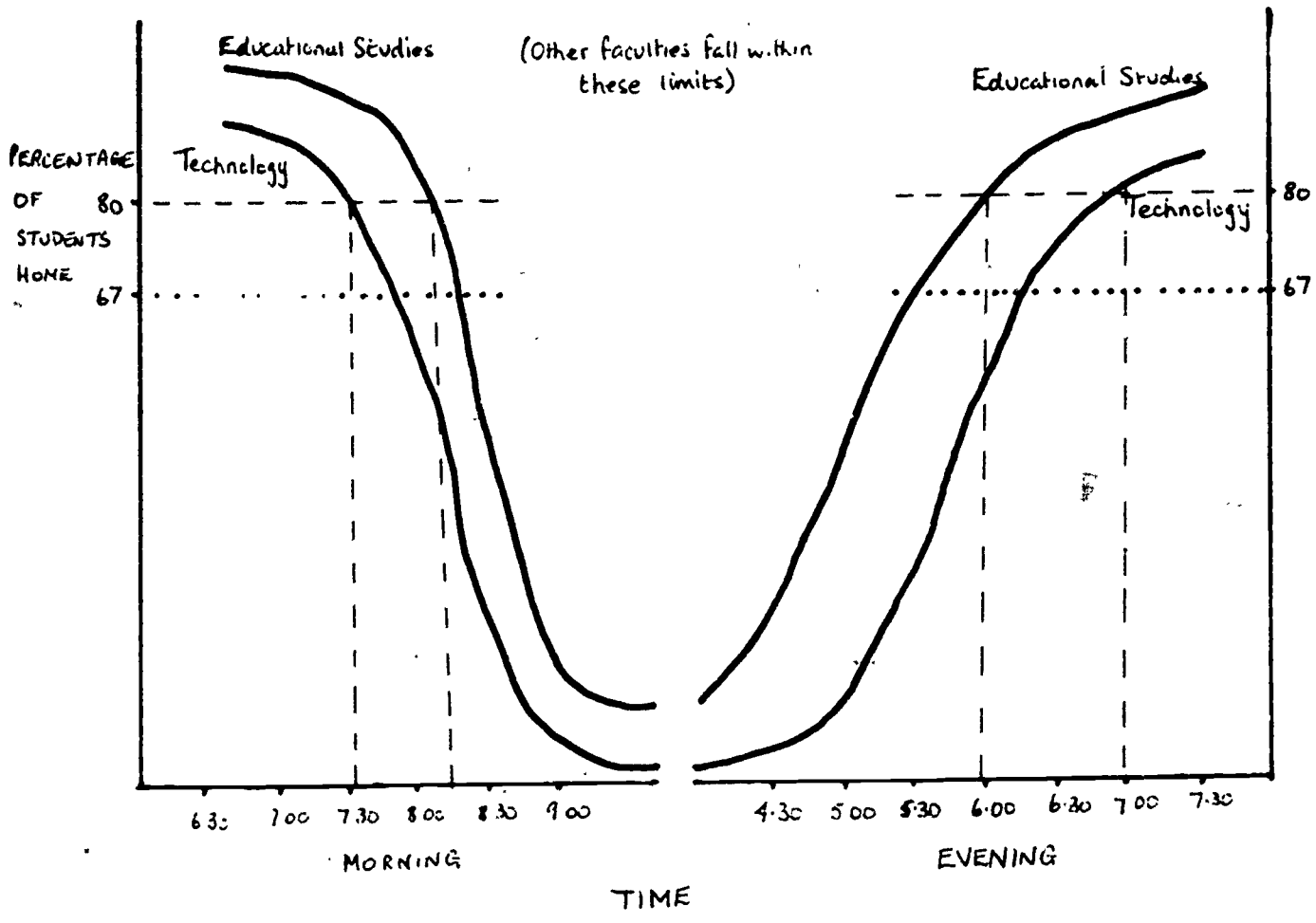
	(a) T.V.				(b) Radio			
	Possible and convenient	Possible but not convenient	Just possible	Impossible	Possible and convenient	Possible but not convenient	Just possible	Impossible
Weekdays: Before 6.00 a.m.	3	22	9	63	3	21	10	60
6.00 - 6.30 a.m.	5	24	13	54	6	24	14	51
6.30 - 7.00 a.m.	11	24	15	45	14	2	15	42
7.00 - 7.30 a.m.	20	23	15	38				
10.00 -12.00 noon	11	4	3	77				
2.00 - 4.00 p.m.	11	5	3	76				
4.00 - 4.30 p.m.	9	7	7	71				
4.30 - 5.00 p.m.	14	11	8	61				
5.00 - 5.30 p.m.	20	15	12	48				
5.30 - 6.00 p.m.	30	20	14	32	35	18	13	24
6.00 - 6.30 p.m.	54	18	13	11	55	18	11	9
6.30 - 7.30 p.m.	80	8	5	3	79	8	4	3
12.00 midnight - 1.00 a.m.	20	29	11	35	21	28	10	33
After 1.00 a.m.	5	23	8	58	6	22	8	55
Saturdays: Before 6.00 a.m.	3	22	9	60	3	21	9	58
6.00 - 6.30 a.m.	6	24	11	54	7	24	10	51
6.30 - 7.00 a.m.	11	25	12	46	12	25	11	44
7.00 - 7.30 a.m.	21	25	15	34	21	24	14	33
7.30 - 8.00 a.m.	30	25	14	27	31	24	12	26
8.00 - 8.30 a.m.	42	22	11	21	42	22	10	20
8.30 - 9.00 a.m.	60	20	9	17	50	19	8	16
9.00 -12.00 noon	61	19	6	11	60	17	6	10
12.00 - 1.00 p.m.	58	20	7	11	58	19	6	10
2.00 - 5.00 p.m.					45	16	5	10
12.00 midnight - 1.00 a.m.	19	26	10	37	20	25	11	35
After 1.00 a.m.	7	23	9	53	7	22	9	51
Sundays: Before 6.00 a.m.	3	21	8	63	3	20	8	60
6.00 - 6.30 a.m.	5	23	10	57	5	22	10	54
6.30 - 7.00 a.m.	10	24	11	50	11	23	11	48
7.00 - 7.30 a.m.	19	24	13	38	20	23	14	36
7.30 - 8.00 a.m.	28	29	13	30	29	23	13	28
8.00 - 8.30 a.m.	42	22	9	22	42	22	8	20
8.30 - 9.00 a.m.	53	19	6	17	54	18	6	16
9.00 -10.30 a.m.	72	12	4	8	72	11	3	8
10.30 - 1.00 p.m.	70	12	4	10				
12.00 midnight - 1.00 a.m.	17	24	10	45	17	23	10	43
After 1.00 a.m.	6	19	8	63	6	19	8	60

Not applicable_____ No T.V. - - - - - - - - No Radio - - - - - - - -

TIME HOME FROM WORK: 1971

APPENDIX XI

(Source. Survey Research Department 1971 Base-line Questionnaire)



Reasons for missing programmes

APPENDIX XII

	% of Students giving reasons						
Television	All	Arts	Soc. Sciences	Ed. Studies	Maths	Science	Technology
Hardly ever missed	24	27	23	19	19	35	26
Forgot	29	28	25	37	30	26	32
Away on holiday	26	31	27	23	19	24	24
Away on business	16	15	20	10	17	15	24
Conflict with Social/leisure activities	16	16	19	19	16	12	13
Not home from work	16	14	15	15	17	17	18
Away at Summer School	13	14	16	4	10	17	22
Difficult with family around	13	16	13	18	11	10	10
Too much other OU work	9	7	7	12	13	7	6
Early morning too early	8	11	7	6	5	8	11
Sickness	8	9	7	9	7	6	6
Not worth it on this course	4	3	5	5	6	1	4
Not worth it on other course	4	3	4	6	5	2	3
Radio							
Hardly ever missed	17	23	16	16	9	17	17
Forgot	33	32	29	39	30	35	34
Away on holiday	19	26	21	18	12	14	15
Conflict with Social/leisure activities	16	17	18	17	13	12	14
Away on business	14	14	18	9	13	12	18
Not home from work	14	12	15	13	12	15	15
Difficult with family around	13	15	14	15	9	12	11
Radio difficult to use for studying	11	7	12	8	15	14	11
Away at Summer School	10	12	14	3	7	9	14
Too much other OU work	9	6	8	11	11	12	9
Early morning too early	7	9	6	8	7	3	8
Sickness	6	8	7	8	5	4	4
Not worth it on other courses	6	3	4	6	9	6	7
Not worth it on this course	5	2	7	4	9	6	5
No VHF set	5	5	5	5	7	5	7
Other reasons	14	13	14	16	18	12	12

APPENDIX XIII

(All comments relating to the Open University's use of broadcasting received as separate letters accompanying questionnaires are included here.)

1. It may assist you to have a little more information. Last year, my foundation year, I took quite a lot of trouble to attend the study centre weekly. I found this extremely useful, indeed it got me through M100. However I don't own a car, and it takes me about 2½ hours travel and waiting to put in 2 hours at the study centre. Obviously this is not on as a long term affair, so this year I cut out the study centre completely.

   This means that I am a very keen supporter of TV and radio teaching since otherwise I would have no stimulation to tackle the large packages of book wisdom that thud through the letterbox. As an extension of this I would also favour telephone hook-ups, audio-cassette correspondence with tutors or regional centres, or anything that provided stimulation and provided gentle reminders that there was work to be done and deadlines to be met.

   Regarding TV, I recognise that this is an expensive and limited resource, so that it has to be used carefully. Suggestions are:- many programmes are for background only and these should be the first to be reduced to one broadcast, although in prime time. Anything with a heavy technical or mathematical content needs to be repeated twice if its contents are really essential to understand. (There are virtually no TV recorders in private hands).

   In contrast to TV, Radio is a very cheap medium, and there appears to be no lack of channels. Each evening I can hear 3 stations pushing out Radio 2; (Radio 2 + 2 Local Radio Stations); Radio 3, Radio 4, and the local Commercial Station, all on VHF. This vast array of broadcasting is covering a very much minority audience, so surely it wouldn't take too much effort to carve a chunk off for OU broadcast over and above what you are doing already. My ideal would be to have a radio tutorial for every course unit.

   As an alternative or addition have you considered the provision of tutorials on tape? A cassette costing about 50p. can now hold about 2 hours discussion. This is probably cheaper than printing.

   One other point regarding TV; (I apologise for this logical backtracking, but it's better than omitting the point); a great many housewives are doing arts courses. If second broadcasts are to be scrapped, would it not be possible to transfer some Arts broadcasts to the afternoon, when I understand BBC 2 transmits a test card. Also must we get up in the morning to hear and see broadcasts? Many people would prefer to stay up late at night and continue watching TV. I believe this is called the 'capture effect'.

   One last point for background, despite the address I am not connected with school teaching. In fact I don't even like school teachers. If they were any good I wouldn't have had to wait until I was 50 years of age before realising I could cope with university study.

   As a corollary to this, I even find it faintly embarrassing to attend a study centre and sit behind desks like a pack of children. I bet you educationalists are so steeped in the worship of your own temples that you don't know such attitudes exist!

2. I believe it is time the 4th TV Channel was given over to education, daytime for schools, weekends and evening for the OU and other types of adult education.

It seems wrong that a device such as TV should only be looked on as an entertainment item by most of the people.

TV is needed for the courses I have already completed and I would imagine for the future courses I hope to take. (S100, T100, TS282, T291 S234, TM221, T321, S333.)

I am sorry for the outburst and please find the completed questionnaire. More power to the OU.

3. I return questionnaire at once, so that I don't put it aside and forget it!

If the BBC is trying to cut down transmissions because of restricted time, may I say that the TV programmes may not always seem essential for the actual exam we take, but build up confidence in the student, because they are relatively simple to assimilate, compared with the written course material, which is often very tough at the first reading. The TV programmes make one feel its not as impossible as all that!

May I add that some Social Science programmes seem to be repeated ad nauseum. I know "Seymour" and "Yours for a Harvest of Souls" are absolutely gripping TV, but we had them so often, I think it must have been a commercial for the TV producers as well as for OU.

The radio programmes are more difficult and also, I thought, more relevant to the course and to the exam. I could have listened again and again without being sated.

The TV and radio are valuable parts of the OU and I hope you will fight to keep them.

The counselling is more important than my form suggests. I missed it this year, but was lucky to have a good tutor, which I didn't have last year for A100.

---

4. Your questionnaire, returned herewith, enables me to state my opinion on the broadcast elements of OU study. I consider that your questions regarding broadcast accessibility, temporarily and geographically, are lacking in a more important aspect, which is not availability but suitability of the programmes.

A303 radio broadcasts are nearly all accompanied by transcripts, so why broadcast them as well? Can the addition of vocal inflection and timbre assist in the assimilation of the knowledge being conveyed?

I consider an even greater absurdity is the TV broadcasts for this course, and again it could be asked whether the assimilation of knowledge is assisted by seeing the philosphers in their chairs engaged in cozy discussion. Of course it is possible that some students cannot derive the same value from written material as from vocal and visual, but in my case written transcripts would have sufficed.

The principal value of TV broadcasts is in presentation of materials and activity that can not be properly demonstrated otherwise, and therefore a TV broadcast of a discussion seems a waste of valuable broadcasting time. I would make the same criticism regarding radio broadcasts that can otherwise be dealt with by correspondence material, particularly when there would seem an urgent need to husband broadcast time.

To revert from destructive to construction criticism, I would make one suggestion. Other students besides myself must have wished for the opportunity to take part in TV or radio programmes. Why not broadcast live from a tutorial evening?

---

5. I hope this reply is not too late. Points I feel necessary to make about Questionnaire : Section A3 code 2-reason for this is proximity of Heathrow which interferes with even the best VHF set. Section B 30 code 1.* I feel these are vital to all courses but I could only attend the first due to domestic reasons. Section B 18 and 23: I prefer to watch and listen twice, even if I think the programmes useless - but this year domestic upheaval has prevented this.

As a working Mother with 2 small children, the youngest 6 months, feed times clash seriously, especially early morning/evening and weekends with both TV and Radio.

* Class tutorials

---

6. May I take the liberty of passing on to you some observations and reflections I have made about the University's use of television.

I have viewed a number of programmes other than those for my own courses including Maths, Technology, Biology, and History programmes. A lot of these have been "good" television in that they have made full use of visual effects to put their points across. I have also watched some religious and philosophical programmes which I would suggest would be better on radio, as for the most part they consisted of "talking heads".

I understand that television is an expensive medium and I would like to make the radical suggestion that TV broadcasting be either discontinued or severely curtailed. In it's place I propose the use of 8mm. sound loop viewers issued to each student. Possibly these could be mass produced cheaply in plastic as were the microscopes. There might be a heavy initial cost which might be offset by savings in the use of television. (There is of course the consideration that administrative costs would swallow up possible savings).

If television broadcasting was discontinued, then I, and possibly others, would miss picking up incidental snippets of knowledge from other courses and our total world picture would become impoverished. But this is a marginal consideration as the primary purpose of any broadcast must be to convey information to the registered students of that course. It could be argued also that to discontinue such broadcasts would diminish the student's sense of corporate identity with the University. But I would suggest that this is also a minor consideration.

If the University thinks that television broadcasting is essential would it not be possible to confine these to the weekend between say 9 a.m. and 9 p.m. This would give 24 hours of television and to make sure that it is used effectively. ould it not be made madatory that students (where possible) attend a study centre for 40% of the broadcasts and have them linked to tutorial? (The attendance counting towards a course credit.)

I can see that there would be difficulties in administration, in engaging tutors and the hire of study centres, but students and tutors could attend on a fortnightly or three weekly basis which would give students time to complete essays and tutors time to mark them. The biggest snag that I can see is the number of students per course in the study centre's catchment area.

There may of course be other difficulties which I have not foreseen which could make such a scheme inoperable and it may well be that the University has considered and rejected similar suggestions. If this is the case please don't hesitate to put this letter in the nearest waste paper basket.

---

7. There is one aspect which your questionnaire did not mention and which on occasion I found most useful, often by accident! I refer to "ordinary" documentaries made by both TV organisations. Sometimes the titles of these give little indication of their true content.

Perhaps it would be useful if these authorities could give the OU advance information of context and possible viewing dates. I feel many courses could be enriched and students could make an effort to view these to everyones advantage.

The number of class tutorials given in this course were so few as to be limiting.

Mr. ..... made himself available at home and those of us who made the effort to journey that far, found the experience very rewarding.

The lack of numbers in any one locality of course always makes chatting round a subject very difficult to organise. I think more students would make the effort if counsellors pushed the point more forcibly. They are all too nice to us!

---

8. I am afraid that my answers will not be of much help as we can not receive VHF or BBC 2 - Question 30 does not mention telephone tutorials which were arranged for "remote students" and which were most helpful. My correspondence counsellor is always most helpful but just did not need to be involved with DS261.

9.I hope my comments on the questionnaire prove useful. On the whole the TV of D100 did not compare favourably with previous science TV programmes. Some were marginally helpful but it is difficult to be objective since I found the course hard to get hold of generally. Due to excellent counselling help and discussion group, the TV deficiency did not matter too much. The radio, I'm sure would have been useful but was at a time when 'all hell' is let loose in the house (bed-time) and I usually forgot to record it. The repeat at the weekend clashed leisure activities. The radio programmes I did listen to were long-winded and I found myself dozing. I didn't really listen to enough to form a valuable opinion of their use.

Finally, though not related to this questionnaire I do feel that science TV is invaluable in providing practical help to augment the correspondence text. It annoys me to switch on the television and find a discussion group, or someone talking to the camera. This can be done on radio or even radio/vision. S2-5 radio/vision programme very helpful.

---

10. The enclosed questionnaire prompts this letter; points that have sort of appeared particularly this year (my 3rd) but have been lurking since I started. They're mostly not broadcasts so suggest that during the hectic days of analysis you might be advised to put it on one side for now or pass it to someone else!

First TV programmes. I always try to watch 1 transmission and if it's technical (M100, TS251) try and catch the repeat. Frequently find that after waking up early and watching bleary eyed I don't really absorb as much as I'd like. Quite a number of programmes although interesting don't really teach much/anything and are, in my estimation, a waste of time. Why not indicate how vital the course team (or past students response*) consider a programme is. If not vital but interesting background material, transmit it once!

*get response on CMA forms as TS251 has done in such detail this year.

Above of course goes for radio too, which is perhaps a special case for dropping repeats because every study centre should have tapes of all radio programmes (they could be $1\frac{7}{8}$" sec. and at this speed and a 4 track machine I can get 2 × ½ credit courses on 1 reel of tape!) I don't know the relative cost of TV "live" transmission and making cassette viewing possible at all study centres but this could (?) bring some savings of valuable air time.

Home experiment kits are a farce! My T100 kit was little used (apart from the recorder) and my TS251 mostly went back in the box as received - I did all the experiments at summer school where under supervision they worked and were much more informative. Scrap them <u>but</u> make <u>local</u> demonstration a vital part of instruction (but I must protest about course centres 50 miles away, my tutorials for AST 281, TS251 both at Bristol 50 miles away, attended 1 of each).

Counselling seems to vary dramatically, in year 1 (M100) wouldn't have possibly got through without the hand in glove arrangements of tutor and counsellor working together and local study centre; I attended the weekly t and c session about 80% of weeks. Year 2 (T100) local study centre again but although t and c both worked together (outside OU) felt always a spirit of rivalry between them which splintered (for me) the group - attended 3 t/c sessions! (M251 tutorials meant an 1½ hour tutorial so didn't attend any). Year 3 and unfortunately same counsellor as year 2; he was good on getting extension to cut-offs but useless on everything else, didn't contact <u>me</u> once, even failed to notify us of an open talk on integrated circuits which would have been of interest to all technology students-one was attended by 1 maths student.

Cannot the OU do some personal monitoring of counsellors and/or tutors and encourage (by CMA form) student comment?

Instead of asking all students to have VHF radio ask them to have a cheap cassette player and loan/give them radio programmes and make them <u>vital</u> so that they get used (played 1½ of the T100 cassette free issues). Make TV programmes available as cassette or video at local study centres then ensure they are vital.

10. cont. The above views, although my own, are in many instances supported by my talking to other students particularly at summer school (which by the way I consider very important - shall miss it next year). Much of the media put out by OU is OK for the housewife (god bless 'em) but the working man with a busy day and playing trumpet in a dixieland band (profile of the average student of course) who doesn't mind the pressure of OU activity wants to feel that having made the effort to watch, listen, read or attend doesn't want to find a load of padding.

I have a good friend who works for OU staff and I've talked about this with him - seems the OU isn't perhaps as aware of how its students feel - the questionnaire should cover the whole of OU activity.

P.S. Nearly forgot - why don't some regions run day schools to mop up several tutorials? A good idea. If you've got to drive 50 miles at least make a day (dare I say weekend) of it.

---

11. Please fight hard for TV and radio time - they are extremely worthwhile components of courses - hope the computer agrees.

---

12. Excellent course, except for TV broadcasts which generally show shots of normal situations i.e. hospital behaviour, coloured ex. prisoner and white wife interactions. These had no discussion or voice in the programmes, thus no direction was given, and student was left entirely to his own initiative. (OK when students have unlimited time.) These type of ordinary situation shots can be found in a wide range of ordinary TV programmes. Ordinary TV programmes may provide excellent or even better examples of situations. What I expect from an OU TV broadcast is descriptive and explanatory material. i.e. Situation followed by tutor voice, (and V a V) animated diagrams, models etc., and discussion.

Reading material is excellent, but is a heavy load, if one is doing a full credit course at the same time.

P.S. In contrast to D283 TV programmes, D100, A100 and D203 are very useful. Also D283 Radio programmes I found better than radio programmes for other courses.

13. I feel that I must add to the bare answers - I cannot expect the computer to understand that my life, both working and social, is governed by shiftwork. Air traffic control goes on for 24 hours a day, and I work an odd pattern of shifts covering all hours, consequently I could catch a TV or radio programme at any time of the day or night, but equally I could miss one whatever time it was on. I can sometimes see TV at work if I can persuade someone to do my work for me, and radio is not a problem because I can bribe a member of my family to record it. I am sorry that this does not help with your scheduling problems at all, but perhaps a few general comments might be of some use -

I feel that better use could be made of radio and TV, in both cost and time, if it were not so firmly based on a regular schedule. In my brief experience (A100 and A201), some topics and units are enormously helped by broadcasting - music and drama, art and architecture come immediately to mind - while, at the other extreme, some programmes appear to be put in simply because the schedule demands one, and these are of little value. I would estimate that about one third of current broadcasting time could be saved by a combination of pruning out these weak links and increasing coverage for certain topics. It would mean irregular scheduling, more complicated for the student but not necessarily unacceptable, and I am sure that the computer could cope with working it all out. While it was doing it, perhaps it could share out the unpopular dawn slots! If the principle of irregular broadcasting were accepted, a further advantage would be that programmes could vary in length, enabling a whole play or symphony to be performed. Clearly, I am biassed - my life follows anything but a regular pattern and it works - and I am sure that such a system would not suit everyone. It has probably been discussed and rejected before, but, when time and money are so pressing, it is surely worth further thought.

---

14. The Tape Cassettes, with printed notes, were better than many of the TV programmes; and more convenient than the radio.

---

15. 15(b). Normally listened to the repeats for Wales/Scotland, midnight Saturday/Sunday. A few hours on Wednesday.

16. Study Centre 20 miles from home. Would attend only if recordings available when tutorials take place, or if a number of broadcasts available at one time and facilities to tape them for later use.

Have you considered the issue of duplicated samples, mailed with course materials, for courses taken by small numbers of students like A401?

30. Class tutorials virtually non-existent. (One hour). Also face-

15. cont. to-face tuition (one hour). What little there was provided was very useful. An additional meeting would have been most useful. The role of the counsellor in a course of this nature can ooviously be of limited use only, unless personal problems arise.

28. I found late night broadcasts very useful and prefer them to very early morning transmissions or even Saturday afternoons, when family commitments can make listening or watching difficult.

---

16. I think that the OU broadcasts are very useful. If you can, perhaps you submit a proposal for separate educational channels - both for OU and other BBC broadcasts (e.g. "Office", "computers", "Social Science" etc.)

---

17. 3. Retired, old, somewhat deaf practical scientist of 76, who has a poor opinion of the excessive ARTS approach with its medieval philosophical discussions.

4. Am more interested in watching sport on Saturday afternoons on TV (All-in wrestling is NOT a sport.)

6. Am considering acquiring a tape recorder.

7. Present record player, presented on my first retirement in 1959 (I have now retired for the 3rd time) has packed up. Will replace.

8a. & 9a. Retired for 3rd time.

11/12. Not applicable.

13. Open Forum. Not very interested, and in any case I usually either forget or listen or see something more attractive.

16. When my tutor travels to Hereford from Stratford on Avon, I make every effort to be present even if I do dislike night driving.

30. Hearing difficulties especially at 1-day schools (Birmingham). May try recording and listening later at home.

P.S. I do view other scientific TV programmes. At first I had to guess., then the Telegraph took to stating subjects, and now Radio Times does give some information. I did write months ago, suggesting it.

---

18. Radio

1. I found the radio-vision method used on T291 very useful, educational, interesting and requiring more participation and attention. This method could usefully be extended to other courses.

2. If radio transmission time is to be limited and undoubtedly with the increasing number of courses this will probably occur, set programmes could easily be replaced by cassettes or discs. Cassettes would however be too expensive and maybe discs could be more economically viable. The discs need only be those very thin plastic sheets such as are used by Readers Digest as sample demonstration and advertising. This would be cheap enough to be able to be thrown away if necessary after use and perhaps more people have record players than cassette players.

3. By putting set programmes on to disc, the available programme times could be used more as tutorials and technical feedback programmes.

Television

1. M100 had some very good programme notes and pictures, the pictures being taken directly out of the programmes. Having recorded the sound I found the notes and pictures of great value when playing back. Where it is possible, an extension of this scheme to other courses would be of value.

2. Within the restraints of available transmission time I would like to see as much involvement as possible of television with course units.

General

1. I found the broadcast and assignment calendar issued with T291/TS282 invaluable and this system could well be extended to others.

2. Perhaps course notes could make reference to those programmes on other courses which could be of use on one's own course.

3. The involvement of student/tutor/summer school/radio/television must be maintained to avoid the OU becoming the purveyor of correspondence courses.

19. Regarding your present survey, I wonder if you are aware of the special circumstances that have now arisen in Wales.

The Government would seem to have accepted the Crawford Committee's recommendations to allocate the fourth TV channel to Welsh language broadcasting in our area, thus pre-empting the Annan Committee's deliberations. While welcoming the decision for a separate Welsh language channel, both for sparing annoyance to non-Welsh speakers, and for the preservation of our Welsh heritage, I feel that future plans for educational broadcasting (and OU broadcasting in particular) may suffer in this area unless the right steps are taken now.

The trade union to which I belong, the Association of Cinematograph and Television Technicians, has proposed a fifth channel for Wales, and had backed this up by technical and financial facts and figures (I could let you have a copy if you are interested), which demonstrate its feasibility. The OU might well consider this solution for its future broadcasting plans in Wales.

---

20. I feel I must offer a few thoughts on broadcast facilities because my questionnaire answer will not help you much.

I am serving in Germany and so cannot receive any broadcasts. Before coming out here I took D100 in England and saw all the TV programmes and listened to all the radio broadcasts. As a matter of normal routine I tape recorded ALL broadcasts so that I could refer to them when revising. This was successful but involved me in a lot of fairly detailed indexing so that I would not have to listen to many minutes of tape in order to find the required passage. Also I realised it is not really possible to browse through tape - browsing is something I do frequently when preparing TMAs.

I found the most useful of all broadcasts to be television programmes that I watched at the study centre with my fellow students - 25 minute television would normally be followed by 2 hours argument and discussion. I believe that TV and Radio are very important for foundation students because they somehow give a feeling of all belonging together - a corporate oneness with the University itself; which to me was much more important than the obvious educational facets of the media.

Halfway through my second year studies, D203, I left England and came to Germany. I missed the TV and radio but not too badly. The lack of media made me read my unit material more avidly and carefully.

During this last year I have studied two ½ credit third level courses and have not seen any TV or radio. If anything this made my studies simpler because all I could do was concentrate on the unit material and the books. But I was, and still am, worried that I was deprived of a source of information and feel there may be a gap in my knowledge of the subject - a gap of which I am not even aware!

One of my half credit courses was DT352 and it required me to have detailed knowledge of selection interview broadcasts. The course team had anticipated that some students would not be able to receive broadcasts and provided transcripts of the broadcasts. To me they were invaluable. I made three applications to the OU for transcripts of other broadcasts only to be told that it would not be administratively possible to provide them. I am now about to start my fourth year as a student, I have studied with and without broadcasts and feel that though broadcasts are useful, helpful and give a feeling of togetherness they are not essential. Your questionnaire makes me think that you are concerned about people who can't manage to fit in broadcasts at convenient or normal times. May I be allowed to enter a plea for those students who cannot receive broadcasts at all - my suggestion is simple - please make transcripts available to those students who ask for them.

In 1975 I hope to be doing D231, D332, D282 - without TV or radio.

Is there any chance of getting the broadcast transcripts?

---

21. There are one or two comments that I would add to the answers. First in the case of the radio programmes, it is difficult to say from memory how many I heard either on the first or second transmission. Since I have a cassette recorder it did not matter whether I was at home as long as someone could record the broadcast for me. DT352 is I think a very good course and my answers to the question 30 would not be the same for other courses.

    You will observe that I hardly ever listen to or watch Open Forum. This is due to a lack of time as I am a member of my local authority and am also an office holder in my trade union. It does not indicate a lack of interest.

    P.S. The cassette tape recorder was well worth the money, and it is a pity that it is not possible to buy a cheap video machine for the TV broadcasts.

---

22. A completed questionnaire is attached. I hope that it is not too late for your purposes. As a commuter, and fairly busily engaged in after work activities, (Churchwarden, etc, which involves me in various meetings) time is rather at a premium. However, if I may, I would

22. cont. like to give my views on the use of TV and radio so far as the Open University is concerned, at the end of my fourth year exposure.

First of all, I think its value depends very much upon the type of course. TV is a visual medium. It should, I feel, therefore only be used - being an expensive medium - when for a student it is presenting something visually that cannot otherwise be presented to him. This may not be so when it is attempting an approach on a particular subject to the general public, who do not have beside them the appropriate Course Units and Set Books. But an OU student has these. It is no gain to him to "see" two Professors talking to each other on Philosophy, when he has the script already, and the set book, and cannot intervene to ask questions. Similarly for Radio talks, some of which have been a deplorable waste of money.

I found that the TV programmes were most helpful on the A100 and D100 courses. Even more so with the Renaissance and Reformation programmes for A201. Also the D201 and some of the A301 programmes, (except that with this last course some of the War and Propaganda films were so scrappy as not to have been worth the research). I cannot say that I found much value in any of the radio talks that I listened to in the earlier course, except those on Music, which were very useful in that this did not really require TV but the all important sound could not be conveyed in a script or set book. Although I very much enjoyed the Course (A303) on Problems of Philosophy I felt that the TV and radio programmes were a waste of expensive media.

During this last Course - A401 - I watched the opening two TV programmes and then considered the relevance of the TV and radio programmes. The problem here was unsuitable time (early morning, when in a hurry to get my breakfast and catch a train - if a train was running) and just about getting indoors, if lucky, as a programme came on, and when I was hardly in a fit state to consider the problems of Britain 1750-1950. (1974 gave me enough problems.)

Finally, there is the question for the student of "Cost Effectiveness" in the deployment of his time available for study. Looking at the Radio and TV programmes for A401, and bearing in mind my own particular "Research Project" I felt that all the time I had to spare could most usefully be employed in reading and preparation of required assignments. So, although with earlier courses, other than Philosophy, I felt that the radio and TV programmes were likely to be (and were) of real value, this did not apply to some programmes and hardly at all to Philosophy or A401. I could have got more value out of extra time on say Saturday School or extra tutorial.

Thus, to sum up, for a commuter for whom leisure and study time is precious, and certain times for programmes are quite unsuitable, TV and radio should only be used where it is essential that a visual approach is needed, (in TV) or a "Sound" approach for Radio. (Music). I would also be prepared to pay, if necessary, for an occasional record for any music or speech record, if this would give me something essential that could not be given by the printed work, especially seeing that the student, unlike the general listener or viewer, has by him the printed word.

---

23. My abandonment of the OU course was due to changes to job, involving travelling and adverse conditions. The year Sept. 1973/Sept. 1974 has been a year I would rather leave behind!

Now I have changed my job from teaching to local government clerical work, and I work locally.

I did find it muddling to have to refer to numerous pages to find details of Radio and TV programmes. If it were possible, I should think that a printed card or booklet set out in days of the week - with all programmes set out (parallel columns for Radio and TV?) in order of times of broadcasts, would be invaluable. Each student could then underline or ring each programme for his/her course. A pocket or handbag size would be useful, so that it could be referred to easily. I tried to note the times and details of broadcasts in my diary, but this proved time consuming, tedious and as the diary became full, so broadcasts were overlooked.

Some broadcasts were missed because of committee meetings/ school activities etc.

I hope the completed form (which is untypical of previous years in my case) will be of use.

---

24. May I add this - if a television programme was missed - or a radio - then that particular programme was missed, unless a friend taped either. When I did miss a programme I invariably missed the repeat, but I taped all I could and exchanged these with fellow students.

This was a very good course and I more than grateful that I got through. Well, I would have hated having to try the exam twice!

---

25. Regarding the enclosed questionnaire - you may find some of my answers conflicting. Due to my physical disability attendance at Study Centre is flexible as I am dependent upon friends transport to get there.

25. cont. And concerning BBC 2 broadcasts, have only been able to receive this transmission in my own home since Nov. '74, so hopefully I may be able to follow them better in 1975.

---

26. So far as the television broadcasts were concerned I felt a lot more could have been made of the media, the broadcaster seemed to intrude on the subject matter.

Personally my greatest help was having my husband taking the course at the same time and the discussions and mutual support we gave each other, because we approach things in different ways, enabled us to stay the course.

---

27. The number of radio Open Forum programmes watched is very approximate, the low figure being the result, largely, of both Open Forum programmes clashing with both A304 TV transmissions in alternate weeks. I did sometimes remember to listen to the end of the O.F. programmes to find out when delayed course units were due for dispatch!

I realise I may be rather unusual in that I would prefer weekday programmes to be transmitted early in the morning. I am not particularly enthusiastic about early rising but at least I can be sure of being at home at that time, which is more than can be said for early evening.

The most inconvenient times, from my point of view, are Friday evenings and Monday evenings since I spend some weekends visiting my parents.

The reason why I saw some TV programmes twice is that during the energy crisis last spring I feared a power cut might prevent me from watching the weekend transmission. As getting home in time for the programme on Wednesday entailed using up some of my annual leave I gave up doing so after the crisis was over.

It is most unlikely that I could watch any TV programmes during working hours but I could probably record a radio programme at any time.

I would particularly like details of broadcasting times very much earlier than at present, preferably at the time of conditional registration since this could make a difference in which course I decide to take.

---

28. When I began my studies in the first year of the OU's life I did not possess VHF radio or BBC 2 TV. I had therefore to spend about 2 hours travelling to a Study Centre to hear and watch the transmissions. This, in bad winter weather, was very tiring and after a couple of months of travelling I decided to

concentrate on studying at home. As long as my assignments earned satisfactory marks I was content.

The difficulty of travelling also led to my dispensing with tutorials at the same time, and since those first two months I have attended only one Counselling session, and that was the one introducing the 2nd year course.

As time went by it seemed to become more important to me that I should succeed using only the Course Units, the Set Books and the written comments on my TMAs. I hasten to add that on all occasions (infrequent though they have been) when I have met tutors and counsellors they have been most kind and courteous and genuinely desirous of helping all their students to the best of their ability. I particularly enjoyed my fortnight's Summer School at York where the tutorials were most valuable.

I do not doubt that had I listened to all the radio and television programmes my grades would have benefited, but as I have no car, the drain on my energy caused by travelling did not seem to be worthwhile if I could possibly avoid it.

So far I have been successful in the task I have set myself, and, if I have passed my two examinations satisfactorily this year, I shall have been completely successful.

---

29. I apologise for the delay in answering your letter on the above subject.

I am unable to receive BBC 2 or VHF transmissions at this address so I feel that I have nothing to contribute to your survey.

Although I was not impressed with the transmissions for S100, I was struck with the excellence of transmissions for M201. I intended to view these at the home of a relative but this proved to be inconvenient. I purchased a small but efficient portable television receiver and paid £25 for an investigation by a television aerial company with a view to obtaining programmes at my home but to no avail. I managed to receive some programmes by travelling some distance and viewing the programmes in my car, but you will realise that time is a valuable commodity and I was unable to gain the maximum benefit by this procedure.

---

30. To view, or listen, early or late, disturbs the household; and negatives the result! Many, or even most programmes, I would benefit from twice, and would enjoy this. Note Scotland radio repeats are 00.55 hours. So long as one programme is at a reasonable hour, I have no criticism.

OPEN UNIVERSITY

Audio-Visual Media Research Group

I.E.T. PAPERS ON BROADCASTING (excluding Evaluation Reports)

(All papers are available on request from: Mrs. Susan Cox, IET, ext. 3543).

BATES, A.W. Exploring the media (Internal memorandum) 1970.

BATES, A.W. Media research (Internal memorandum) 1971.

BATES, A.W. Evaluation of broadcasts and student assessment (Internal memorandum) 1971.

BATES, A.W. Use of broadcasts in "parallel" to correspondence texts. (Internal memorandum) 1971.

BATES, A.W. Who needs broadcasting? (Internal memorandum) 1971.

BATES, A.W. Evaluation of broadcasting at the Open University, in AUSTWICK, K. and HARRIS, N.D. (eds.), Aspects of Educational Technology VI, London: Pitmans, 1972.

McINTOSH, N.E. and BATES, A.W. Mass-media courses for adults, Programmed Learning and Educational Technology, Vol.9, No.4, 1972.

BATES, A.W. The role of the teacher in a video-teaching system, Auto-Video Conference, Vichy, France: UNESCO (Unpublished), 1972.

BATES, A.W. and McINTOSH, N.E. Student access to audio-visual material (Internal memorandum DFB/30/12) 1972.

BATES, A.W. Student preferences for audio-visual material (Internal memorandum) 1972.

BATES, A.W. Broadcast Allocation Policy and Transmission Times (Internal memorandum DAV/3/1 and 2) 1972.

SKELLINGTON, R. Content Analysis and the Educational Media, (Internal paper) 1972.

BATES, A.W. The use of broadcasting at the Open University, Harvard Graduate School of Education Association Bulletin, Vol.XVII, No.2, 1973.

BATES, A.W. An evaluation of the effect of basing an assignment on broadcast material in a multi-media course, Programmed Learning and Educational Technology, Vol.10, No.4, 1973.

PERRY, W., BATES, A.W. and MOSS, G.D. Multi-media methods at the Open University, Anglo-Rumanian Society Conference, Cambridge, England, 1973.

BATES, A.W. Educational and cost comparisons between open-network, cable, and cassette systems of multi-media teaching, 8th Mediorama, Blankenberge, Belgium: Kingdom of Belgium Ministry of Employment and Labour, 1973.

BATES, A.W. "Problems of broadcasting: a guide to tutors," in Teaching by Correspondence in the Open University. Milton Keynes: Open University, 1973.

BATES, A.W. and RADCLIFFE, J. The Open University and the BBC. Audio-Visual Communication in the University. Liège, Belgium: AUPELF, 1973. (also available in French)

BATES, A.W. and MOSS, M. Research into Open University Broadcasting. 1971-72 (Internal Memorandum), 1973.

BATES, A.W. Guide to Feedback on Broadcasts. (Internal memorandum), 1973.

MOSS, M. Concerning Content Analyses, (Internal memorandum), 1973.

MOSS, M. Attitudes, expectancies and television. (Internal paper), 1973.

GALLAGHER, M. An evaluation of the CTh scheme, (internal memorandum TB/21/23b) 1973.

BATES, A.W. Video-cassettes the Open University, in LEEDHAM, J. and ROMISZOWSKI, A.J. (eds.), Video-cassettes in Education and Training, London: Kogan, Paul. 1974.

BATES, A.W. Success and failure in innovation at the Open University, Programmed Learning and Educational Technology, Vol.11, No.1, 1974.

BATES, A.W. Obstacles to the effective use of communications media in a learning system, in JAMIESON, G. and BAGGELEY, J. (eds.), Aspects of Educational Technology VII, London: Pitmans, 1974.

BATES, A.W. Problems of learning from television at a distance, in Frontiers in Education, London: Institute of Electrical Engineers, 1974.

BATES, A.W. The role of the tutor in evaluating distance teaching, Teaching at a Distance, Vol.1., No.1., 1974.

BATES, A.W. What are we going to do about broadcasting? Sesame, 1974

BATES, A.W. Suggested criteria and guidelines for the allocation of broadcasts, (internal memorandum, BC1h/6/c) 1974.

BATES, A.W. A proposed programme of evaluation (internal memorandum, EVC/3/1), 1974.

BATES, A.W. A design for an evaluation system for educational media in Thailand: Bangkok, Ministry of Education, 1974.

GALLAGHER, M, and MARSHALL, J. The Video Cassette Recorder Project, (internal report, P28/10), 1974.

COOPERMAN, M. An Open University Study Centre and its relation with the Community: A Case-Study in Community Media, Paris: UNESCO, 1974.

MEED, J. Classification of Radio Broadcasts: Format and Technique, (internal report), 1974.

BATES, A.W. Report on distance teaching in Peru, (internal report), 1974.

HANCOCK, A., BATES, A.W. and SLOANE, B. Television programme research and prototype production unit, Poona, India (mission report). Paris: UNESCO, 1974.

MARSHALL, J, and GALLAGHER, M. A cassette replay service for students? Teaching at a Distance, Vol.1, No.3, 1975.

GALLAGHER, M, and MARSHALL, J. Broadcasting and the need for replay facilities at the Open University, British Journal of Educational Technology, Vol.6, No.3, 1975.

GALLAGHER, M. Broadcast evaluation: what can it tell us that we don't already know? (Internal paper),. 1975.

BATES, A.W. The future of broadcasting at the Open University (Internal paper), 1975.

BATES, A.W. Student Use of Open University Broadcasting, Milton Keynes, Open University, 1975.

BATES, A.W, and GALLAGHER, M. A summary of the 1974 Broadcast Evaluation Programme, Milton Keynes, Open University, 1975.

BATES, A.W. The use of television and other audio-visual media in the Open University, Scienza e Tecnica, 76, Milano, Mondadori, 1976 (in press).

BATES, A.W. and GALLAGHER, M. Summary of Activities of Audio-Visual Media Research Group, 1974, (internal paper), 1975.

BATES, A.W. The Control of Broadcasting at the Open University, Educational Broadcasting International, 1975.

BATES, A.W. and PUGH, A.K. Designing multi-media courses for individualised study: the Open University model and its relevance to conventional universities. Presented at a meeting of the Northern Universities Working Party for Co-operation in Educational Technology at Grey College, University of Durham, 7th July, 1975.

BATES, A.W. A summary of the results of the 1974 survey of broadcasting, regarding Open Forum programme, (internal paper, OFP6/7/5), 1975.

BATES, A.W. Some Developments in Advanced Educational Technology in South-East Asia. A report on a study-leave visit to South-East Asia, 1975. (Confidential: not to be distributed without permission of the author.)

BROADCAST EVALUATION REPORTS

GALLAGHER, M.	M231	TV 1,2,3,4 R 1,2	Analysis
GALLAGHER, M.	E221	TV 3 R 6	Cumbria Case Study
BATES, A.W.	T291	TV 6	Fourier Analysis and Transducer Response
GALLAGHER, M.	S24-	TV 7 R 3	Industrial Chemistry Component.
GALLAGHER, M.	E221	R 15	Caught in the Net

THE OPEN UNIVERSITY

INSTITUTE OF EDUCATIONAL TECHNOLOGY

AUDIO-VISUAL MEDIA RESEARCH GROUP

Tony Bates	Senior Lecturer in Media Research Methods
Margaret Gallagher	Research Officer (Media)
Carrie Roberts	Research Assistant
John Meed	Research Consultant
Oonagh Waugh*	Research Consultant
Susan Cox	Secretary
Vera Lynham*	Research Clerk
Gillian Clarke	Research Clerk

* part-time