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AN INVESTIGATION OF THE COMMITMENT ON ENTRY
OF STUDENTS WITHDRAWING FROM A TEACHER TRAINING COURSE,
WITH CONSIDERATION OF SOME OF THE CONSEQUENCES.

Presented for the Degree of MED
of
THE UNIVERSITY OF DURHAM
based on
Research conducted in
The Department of Education
by
A I Gwendolen RENTON, BA(Hons), London
September, 1979

ABSTRACT

RENTON, A I Gwendolen

September 1979

AN INVESTIGATION OF THE COMMITMENT ON ENTRY OF STUDENTS WITHDRAWING FROM A TEACHER TRAINING COURSE, WITH CONSIDERATION OF SOME OF THE CONSEQUENCES.

This thesis attempts to probe some aspects of student wastage from Colleges of Education.

Some of the extensive restructuring of teacher training, since the general course was lengthened to 3 years, is outlined. Developments in entry qualifications, attitudes to mathematics and science, Governmental decisions and the reactions of the Colleges are considered. In the light of these changes, college based studies of the problem of "drop-out" are reviewed and the relevance to the Colleges of some of the University studies is sought as the diversification of courses is currently being implemented. Influences on wastage, including selection procedures and some philosophical, psychological and social effects are discussed prior to a consideration of student motivation, reasons for withdrawal and the assessment of teacher trainees.

Two questionnaires used are described against a background of some relevant points of survey theory. One given to first and second year students within two voluntary colleges in the year before and the first year of their amalgamation looks at some aspects of strength of commitment to teaching. The other, mailed to all the students known to have withdrawn from the 1970 entry to colleges of two Northern Universities' Institutes of Education, enquires what students who withdrew remember of their courses and what they are doing subsequently, with particular reference to their mathematical experiences.

The responses are discussed question by question and comparisons made where possible. The results are reported with some suggestions made for possible future work.

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PREFACE

Having joined my College of Education when the first cohort of 3-year trained teachers were in their second year, and being at that time the only mathematics lecturer, I have assisted nearly two decades of students in their passage from school to professional status, sometimes being relieved but sometimes puzzled and even distressed over withdrawals. Especially thought-provoking were those which appeared as a 'fait accompli' without outward sign of the inevitable heart-searchings which must have gone on. Thus there grew the desire, if possible, to "do something about it" and, before terminating a career that has spanned these most significant changes in the professional training of teachers, to make this investigation of the kind which was perhaps too risky to be undertaken by a younger student at the outset of his career!

Particularly as circumstances beyond my control have delayed and limited the pursuit of this goal, I wish to acknowledge the help received from various quarters. First and foremost thanks are due to the Directors of the Institutes and the Principals of the Colleges involved, and to all those students and ex-students who responded to the questionnaires, to the parents who replied on behalf of some of the latter and to the GPO Officials who returned so many questionnaires they could not deliver. In no less measure I appreciate the help of my colleagues and students of my College in the distribution of the questionnaires, and our college librarian Mr. Geoff Willett in obtaining literature in particular through the inter-library loan service. I thank too "the punching ladies" and others at Durham University Computing Laboratory for their help with the first questionnaire, and especially Mr. John Steele for his

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efforts in getting my data transferred from cards to tape so that the work could be finished on a RAIR BLACK BOX micro-computer.

Finally, but by no means least, I owe a considerable debt to my husband, Alex, for his help with the computer processing of the data, and to Mr. Michael Cornelius for his patient advice and encouragement in supervision over the protracted span of work.

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DECLARATION

The copyright of this thesis rests with the author. No quotation from it should be published without her prior written consent, and information derived from it should be acknowledged.

None of the material herein has previously been submitted for a degree in Durham or any other University.

A I Gwendolen Renton .

A I Gwendolen Renton

Introduction

This thesis attempts to probe some of the aspects of wastage of students from Colleges of Education.

The first section establishes the background of the very extensive restructuring that has taken place in teacher training since the general course was lengthened from two to three years at the beginning of the 'sixties' decade. Following the addition of the extra year came developments in entry qualifications. Attitudes to mathematics and science were changing steadily, the Government made far-reaching decisions and the Colleges inevitably reacted to these in various ways, some of which are discussed.

In section two some College-based studies of the problem of student-teacher wastage are reviewed: more University-based studies are available and the relevance of these to the Colleges is increasing as the latter move towards greater diversification. Many factors influence the drop-out rate from a college and some of these are considered, such as the selection procedures and the philosophy of the Institution. Similarly, some of the psychological and social pressures on students are discussed briefly prior to a consideration of the motivation of students and the assessment of the teacher trainees. Explanations are given why in this study it did not seem appropriate to delve deeply into the stated reasons for withdrawal, but the relation between drop-out rate and length of course is touched upon, as also the effect this rate has in provoking withdrawal. The section concludes with a mention of assessment and formal examination, and the problem of teaching practice, followed by some questions these topics provoke.

Section three is concerned with the surveys undertaken.

3.1 deals with the preparation, administration and analysis of questionnaire 1(a) given to teacher trainees in years 1 and 2 in 1974, followed by questionnaire 1(b), a modification of its predecessor, administered to years 1 and 2 in 1975. 3.3 deals with the survey mailed to a population of students who had already withdrawn from the colleges of two Northern Universities' Institutes of Education, and considers some of the problems of the unknown non-responders.

Finally, in section four the results are discussed, some conclusions are drawn and possibilities for further work are suggested.

SECTION ONE

Some Changes in Teacher Training.

SECTION 1

SOME CHANGES IN TEACHER TRAINING

1.1 With the opening of the decade of the sixties came one of the most precursory changes that teacher education in England had yet seen - the extension from the two-year to the three-year course. This generated experiment upon experiment within the curricula to adjust to the significant increase in maturity shown by students approaching completion of their training. The Ministry of Education report "15 to 18" in 1960 protested at the too low standard of general education of students both entering and leaving the training colleges and anticipated that the three year course would help here, saying also "We really have to think in terms of recruiting a few large and many small groups of differently qualified people. More teachers will be needed with really professional skills and with active interests in a wide variety of the occupations to which their pupils will go". By the end of the same decade the qualification demand for teachers had appreciated as far as the establishment, extending beyond the precincts of a few Universities to a majority of Area Training Organisations, of the B.Ed. degree which was already taking a variety of forms.

1.2 At about the same time concern was becoming widespread about the limitations of attitudes towards mathematics and sciences among student-teachers, and the Report of the Pilot Research of the Association of Teachers in Colleges and Departments of Education Mathematics Section (1965) voiced their confirmed fear that students entered college with knowledge of technical processes in mathematics but lacking "the depth of understanding which could be deemed appropriate to their status". As a result of this, the report urged the

development of "a sympathetic awareness of the different interpretations that may be put on a particular situation" through a discussion of more open situations" in mathematical activity. By this time, too, Beard (1967) was conducting research into teaching methods in higher education both in sciences and arts. She had spent a number of years studying the learning of children and now turned her attention to study modes and skills of the older students in the higher education sector, especially in relation to methods encouraging the motivation for development of critical and creative thinking and the possibilities of assessing these higher mental skills. Such attributes and abilities were much in the minds of members of the ATCDE Mathematics Section Working Party which produced the report on The Development of the B. Ed. Degree in Mathematics (1970) underlining the need for the professional equipment necessary for advancing the teaching of mathematics and the study of Mathematical Education, as well as some knowledge of the major branches of the subject, with a broad study of its structure and a fairly deep study of some branch. While also emphasising the need for the teacher to have attempted creative work in mathematics and to have the confidence to go on learning himself and to provide leadership for others, with the necessary understanding to look at school mathematics from several different points of view, the distinctive nature of the B. Ed. Degree was spelled out, some pertinent questions were raised concerning assessment, and attention was given to the conditions under which the candidate for this degree would be studying.

1.3 Meanwhile the Committee on Higher Education appointed by

the Prime Minister under the Chairmanship of Lord Robbins in 1961 "to review the pattern of full-time higher education in Great Britain and in the light of national needs and resources to advise Her Majesty's Government on what principles its long-term development should be based" had produced its report in October 1963. Having pointed out that students in Training Colleges and Colleges of Education, of whom the great majority were taking three-year courses leading to a professional qualification, represented a quarter of all full-time students in higher education the Committee went on to recommend a big expansion in numbers but with two important differences. Firstly the Robbins report (1963) stated: "By the middle of the 1970's we expect that a substantial number of the students will be taking four-year courses leading to a university degree and to a professional qualification, "to ensure for the colleges a role in higher education even more important in future than today". Secondly the hope was expressed that "long before that, the colleges in England and Wales will have been federated in University Schools of Education, that those in Scotland will have forged strong links with the universities, and that both groups will be financed by the body responsible for university grants". In fact 1975 saw the amalgamation of the two voluntary colleges of education featuring in this study, to form one new College, which from its institution offered collegiate degrees of the validating university B. Ed, B.A. and BSc, as well as Cert. Ed and the Dip. H E. Thus the questionnaire described in Section 3 was given to the students of these colleges just before and immediately after this amalgamation. The summaries quoted above were amplified (Robbins Report, P.156) and consideration was given to subjects studied, with special reference to the need

for "mathematics or science", saying in 507, "Administration both in industry, in commerce and in the public service will need by 1980 many more people who have received a general education in scientific subjects, and now that developments in science are increasingly a part of daily life there will be few who have no interest in it. There should therefore be no arbitrary limit set to the provision for young people to study scientific subjects". In the financial climate pertaining as the 70's near their conclusion, the first recommendation has, amidst much trauma, been more or less fulfilled: the second has become a matter of reportage. But the concern about deficiencies in mathematical and scientific education remains.

1.4 Various developments followed the publication of the "Robbins Report" and may be seen as responses to it. It is equally possible, however, that they were rather generated by the same circumstances, an important aspect of this background being the expansion of student training places from 2700 in 1957 to 114,000 in 1972.

1.41. One attempt to meet the need for revivifying many aspects of 'scientific' education was the concern shown by the Mathematical Association to establish relations between industry and schools. Bellis (1963) pointed out that whatever the actual mathematical syllabus, boys (and let us include girls!) should be taught to think and so that they learn to think mathematically their work in this subject should be lively and meaningful. "Apart from producing the sort of person needed in industry today, this might also be a valuable source of mathematics teachers - and they would have a wide experience of applications of mathematics with which to enliven their teaching

and to inculcate a thorough understanding of those principles most often used". He referred also to mathematical education as "the essential background needed by a wide section of the community in order to deal with the problems which occur in their work". In the same document Lovis (1963) reported his reactions to a visit to an industrial company, quoting mathematics used in some sections of the oil industry, and related the implications for mathematics teachers that he saw in his experiences.

1.42. Another attempt to break the "ivory tower" syndrome of the training of mathematicians was the development of industrial sandwich courses in higher education. These were most frequently to be found in the Polytechnics but, like most innovations, had a mixed reception. Musgrove, F. (1972) expressed grave doubts after studies of evaluation by 400 industrialists and a sub-sample of 300 of the sandwich course itself. He found that the students showed unusually high levels of neuroticism, dogmatism and closed-mindedness; but recognised that although they complained of disruption, they had initial advantages over more orthodox graduates in industry in their grasp of technical problems, especially in appreciation of the economics of the industrial problems and in practical applications of their knowledge. He noted however a tendency for only "poorer" students and teachers to take part in the sandwich courses. There can be no doubt that this type of course has now been much more widely accepted. Furthermore, it is interesting to note that the idea of "alternative experience" intervals, of varying durations, has been accepted in principle both for pupils in their final year of school anticipating employment and for

students taking some of the new modular courses in colleges of education. The advantages of sandwich courses outlined by Musgrove may perhaps also be seen as analogous to those of concurrent rather than consecutive teacher education.

1.43. Other developments, each of which had their own profound effect on teacher education include the establishment of the Council for National Academic Awards (CNAA) as a degree-granting agency outside the University sector, the Open University and the Industrial Training Boards. These Boards have shown their most profound effects in the Further Education Sector, but the modular courses of the 'O.U.' gave British acceptability to a form of structure already widely developed in the United States of America. Now, in their own form, unit courses building up to a programme with varying degrees of flexibility have been adopted by several Colleges of Education; three of these have already been the subject of a D.E.S. funded project reported by Adelman, C. and Gibbs, I. (1979). The most wide-ranging effect of the CNAA has been seen in its adoption as the validating body for the B.Ed. and other degrees in many Colleges of Education whose status has changed drastically following the publication of "The James Report" in 1972.

1.5 Entitled "Teacher Education and Training", the 1972 report of the Committee of Inquiry under the Chairmanship of Lord James of Rusholme set up by the Department of Education and Science has become known familiarly, if not always affectionately, as the James Report. The Committee based its findings on three propositions; (1) that a full course of higher education is essential for a trainee teacher; (2) that the formal distinction between the three-year concurrent non-graduate training and the

one-year consecutive post-graduate training should be abolished and, (3) that in view of the currently rapid changes in our cultural and social environment, initial training alone can no longer be sufficient for a whole teaching career. The recommendations of the report were phrased in terms of "cycles", but this expression has not in fact gained currency. Regional Councils for Colleges and Departments of Education were proposed; as also the introduction of the award, after two years higher academic work, of the Diploma in Higher Education.

The former of these proposals has been implemented in modified form, and the 'Dip. H E' has been instituted but has not as yet established itself in general, serving more as an "escape route" for students not wishing to complete a three-year programme. Reorganisation as currently planned includes phasing out the 3-year Certificate of Education as a complete 2-A level entry to teacher-training courses is implemented.

A Working Party of the Mathematics Section of the ATCDE prepared as a quick response in September of the same year an interim report entitled "Mathematics in Colleges of Education in the post-James era", showing by this title how much that report was regarded as a watershed. The Working Party considered the range of courses for students on both teaching and non-teaching programmes, and suggested "modules" of mathematics courses with possible inter-relations between these and with both more elementary and more advanced courses. The report made important points about the necessary compatibility with degree courses of a two-year Diploma as regards entry conditions, structure and content, validation, transferability and the institutions which would offer it. It also suggested the need for investigation of

types of employment likely to be available to diplomates. The report went on to consider the problems of a college in view of the relatively small number of students likely to be taking mathematics courses, and in staffing the variety of work needed, including in-service provision. It also urged the retention in the college curriculum of the separate identity of pre-service professional courses in mathematics, on the grounds that "in the education of children, the mental processes involved in mathematical thought differ in kind from modes of thought in other disciplines" since "Mathematical thought is concerned with abstraction of structure from concepts which are themselves abstract". In addition it was pointed out that students who delayed commitment to teaching until they had completed their second year in college would need intensive professional courses in mathematics with either a secondary or primary focus. A statement for the Executive Committee of the ATCDE entitled "A Policy for the development of Higher Education in the non-university sector" (November 1973) made more general points concerning mandatory grants, minimum entrance requirements, critical sizes and distribution of numbers between types of higher education institutions, resources for the non-university sector and salaries and conditions of service of teaching and non-teaching staff.

- 1.6 The blow which struck the Colleges of Education most severely came as they were struggling with the changes involved in local government reorganisation from the White Paper of December 1972 announcing reductions in Initial Teacher Training Quotas and recommending the development by the Colleges of alternative programmes of study. Circular 6/74 added the

information that no additional staff or resources would be available to the colleges to develop new courses. These two factors, with the cuts in quotas announced in January 1977 and the discontinuance of teacher-training in over a dozen of the colleges - and there may yet be more of this to come - contributed to the production of extremely sad personal situations for many of the academic staff in the colleges. 6000 lecturers were estimated in late 1976 as being affected directly by redundancy; it was almost as distressing for those who had to make decisions about these redundancies. Speaking at the annual conference of the Society for Research into Higher Education, the statistician Armitage, P. (1974) stressed the inevitability of wrong projections, and said that in observing the number of school leavers with specified A-levels who went into forms of higher education "we are not measuring demand but the outcome of demand interacting with supply". He pointed out, with figures in his Table 2, that four years after the Robbins predictions, colleges of education had exceeded them by about 25% and advanced further education by about 50%, since "the non-university sector absorbed almost all of the expansion beyond Robbins".

- 1.7 All the colleges have suffered in the subsequent retraction in varying degrees, the overall quota for 1981 being reduced from the 60,000 teacher training places announced in March 1975 to a figure of 46,670. While some colleges have closed completely, others have merged with polytechnics, with University Schools of Education or with each other, or have made other severe modifications to their provision. The report by Adelman, C. and Gibbs, I. (1979) of how three of the colleges of education met this challenge has already been mentioned above: nevertheless

at least one of the three colleges involved is already in the process of modifying the 'new' structure of its provision of diversified programmes in the light of experience and of the DES discussion document entitled "Higher Education into the 1990s" (1978), and of the occasional papers of the College of Ripon and York St. John, No.1 and No.2. The first of these (Barnett, J.V., 1979) reiterated that "It is the responsibility of the College through its taught courses to lay a foundation and to give the guidelines for building on that foundation. It is equally the responsibility of the College - though not solely through assessed courses - to offer opportunities for students to acquire skills and practical experience at the time when they perceive a need for them and when an assessed course would be inappropriate. It is then the responsibility of the students to use the varied opportunities of personal study, attendance at assessed courses, workshops and periods of practical experience to prepare themselves both for the award of a degree and for entry into the next stage of their careers". Having started with a prediction of future needs and proceeded to a summary of the current position of the Church colleges, Occasional Paper 2 (Alves, C. 1979) pointed out that the HE system as a whole could be faced - ignoring the planned increase in 18 year old entrants in the next 3 years - with a reduction of approximately 25% by 1985 from the current figure of 516,000. However the Government have spoken in terms of a minimum teacher training system of 45,000, from 1981, and the Paper also stated that the Church of England Board of Education "believes that a reformed HE system should take active steps to bring within itself not only a continuing number of 'traditional' recruits, but also many more adult students, a significant proportion of

overseas students and a significantly increased number of home students from socially and culturally deprived backgrounds".

1.8 From this short survey of some aspects of a very complex growth period it is clear that there have been few, if any, consolidation periods in the evolution of teacher education and training for a quarter of a century. However, Allen, E. (1963) underlined the idea of education as a lifelong process, but indicated particular developmental tasks on which students undertaking professional training were likely to be actively engaged as they moved from the role of adolescent pupil to that of teacher in early adulthood. These tasks have remained relatively constant despite the drastically changing circumstances of teacher development and despite the lowering of the official age of majority from 21, when students were completing their training, to 18, when they would just be embarking upon it. They included - amongst others - becoming emotionally independent of parents, achieving new and more mature relations with peers - and with college lecturers - "desiring and achieving socially responsible behaviour" and "acquiring a set of values and an ethical system as a guide to behaviour": failure in one or more might well engender personal unhappiness from dissatisfaction with self or from sensing the disapproval of others, and might increase the difficulty of accomplishing later growth-tasks. As he looked at the attributes of good teachers, Allen distinguished between "showing it to be the case" and "believing" that "good" teachers possess certain qualities; he amplified those summed up in the Crowther Report (Ministry of Education, 1959) as "an integrity and a humility in their task which clearly puts their pupils' interests before their own". Allen, E. (1963)

discussed furthermore the likelihood of changes taking place in attitude in the context of training and pointed out that if it were too much to expect initial training to be concerned with the later professional careers of teachers rather than the first few years, then in-service courses should be an integral part of the career. In this, and in discussing both personal development and professional training, especially through teaching practice, he foreshadowed ideas being implemented recently in some colleges through which "the learning of the job can be made easier, more adventurous, more thorough and rapid, and be given more momentum, if initial experiences are arranged and supervised with unobtrusive care".

Remembering that the number of students training for teaching is approximately one third that of teachers in service, which constitutes roughly .3% of the total population, and having considered the turmoil seething behind teacher education, the importance to a College of filling the quota of teacher training places is clear, quite apart from the expense of "wastage", and it is clearly important to gain understanding so as to reduce student withdrawal to proportions as small as possible. In the next section some work on wastage and related topics will be reviewed.

SECTION TWO

The Problem of Wastage.

SECTION 2

THE PROBLEM OF WASTAGE

2.1 Wastage is an emotive word, particularly in the current climate of cuts in public expenditure, so what does the term comprise and what is the extent of the problem? In what circumstances is wastage most - and least - likely to occur? If not eliminated, how far could it, and even should it, be reduced? The ~~latter~~ part of the last question involves value judgement; the ~~former~~ depends whether potential "drop outs" can be pre-detected and if so, whether the conditions causing the phenomenon may be modified, or whether selection methods can from this point of view, be made more sensitive. What should be done about the resulting "hard-core" cases?

2.2 Most studies on student "wastage", of which a number are listed in the Register of Research into higher education, 1974-5, seem to have originated from the Universities. This is perhaps not surprising in view of their more independent financial provision, but certainly some of them have messages for those concerned with initial training of student teachers. The relevance of such studies to Colleges of Education is in any case already increasing with the further development of degree courses in the Colleges, particularly in view of the implication of Thistlethwaite, D.L. (1965) that, in the U.S.A. at least, "College withdrawal is the same psychological phenomenon no matter where it occurs. Although inter-institutional comparisons may suggest relevant correlates of persistence, both selection and persistence are primarily intra-institutional problems, and they will have to be understood at that level". But is withdrawal necessarily wastage?

To Malleon, N (1963) wastage was "that proportion of students who leave the university for whatever reason without obtaining their degree or diploma", such rates being too high except for those of Oxford and Cambridge whose specific provision for personal evaluation of "unsatisfactory cases" he described. The report of the University Grants Committee for the academic year 1960-61 was the first to include nationwide statistics for the major faculties which covered several years. Surveying the situation ten years later Kendall, M.N. (1973) viewed wastage as consisting of those students, whether or not they had withdrawn voluntarily, and whether or not they had attempted their final examination, whose grant had terminated before they had graduated. He considered that higher education institutions were prone to creating disillusionment and mismatching of students and courses, engendering loss of motivation and later withdrawals. Watts, A.G. (1973) suggested that "the success of the educational system in using vocational arguments to expand itself had simply been an effective tactical ploy which has enabled it to get on with its real objectives - making a significant contribution to personal development and to the quality of our society. Those who hold this view must, however, take into account two casualties of their tactics. One is the student, who is often hoodwinked into doing something he does not particularly want to do for an occupational end product which, when he reaches the end of the tunnel, is revealed as a mirage.....The other casualty is the educational process itself, which is perverted into a credentialing sorting function" With the 1979 financial crisis causing cuts in the educational service, Watts may well have also been describing, with his student casualty, the state of some of the present teachers-in-training.

2.3

According to the Robbins Report (Appendix 2(A), Part IV, Section 1, Tables 5 and 8, and Section 3 Table 33), of all undergraduate entrants in 1957, 14% left without success, almost half in their first year and another quarter in their 2nd year. Of Arts, Science and Technology undergraduates respectively, the rates were 12%, 15% and 21%, whilst the corresponding rate for 2-year general teacher training courses was 5.6%, being rather higher for men than for women. On the three year specialist training courses the rates were 7% for housecraft and 10.4% for physical education, both women only. For 1960 entrants the Training College general course was extended to 3 years and then, with the B Ed qualification courses for many, lasted 4 years. The level of wastage in the colleges seems likely to have increased proportionately. Miller, G.W. (1970) pointed out that the 14.3% rate was hardly one to be proud of in view of the selectivity of undergraduate entry in Britain, and one should perhaps view the teacher-training figures in a similar light. Malleeson, N. (1963) drew attention to the exceedingly high cost of wastage on the University front, putting it then at "around £5 million per annum, a figure which will grow with the university population. But a wastage of students not only involves a wastage of money. It means a wastage of university places, a failure fully to utilize equipment and trained staff". This is equally true in the colleges. Furthermore inflation has undoubtedly played havoc with this financial estimate!

In the Colleges of Education, with the same criteria for wastage as were taken in discussing universities, the Robbins report (1963) pointed out that there had been no comprehensive survey of the success or otherwise of students admitted for

teacher training in a particular year. The writers went on to compare the numbers admitted with those who completed successfully and normally courses of varying durations, and concluded: "Whatever the minor fluctuations from year to year or from one type of course to another, wastage in Training Colleges is considerably less than in any other sector of Higher Education in England and Wales. Data was given in evidence (Robbins Report,* Table 33) for the years 1955-1959, i.e. before the extension of the general course to three years, and it was claimed that the table indicated that the length of courses influenced the extent of wastage. The ATCDE set up a Working Party on Wastage whose report, as received by the Executive in 1971, was announced in the ATCDE News No.1, Sept. 1971 which informed members that withdrawals from the 1967 intake amounted to 10.5 per cent and probably to 12 per cent of the 1968 intake. An almost negligible number of these were for disciplinary reasons, more than half of the total being voluntary withdrawals, but with a higher proportion attributable to younger students and a quarter of all occurring at the end of the first year. In response to a questionnaire circulated to all colleges at the request of the ATCDE Principals Panel, there were replies from 99 colleges (including departments of education in polytechnics), and for most questions the data accounted for about 80% of all reported withdrawals, the percentages being "remarkably consistent over the three years 1967-68, 1968-69 and 1969-70 and over first and second year students." The results match very well with the views generated by commonsense based on experience that, (1) influences near the end of the first year, presumably examinations and/or continuous school practice, precipitate the most significant wastage;

* Appendix Two (A), p. 158.

(2) students coming to college straight from the sixth form tend to be more vulnerable than those with intermediate activities or employment, except perhaps those who have had teaching experience and observation; (3) the better qualified, who may well be more confident than their peers, and the least well qualified academically on entry, who are likely to want to succeed but feel they need to work hard, seem to be slightly more stable portions of the population than those students with the middle range of examination qualifications; (4) "throughout the years, students living at home show a lower rate of withdrawal than their proportion in colleges would suggest"; and (5) "there will always be human beings who change after making a decision. This should be faced. Some students leave because they are unsettled, butothers that are unsettled settle down. How do we distinguish between the two types?"

2.4 Identifying in advance the students who will settle down and those who will be unable to do so is part of the whole process of selecting the potentially successful students from all the candidates for admission. Hamilton, P.G. and Wealles, J.G. (1973) imply at least that the colleges are consistent in their views of applicants, since they found that those students who were rejected at their first choice institution were also rejected at their second choice and half of them yet again at "the Pool", one of them also on the second Pool allocation. This was however a small sample; but it might well have been taken when the colleges were unable to fill the almost 40,000 places available. According to the Clearing House annual report for the Autumn 1970 entry, men's registrations, had fallen by 5.5% and women's by 3.6%, giving a total decrease

of 4%; and 1.5% less students were accepted by the Clearing House, by the January following the commencement of the course. Four years later the corresponding report was making an urgent plea for stimulation of the recruitment of men in view of the exceptionally high decrease in the number of men's applications, 21%, contributing to an overall fall of 11.4% in spite of the "more modest 7% for women". Although enquiries from both advisers and individual candidates then increased, no improvement was shown in registrations for the three-year courses judging by the further reduction of 10.8% announced in the Foreword of the report for the 1975 entry, although those for the post graduate courses were just 4% up on the 1974 number. Rather seriously the report deplores that "the numbers applying for courses in mathematics and the physical sciences are still well below those needed to sustain the teaching of these important subjects in the school curriculum and urgent action is needed to stimulate recruitment in these areas". This remains a serious shortage area in 1979, especially as rationalisation in colleges has led to reduction in offering of some mathematics and science courses, but as the colleges' quotas of teacher-training places have been so drastically cut as to endanger the fulfilment of responsibilities towards students in a number of cases, it becomes vital to take the full quota of such students who will complete the course satisfactorily. Some colleges which have been able to diversify and now offer B.A. and/or B.Sc. degrees may be able to make up a little teacher-training wastage with transfers from the non-vocational courses.

2.5 Studying the predictability of teaching practice marks, Crocker, A.C. (1973) reviewing the selection process, drew

attention to the variable basis of Head Teachers' recommendations, often resting on candidates' social and athletic activities, in view of the impossibility of measuring likelihood of success for students in something at which they have usually not tried their hand.

2. 51 Nor does the college interview appear to rest on any firmer foundation. Corey, S.M. (1953) went so far as to suggest that the process was even unfair to candidates and suggested interviewing instead those giving the references, even though this would entail considerable expense. Mann, J.F. (1961) found a consistent trend for the more favourable comments to be made about students who later did well, except that in comparing groups of 'A' and 'B' students he found that "the below average group of men have nearly twice as many favourable comments made about them as the above average group". Was this a function of the climate at the time, a sampling accident, or bias on the part of their teachers to get well placed in colleges the smaller number of boys than girls interested in the profession? Generally Mann, J.F. (1961) appeared to support the conclusion that as long as it was not strained beyond reasonable limits the interview was as useful as most available measures as a predictor of success in this context.

2.52 A different aspect also discussed by Crocker, A.C. (1973), and about which he expressed doubt, was that lecturers may have dramatically differing decisions of the worth of a student's teaching, and so presumably, when interviewing, of that of a candidate's potential, depending on their educational philosophy. At the same time in the United States there was considerable discussion of Competency Based Teacher Education whose objectives,

discussed by Dodl, N.R. (1973), are related to his assumption that before the qualifying teacher receives a certificate he should demonstrate "essential competencies in performing those functions for which certification is awarded". Dodl then discussed some programme objectives and pointed out that these must be stated in terms of role and function. Packwood, G.F.L. (1972) poses the problem that though "it is vital that any organisation is in no doubt as to its objectives" yet "it is no easy matter to pick out the objectives of the (British) education service", concerning which the opinions of educators differ. Derricott, R. (1975) lists objectives showing a rather different attitude, being much less 'behavioural', for the Schools Councils' History, Geography and Social Science 8-13 Project. How close the connection may be between classroom and teacher training objectives has been a discussion topic paralleled by that of the dichotomy, real or apparent, of academic and professional ability and of the criteria for their respective successes which Cortis, G.A. (1968) found interesting in view of the impending award of B.Ed degrees. Where students show ability on both branches of the dichotomy they will tend to become able teachers competently formulating and pursuing objectives with individual concern for the learning activities of the children in their care, except in so far as emotional or motivational problems intervene. Where students' ability is less, or less well balanced, the latter types of problem may increase.

2.53 Morrison, A. and McIntyre, D. (1969) in the first paragraph of their preface pointed out that the minimal nature of our knowledge of teacher behaviour hampered evaluation and improvement of professional training; later they noted that

there are greater intra-teacher group differences of personality than there are between teachers and non-teachers. Crocker, A.C. (1973) said the "lack of ability to discover significant personality traits unique to good teachers may be the result of poor sampling or even a lack of adequate tests" but he came to the conclusion that teachers exhibit a roughly normal distribution of personality traits, with many variables interacting for success or failure. Dugan, R.R. (1961) reviewed attempts to analyse effective teacher personality, and pointed out the complexity of the position due at least in part to the dynamic nature of personality as the organisation of many individual factors seen in their effect on other people: she suggests that it may be the association of certain patterns of personality factors with certain professional factors that render a teacher suitable for a particular, specific job. Nias, J. (1974) appreciated that "Free Schools" could provide for some teachers the freer and more satisfying conditions they sought but had failed to find in ordinary schools, thus appealing to "some of the best, most highly committed teachers". Such posts as these would, however, only be available to those who had already survived their teacher-education course and attained 'qualified' status. Mann, J.F. (1961) testing 2-year teacher training students found evidence of greater neuroticisms among below average than among more able students. McCabe, J.J. and Savage, R.D. (1973) used the Cattell 16 PFQ test to compare student teachers with both medical and planning students, than whom they seemed to show "considerably more than average self-conflict, lack of self-discipline and control with associated personal and interpersonal problems". If this is so, is this why - or is it because - they have turned to teaching? Or again, why is the

drop-out rate not considerably higher?

2.54 Studying groups of training college students Phillips, A.S. (1963) suggested that there is a clear relationship between self-concept on the one hand and on the other sociability and academic achievement, but not intelligence. It may not be the lack of self discipline and control or the interpersonal problems per se which cause the abandonment of the chosen career, but the effect of these mirrored in the student's own self-concept. The first part of Phillips' study concerned a comparison of a group of West Indian Students with a group of British students, where the college circumstances were markedly different, but the conclusions mentioned above were based on a British college group, so could possibly apply more widely in this country. Studying drop-out from educational institutions on the other side of the globe, Boshier, R. (1971) found it an important view that "attitude towards oneself influences one's attitude toward others"; and that "self-rejecting people, as well as being less tolerant of others than are self-accepting people, are less tolerant of things and events generally". In a study of British polytechnic students, Oxtoby, R. (1972) also accepted the influence on human behaviour of the expectations held for them by other individuals with whom they are involved in social relationships, as well as by themselves, seeing this partly as a function of the position an individual occupies and the expectations associated with that role. The lack of agreement about approval or otherwise of the inventory item "addresses lecturers by their Christian names" is interesting. Would "approval" seem to bring the student himself nearer to, or to lower the status of, a position he hopes to attain? There were no major discrepancies between

the undergraduates' own views and their perception either of fellow students' or of graduates' opinions, though on about half the items in the inventory the respondents saw their parents as having different expectations.

2.55 Smith, I.M. (1972) using the Likert type 50 statement five point scale "test" of the Minnesota Teacher Attitude Inventory (MTAI) with 1 year college of education (technical) students saw the test as based on the theory that less successful teachers are essentially insecure socially, and that a student teacher failing to establish secure social relations is less likely to gain security through pupil-teacher relations in his career, and so is likely to develop less desirable traits in his teaching. The tester thought the change in attitude he detected might indicate a tendency of the students to change in the direction of attitudes held by the majority of their fellow students, but noted that this was not supported by the fact that the residential students showed less increase in their mean score than the day students. One should however, note here that these would be mature students and that such students in residence generally spend even more time at home than younger students, thus reducing residential effects. The report of the Sub-Committee of the National Young Teacher Advisory Committee of the National Union of Teachers (1969) endorses the opinion that teachers starting careers in the seventies and eighties should "be critically aware of the Society in which they operate; they should enjoy working with children, and a working partnership rather than an authoritarian rule should be the social ideal of the teacher and child and of the whole school". The same outlook is taken to classroom level in the inclusion of "The fostering of a willingness to explore personal attitudes and values and to

relate these to other people's" among the personal qualities in the table of objectives listed by Derricott, R. (1975), already mentioned above. Thus while there may be a lack of direct experimental evidence on the importance of self-concept in the mental health of three-year teacher-training students, there is a strong atmosphere of the weight given to it in similar situations, supported by the finding of Adelman, C. and Gibbs, I. (1979) in three colleges of education two of which had recently diversified and all of which were offering course choice in varying "modules". "About 65% of students in the 1978 entry consider it important that they get on well with other students, and 40% are specially concerned to get on well with tutors".

2.56 These 40% may perhaps be among the most perspicacious students, since their tutors constitute an influential part of the total student environment, from the possibly extreme case of the example quoted by Malleson, N. (1963) - of the physics and mathematics University student told in her first few weeks that of 40 selected students there would only be 10 left at the end of the course, so that she was afraid to ask for help in difficulties as this might expose her own inadequacy - to the students questioned by Adelman and Gibbs whose report is mentioned above. While "The first priority of students entering the colleges in 1976 and 1978 was to gain a qualification which would assist them in their preparation to enter a career, 35% of students would be disappointed if the courses were too easy". Smithers, A. and Musgrave, G. (1972) concluded from their study of students' reactions to their teaching that "personal contact with staff is extremely important to students" in that "it is the total process that counts". Black, P.J. (1976) looked at student responses from

the lecturer's point of view with particular reference to assessing whether teaching innovations were evolving successfully. He stated that "for tutorials there is the additional feature that free communication in both directions remains as the essence of the enterprise and one of its chief advantages", advocating more student responsibility for tutorials so that they can help to meet the students' learning needs.

Goldman, G. (1976) speaking to the title "Students with learning problems - some practical approaches" described how students overwhelmed by the learning task they feel they face need to be helped to see the 'what' and 'why' the 'when' the 'where' of their study methods, to realise what type of support they can and cannot expect from academic staff.

Unfortunate students who have had severely destructive experiences may need regular counselling help for a long period; others may be adequately helped by a single discussion with an advisor or perhaps short-term small group meetings.

Goldman concludes with a reminder that "the learning being, the person, is the central issue. Alternative techniques of study will be acceptable only if the individual finds himself accepted. Denied as a person he can only too easily deny that change is possible. Open to change, he may experience the joy of discovering that learning can be not a fearful drudgery but a challenge and a delight".

Important as study habit improvement may be for university students, it could well be even more important for college of education students. Not only have many of them a rather lower level of academic attainment as indicated by A-levels but also, according to McCabe, J.J.C. and Savage, R.D. (1973) using a Study Habits Inventory, the characteristics shown by student teachers left much to be desired even when on Cattell's

scholastic mental capacity Factor 'B' scale they showed no significant difference between high and low attainment groups and reached a high average level comparable with that attained by both medical and planning students. The report continued to assert a highly significant difference found between the "good" and the "poor" students with regard to the characteristics of their study habits overall; it suggested furthermore that study habits and self-conflict personal problem measures could reasonably give possible identification of those at risk, a matter of considerable importance in a profession where consequences of success or failure directly affect so many children.

2.57 The college environment will however be less differentiated between students than their socio-economic background. Halsey, A.H. (1963) discussed the effect at school level as being that of offering equal opportunities to those of equal ability without ensuring equal educability, since barriers of culture may prevent some profiting from their opportunities. Also Miller, G.W. (1970) found that poorer students had generally had their school studies over-directed, with little responsibility rested in them personally.

Pratt, L. and Allemano, R. (1972) discuss the effect of "accidents of geography" through variations in the education provision in the North of England, following a survey by staff of the Centre for Institutional Studies at the North East London Polytechnic. Astin, A.W. (1965) compared 'drop-outs' with 'persisters' and found that the former came from a lower socio-economic background, had achieved lower ranks in high school and a lower placing in the questionnaire on items assessing degree of motivation. However there was a broader

spectrum of environment in that study from the United States than is likely to be generally found in most colleges of education as yet.

2.6

As part of a larger Enquiry into failure and withdrawal of University students Wankowski, J.A. (1969) discussed the influence of motivation as assessed from answers to questions about plans for the future of both a short range vocational nature and concerning long range goals during the next ten years. He stated that clear short-range goals seem to be more conducive to success than the long-range ones. Weak but successful students were more specific about their goals than the weak and unsuccessful students; whilst the very good students were definite in both short and long term aims. Mori, T. (1965) designed a study both to investigate motivations for becoming a teacher and to improve attempts to measure these. He noted initially that the same reasons are given both for entering and for not entering the teaching profession, with a large number of prospective teachers giving apparently irrelevant reasons or no clear reason at all. Many did not rate highly the economic values of the career but were better disposed towards the social and the inter-personal values, with the intellectual values rated more highly and the ethical values most of all. Mori found that each of these five 'communities' of values was the interaction between the self-concepts of needs for becoming a teacher and the attitudes towards the occupational values of the profession. Morrison, A. and McIntyre, D. (1969) question whether less conscious motivations may not be at least as important as those given: mature students giving up jobs in which they were successful and with which they said they were quite satisfied felt the opportunity to help others, "to use abilities and aptitudes, and to be creative and

original" figured more in teaching than in their previous occupations.

Mann, J.F. (1961) attempted to differentiate between reasons originally motivating the decision to take up teaching as a career and those currently held as operative: there were no significant differences in the ratings of their recent motives, but in general there was a tendency for the below average students to give greater weight than the above average group to the economic desirability of the career, to the likelihood of applying their fondness for children, and to retaining a connection with some favourite subject of study. The above average students rejected more strongly than the rest parental influence as a factor of their choice.

Miller, G.W. (1970) pointed out that two thirds of students who failed were sufficiently strongly motivated to attempt to retrieve their failure, and that about half of them were successful.

Malleson, N. (1963) expressed the view that it is perhaps surprising that so many "march in locked step through a three year course", and that with such low delay rates there may well not be "a sufficiently flexible allowance for the diversities of human nature". An intermission of a year has been successfully allowed on occasions to teacher-training students, who have returned with enriched background experience and a more mature outlook. Similarly Watts, A.G. (1973) suggested it would make for a sounder system if there were an increase in discontinuities to "allow individuals to step off the escalator and to see where it is leading them before they get on it again". He also pointed out that guidance could play a crucial role in helping students to make decisions which are their own and not

mere responses to external pressure, so that they are strongly motivated to prove them "good". These two suggestions are now being practised together in modified forms through the freer choice of courses of a modular system with the emphasis on counselling that the inevitable complexities demand. These features together with the transferability between types of programme may well contribute to the lower rate of withdrawal reported by Adelman, C. and Gibbs, I. (1979) in College 3 with its diversified courses.

2.7

Reasons for withdrawal are much more complex and difficult to assess than appears on first approaching the problem. The Robbins Report (1963) quotes 5 main categories adopted by the University Grants Committee as Academic reasons for withdrawal, either required or voluntary, viz:- (i) failure in finals; (ii) failure in an earlier examination; (iii) academic difficulties otherwise revealed; (iv) personal causes; and (v) disciplinary reasons. The same categories are taken to apply in colleges of Education. Withdrawals in the fifth category are so few as to be insignificant in number.

2.71 Of those of the 1957 university entrants who left without success by the October of the year of completion of a 4-year technology course or that following a normal 3-year completion of courses in arts and science, 83% were recorded as leaving for academic reasons. The proportions of arts, science and technology students thus "wasted" were 76%, 90% and 88%, with a comparable figure of 74% for medical faculties.* The report goes on, however, to state that since illness or other objective reason may be used as an excuse for withdrawal for academic reasons, no distinction would thenceforth be made between the categories. This argument could equally well apply

* Those who left "for academic reasons" given as a percentage of those "wasted".

to students in colleges of education.

2.72 The 1968 UGC report used revised classifications with separate analyses for each length of course, since differences in success patterns have been associated with differing lengths of course, a point already mentioned above. Withdrawal rates were shown to be appreciably higher on 4-year courses, including sandwich ones, than on 3-year courses but the longer ones showed only half the rate of failure in final examinations: neither of these results would have come as a great surprise to those who have noted the rates of success and failure as they watched teacher-training courses extended from two to three and, with the introduction of the B Ed courses, to four years. It will be interesting to see the effects on these patterns of the availability of diversified courses too.

2.73 In addition to such interpretative difficulties of understanding withdrawal figures, we have the effect of other largely unknown institutional variables, including, as Boshier, R. (1971) pointed out, and as was mentioned in section 2.6, the drop-out rate itself. When this can be brought down to a small figure in a particular course we have the situation Boshier describes that "when an individual is in no way threatened, he is open to experiences, which is the opposite of defensiveness..... Specifically it is suggested that drop-out, particularly drop-out for course-related reasons, is a function of the magnitude of the discrepancy between the student's rating of himself, his lecturer, the other students, and his ideal self".

2.74 With Miller, G.W. (1970) who made a parallel statement, and Cohen, L. (1972) who supported the notion, Boshier went on to postulate that the reasons given in such categories as personal and home, psychological, location and job, were in many

cases probably false; and that these should therefore be disregarded. Experience of both formal and informal counselling supports this view, but gives encouragement in so far as helping students to understand their true problems can give them the power to reduce the impact of both these and the subsidiary ones. Some counsellors approach the task of self-understanding for students by administering some form of problem detection test. Investigating personality and changing problems among a whole first year intake of one college of education's women students Cohen, L. (1972) used the self-administered Mooney Problem Check Lists with 330 items covering eleven problem areas, the Cattell 16 Personality Factor "test", and Need for Achievement 25 item scale. He found an encouraging reduction in the incidence of problems reported as students progressed through year 1, in that particular small college with a well established advisory system. Malleon, N. (1963) had earlier pointed out that the kind of upheavals and re-orientation in personal lives which are an inevitable part of growing up are frequently accompanied by a transitory falling off in academic efficiency. The more comfortably such upheavals can be settled and reorientation accomplished, the less likely is the student to reach the crisis point of withdrawal decision.

2.75 Watts, A.G. (1973) thought it ^{is} probable that an important contribution to the problem young people face in searching for their adult identity and role is failure to face up to the questions of "challenging powerful shibboleths and vested interests" raised by the increase in graduate unemployment: this has now extended to those qualifying in the teaching profession, so that not only are the career advantages less surely conferred, but there is also danger of the element of

competition undermining the appreciation of the essential element of mutual co-operation necessary for successful teaching. According to Smith, I.M. (1972), if a student has failed to gain security in social relations during his training period, he would find it far more difficult to gain "security through social responses of pupils during teaching". Nevertheless, it is excessively paternalistic to dismiss out of hand either the formal reasons given by a registry or the possibly rationalised reasons as stated by students. Adjusting only a subsidiary environmental problem may ease the tension enough to enable a potential withdrawal to reach a recovery state, provided there is a sufficiently strong motivation. If this is not the case, and if the rationalisation processes provide successive "dummy" reasons, then withdrawal may well be the only sound decision unless there is available an alternative course to which the distressed student may satisfactorily transfer.

2.8 No discussion has so far been pursued here about the increasingly controversial topic of the assessment of students' work.

2.81 Thomas, R.H. (1976) started his consideration by reminding his readers of the examination's 3-fold purpose as (1) confidence-commanding qualification tests, (2) assurances of the acquisition of requisite knowledge before a student proceeds to a further step, and (3) as both a motivation for and a form of assistance to self-knowledge for a student. Thomas then criticised the extent to which formal examinations satisfied these criteria, coming to the conclusion that they were too undemanding where originality or rigour was needed and too demanding in aspects such as ability to memorise which, important

though they might be, could in excess detrimentally condition the process of studying. Finally he offered an alternative of "non-invigilated" examinations which he had tried, discussing their dangers and advantages. A different modification was suggested by Klug, B. (1976) who said that facts do not appear to justify the university tradition that "degrees are valid, meaningful and comparable" and discussed the notion of development of profiles in contrast to grading. Wood, R. (1968) discussed the reliability and validity of "tests" and the assessment of levels of intellectual maturity, with particular reference to mathematics and the formulation of objectives, at school level. The adoption of varying modes of assessment in pre-college work has made its own contribution to the problems faced by some teacher-training students, who are very unsure what is expected of them. In his short article Skemp, R.R. (1968) raised the important questions of the effects of stress, moderate or severe, in increasing performance in simple tasks but decreasing it in more complex ones and in paced work, and of the effects of intrinsic and extrinsic motivation. These effects are again seen among students beyond school level. What is the proper perspective in which successes and failures in examinations should be seen, especially in higher education? Miller, G.W. (1970) left no doubt with his unequivocal suggestion "that when more than 10% of a class fails, something is seriously wrong with the selection of students, or the teaching they have received, or the examining to which they have been subjected". Perhaps for student teachers we should add "or the careers counselling and preparation which they have experienced", since this may well contribute to the "make or break" effect of the first continuous school practice period.

2.82 The self-assessment of teaching ability is frequently at variance with tutor-assessment at both ends of the assurance spectrum. Some of the more sensitive but confidence-lacking students may be likely to mature with further experience and become highly professional teachers, whereas over-confident students may be failing to appreciate children's needs.

Sharples, D. and Woodman, P.F. (1972) questioned the appropriateness of generalised teacher qualification in view of the complexities of the task and the particular attributes requiring emphasis in varying pupil-age groups.

Crocker, A.C. (1973) found repeated evidence that college estimates of student-teaching correlated significantly with later estimates of the same people in their full-time posts; on the other hand Wiseman, S. and Start, K.B. (1965) had found such a lack of agreement between the college assessment and that of the headmasters that - even allowing for the considerable variations likely in professional experience during the 5 years since qualification - they suggested very different criteria must have been used. However, differences of opinion seemed generally to have been less marked at both the very good and very weak ends of the spectrum of student teaching ability as assessed during continuous practice periods. Thus, even if college/school assessments do not coincide - and changes have in many colleges already brought a sharing of responsibility for school practice assessments - it seems unlikely that grave injustice will have contributed significantly towards withdrawal from the total course. Nevertheless, it is true that as Bell, L.A. (1973) said "We know little about students' intentions in giving a particular reason or about the students' interpretation of that reason."

2.83 "Hardly anything was known about what happens to these students after they left". Would students who had withdrawn from teacher-training courses be willing to recall what must have been a traumatic time, and, if so, would they provide useful information? Could they help to answer the question of whether the "right" people were being "wasted"? Alternatively, could a closer look at a cohort of students give any help in solving the problem of predicting potential withdrawals and hence assisting them either to become recoverers or to transfer to a more appropriate course of study at the earliest opportunity? It was with these questions in mind that the two investigations now to be described were undertaken, one study involving two voluntary colleges just prior to and just after their amalgamation, to form one new Voluntary College, and the other involving two neighbouring Institutes of Education of well established Northern Universities.

SECTION THREE

Questions put to some Students Before their Withdrawal
and to Others Afterwards.

SECTION 3QUESTIONS PUT TO SOME STUDENTS BEFORE WITHDRAWAL
AND TO OTHERS AFTERWARDS

3.1 In reviewing work in Section 2, it was found that while a considerable quantity had been written about wastage and drop-out from various universities, as for example by Wankowski, J.A. (1969), yet Morrison, A. and McIntyre, D. (1969) writing about teachers and teaching discussed their background and training, their motivations and dissatisfactions without dealing with withdrawal from training at all. Miller, G.W. (1970) provided from the University Grants Committee's Enquiry of 1968 interesting figures against which to balance those of teacher-training students, but although Allen, E.A. (1963), reporting on professional training, said "we do not want money spent on training teachers who do not materialise or do not last", his discussion omitted further reference to these drop-outs. Similarly, Mann, J.F. (1961), while the two-year course was still standard, compared 40 good students with 40 poor achievers who succeeded rather than with those who opted out. For non-graduate women P.E. specialists who had qualified at the same college, Brown, G. and Cherrington, D.H. (1970) gave in their Table 2 the rate of failure of college entrants, without any teaching service as 4.4%; it was informative to note from their survey the decrease in teachers' response rates from 96% for the 1967 leavers and 97% for the previous year, after 1 and 2 years service, to 54% and 68% for the 1962 and 1961 leavers after 6 and 7 years respectively in the profession. Bell, L.A. (1973), who examined student wastage during teaching training in 5 colleges not selected randomly but on the basis of willingness to respond to questionnaires, stressed the lack of

comparability about these returns because of the unavailability of some of the information he sought. His pertinent comment that "Hardly anything was known about what happened to these students after they left" has already been mentioned in Section 2.83. The present study, which has also been hampered by difficulty in obtaining some information, sought at least a partial solution to this "mystery" with respect to the drop-outs from the cohort of students admitted in September 1970 to the 3-year course of teacher training of one large and one smaller Northern Institute of Education of their respective Universities. This part of the study was preceded by a questionnaire issued to all the students in the first 2 years of their courses in the academic years beginning in September 1974 and September 1975 at two voluntary colleges in the larger of the two Institutes mentioned above, just as these two colleges were amalgamating. The intention was to enable two comparisons to be made: (1) between the answers given by some students in both their first and second years; and (2) between students who ultimately withdrew and their peers who completed their courses, with regard to commitment, to qualifications, and consequences of college experience. The two aspects of the study formulated in the questionnaires are dealt with separately below, but before this a few general points are discussed which affect them both.

3.11 First and foremost come many warnings about sampling and about factor analysis applied to unsuitable data. Fisher, R.A. (1966) pointed out that only direct observation can give access to unsuspected truths; "inductive inference is the only process known to us by which essentially new knowledge comes into the world". Yet uncontrolled causes may influence

the result whilst being always strictly innumerable. Increased sensitivity may be achieved by increasing the size of the experiment: this may however not be possible. The Deputy Director of the Central Statistical Office, Boreham, J. and Holmes, C. (1974) reminded his listeners and readers how hypothesis formation depends on disciplined observations, which still would not ensure that there were not also other factors.

Child D. (1970) warned against reading too much into correlations, because of the high margins of error likely to abound. Using 11+ examinations to exemplify how carefully formulated predictors are only partially reliable, he stated that accurate prediction is rarely possible for control of human activity. Similarly, Shaw, B. (1974), reviewing books by Dixon, K. (1973) and Phillips, D.L. (1973) with reference to data language, quotes the former as saying that it is permeated inevitably by theoretical assumptions about human behaviour and about the very social life on which it depends for its meaning. He said the latter maintained that bias-free research was quite impossible "in situations where human beings collect data from active thinking people like themselves". Shipman, M.D. (1972) discussed reliability and validity of studies and their objectivity as well as quality of questioning and interpretation, but reminded readers that "in practice chance occurrences during research have often proved more important than the original subject."

Lofthouse, S. (1974) affirmed that faith put for a number of years in random sampling or stratified sampling had been eroded steadily, whereas quota sampling at least had the merit of not being open in the same way to mathematical

procedures which tended to mask unsatisfactory aspects. Everitt, B.S. (1975) took up this theme discussing the question of numbers of measurements in relation to sample numbers, and the consideration of rejection of outlying results. Oldman, D. (1973) offered caution in inference from samples and recommended use of cross-classifications and working with and evaluating measures of association between attributes rather than correlation between metric variables. Similarly Krausz, E. and Miller, S.H. (1974) pointed out many of the difficulties of research in social science fields, but more encouragingly said "The difficulties in controlling variables or in accounting for all relevant variables does not invalidate a search for covariances and temporal sequences. Neither does it stop us from claiming that certain things do not merely coexist or do not merely succeed one another, but that they are linked in a causal fashion.

3.12 A reminder related to a rather different aspect of data gathering was given by Stacey, M. (1969) when she said how vital a social variable occupation is for giving a study comparability, as also age, sex, education and housing. In the context of the present study occupation, age and education are variables which are likely to have similar values for many members of the population, but the remainder must therefore be examined where possible. Standard categories for variables of these types established by the office of population censuses and surveys, have been clearly stated by Atkinson, J. (1971). Pickett, K.G. (1974) related the thirteen classes "combining status and skill" to the socio-economic groups recommended by the Statistical Commission and Economic Commission for Europe

Table 1

Based on information given by
Pickett, KG (1974), page 94

<u>Socio-economic group</u>	←—————→	<u>Social class</u>
	transformations	
3, 4		I
1, 2, 13		II
5, 6		III non-manual
8, 9, 12, 14		III manual
7, 10, 15		IV
11		V
16, 17		Undefined

N.B. There are some discrepancies, chiefly among the non-manual groups.

Correspondence between classes defined by status/skill and socio-economic groups, according to Pickett, K. G. (1974) - Sources of Official Data - Longman.

in 1960, as shown in Table 1. With a query as to whether there should not today be an additional, eighteenth group of those unemployed!

Although the five investigations reported by Wankowski, J.A. (1969) did not carry "the validity of the Random Sample" he regarded the data as uniform and had sufficient confidence to make three recommendations:-

- (1) That weakness should be identified early and students given practical help to settle down to their studies.
- (2) That the motives and interests of students should be considered both on admission and afterwards.
- (3) That at the teaching level students should be helped to relate their courses to their future needs, skills and interests and so to become more involved in their academic work.

These three recommendations are very closely related to the intention and purposes of this study. As Kitwood, T. (1976) said of "those involved in the actual business of education. Their concern is with real events, not with measurements; with the actual attitudes and morale of students, not with answers to arbitrarily-framed questions; with the causes, not the correlates of academic success and failure; with the forming of a sane and ethical policy for the future of higher education", and "it is essential to recognise what a person is and can be" so that "methods which attribute to persons more or less fixed quantities of such entities as 'academic motivation' are counter-educational". These words must surely be applicable to those in colleges of education, especially

in the context of this study. Both of the questionnaires however promised to have their difficulties especially over the problem of non-response which is now considered.

3.13 Scott, C. (1961) said that except for "studies crucially concerned with a small sub-sample of the respondents" "if all but 10% of the sample respond it does not matter very much how biased the non-respondents are" but that attempts to find reasons for non-reply were unsatisfactory, having to be based on scanty and untrustworthy information. More encouraging was the statement of Boshier, R. (1971) that the characteristics of non-respondent drop-outs and persisters in his study did not differ significantly from those of the wider participant population. Nevertheless, non-response remains a major problem of mail surveys; it is thoroughly discussed by Moser, C.A. and Kalton, G. (1971). Among other points made are the value of throw-away questions to widen the interest and so promote involvement in the survey, but the lack of evidence of appreciable effect of assurance of anonymity or confidentiality, colour of stationery or day of the week and time of year. However, Moser & Kalton also suggest there is a tendency to upward bias in educational level and social class composition, and two warnings are given: (1) that a response rate not rising above 20 to 30 per cent may have bias at so critical a level that it vitiates the results; and (2) although repetition of mailings will bring in further responses, their quality is likely to decline with the spontaneity. Apart from the question of bias, non-response may well reduce the total number of cases available so that simultaneous control for several test factors becomes impossible. As

additional factors are introduced, the number of cells in the table increases and there is the danger of the number of members in each category becoming too small to be of any use. Zimmer, H. (1956) examined a procedure for using the numbers in the groups responding to an increasing number of follow-up messages to estimate the numbers likely to occur in the non-response group. He found that non-response bias occurred despite a very high rate of return, and that his method of using the response/non-response probability function to indicate the direction of such bias and enable extrapolation to be effected could not be relied upon exclusively.

Nisbet, J.D. and Entwistle, N.J. (1970) suggested first separating the non-receivers, if possible, from those who had received the questionnaire but not replied, and then checking to see how the responders differed from the non-responders. The next step was to check a sample, say, one in ten, of the non-responders personally as far as possible to see how far they corresponded to the total group and, if the numbers were adequate, to weight the answers given by the non-responders' sample by a factor of ten as appropriate. A very high rate of non-response was expected for the "Institutes" questionnaire, No.2, sent to students known to have withdrawn from their teacher-training courses. Both the questionnaires used in this investigation will now be described in detail.

3.2 Two questionnaires were issued, in the traumatic circumstances described in Section 1. It is essential for this background to be understood at least to some extent to appreciate the mood of both the responders and non-responders and to understand why it seemed worth taking the undoubted risk of asking hypothetical questions, and those relying on

recall, known as they are to be notoriously doubtful in the quality of answers they provoke.

3.21 The first set of answers could possibly give some forecast of how students would react to the new diversified modular courses about to be introduced, and, the questionnaire being re-issued a year later in only slightly modified form, could show how the students were reacting in the initial stages of these experimental courses. Furthermore, these students could be followed-up to see which of them actually did withdraw without completing their programmes, or change to non-teaching programmes, and hence could perhaps show whether or not there was a relationship between the students' anticipated and actual achievements. Since the students who were first years for the first issue were second years for the second issue, their answers might indicate likely change of opinion as the programme of such teachers-in-training proceeds. The extent to which these objectives were achieved is displayed in Section 3.25.

It was however to be expected that scanning two year's entry of these colleges, together serving only about 1500 students, would not produce a large sample of withdrawal cases. Thus the second questionnaire, with the kind permission of the Directors of the two Institutes of Education and the much appreciated co-operation of registry staff, in both, was mailed to students in each of two Northern Institutes, one large one covering twelve colleges and the other covering five. The students selected were all those who had withdrawn from their courses without completion, but had not simply transferred to another college to continue with a similar

course elsewhere. It was anticipated that there would be a very low response indeed to the second questionnaire for several reasons: (1) it was at least five years since the students' addresses were known to be correct, and the population was in any case likely to be mobile; (2) it was possible that the withdrawal from college was still a delicate matter, perhaps rousing unhappy memories that the subjects would prefer to forget; (3) the time lag, even were the topic favoured, would reduce the interest and hence the motivation for replying, and perhaps also the accuracy of some replies. Thus it was even more than normally desirable to aim at as high a response rate as circumstances would permit, though at the same time it was essential from the point of view of achieving the necessary follow-up to be able to match the responders to the sample list, although not by name. The structure and detail of the questionnaires and letters sent out was thus a compromise between what seemed unavoidable and the ideal forms. The first questionnaire drafted was modified in small ways after trial on a few students, known personally, from other colleges.

3.22 The questionnaire "1974", numbered 1(a), with the names of the colleges inserted, was given, in each of the two voluntary colleges concerned, to all the students who were just starting either their first year or second year. The single sheets were distributed and returned via Education Tutors meeting their groups. Of the few students who missed receiving them, the majority received them on the next occasion that the group met. Most of the students thus completed the questionnaires, and handed them in, almost at the same time and certainly within a few days.

QUESTIONNAIRE 1(a)

given to both first and second year students
of "Voluntary College" in 1974.

N.B. The two colleges had separate identities
in 1974; in 1975 they had amalgamated
to form one new college.

1974

To Students of the Colleges ofand

To help in checking 'lost' replies, please put your initials here

(No information will be publicised with names in any way)

(1) College year ----- (2) Date of Birth -----

(3) Secondary schools attended:	School	From	To
(Please give month and year)	-----	-----	-----
	-----	-----	-----
	-----	-----	-----

PLEASE TICK THE APPROPRIATE SPACE FOR EACH ITEM

(4) Male ----- Female -----

(5) How strong, on entering college, is/was your decision to teach?

- Very firm intention -----
- Firm intention -----
- Intention, but not at all strongly committed -----
- Probably will, but may not -----
- Require qualification for some further purpose -----
- Very uncertain -----

(6) For how long have you intended to train for teaching?

- Before form VI/3 more years ago -----
- Early in form VI/about 2 years ago -----
- At the time of applying to college -----
- Just in time for late application -----
- No real intention yet but will decide so if I like the college course -----
- Have only come to college for want of other higher education -----

(7) If there had been non-teaching as well as teacher-training courses offered at college, which of the following courses would you have selected?

A course definitely for intending teachers -----

A teaching course with the possibility of transfer to non-teaching later -----

An un-committed course with the possibility of transfer to a teaching course later -----

Definitely on a non-teaching course -----

(8) If there had been an alternative Two-year "Diploma" qualification, which of the following patterns would you have chosen?

A three year course or longer, but not less -----

A three year course such that you could decide later to terminate it after two years -----

A two year course such that you could decide later to continue for at least 3 years -----

A course to terminate definitely after two years even with no teaching qualification -----

(9) YEAR TWO ONLY

Have you at any time during your first year seriously contemplated withdrawal from college?

YES NO

If 'YES', for which of these reasons?

On personal grounds -----

Because you found college work too demanding -----

Because you felt you would not reach the required in-college standards -----

Because you felt you would not succeed in the classroom -----

Other reasons (Please specify if you can)

(10) YEAR TWO ONLY

If you had the option now of turning to a general non-teaching qualification in your present college, which of the following would you choose?

To turn at once to non-teaching course -----

To continue on a course specifically
for teaching -----

To keep open the option to transfer
at the end of year two -----

THANK YOU FOR YOUR HELP.

GOOD LUCK WITH YOUR YEAR'S WORK, AND BEST
WISHES FOR A SUCCESSFUL AND HAPPY CAREER
IN TEACHING.

A.I.G. Renton
Sept. 1974.

The answers were coded, as shown on the sheet, and transferred to punched cards by the Durham University Computing Laboratory "punching ladies". Using the SPSS package described by Nie, N.H. et al, (1975) the data was printed with counts of absolute and relative frequencies (%).

3.23 The questionnaire "1975", numbered 1(b)*, was issued in a similar way the following year, being a slightly modified form of 1(a). The slight changes were made to discourage rejection by those who had completed the 1974 version: in fact, of the students with whom it was afterwards discussed none had recognised it as the same - probably because there was much of more moment to them demanding their attention when they had filled in the previous questionnaire so early in their college life. Unfortunately, however, the general circumstances were by September 1975 much more hectic. Not only had the two colleges just amalgamated to create a single college on two campuses, but the new first years were embarking upon the modular courses, many of them for the new B.Ed. This had brought with it a change from working by terms to working by semesters of half a year, which also reflected on the second years still working by terms. In addition their lectures had inevitably been affected in a variety of ways and the students had been asked to fill in two or three other forms for registration and course choices just prior to this one. It seemed likely that this would contribute to a lower response rate. (It was also probable that in the stress felt at that time a few of the completed sheets were unintentionally not handed in). First year teacher-training numbers were now smaller through the quota reduction and some of the entrants,

* Appendix, pages 126-130

being B.A. or B.Sc. undergraduates, were ineligible for the survey. As it was an important aspect of college policy that the small number of non-teaching students should not be made to feel "left out", they had the opportunity of completing the questionnaire which was so labelled and worded that their answers could be separated from those of the teachers-in-training, although the number thus rejected was too small to admit of separate analysis. The format of a single sheet was still possible, using foolscap paper: this has been adjusted for presentation on A4 sheets in this report. The coding for the 1975 answers was exactly as for the 1974 ones. The "types of school" identification in question 3 (a) was abandoned because so many of the students had been in schools transitional in one way or another, sometimes over several years, towards comprehensive education: it had not been foreseen how very confusing this would have proved to be for the students even with the modifications made to the question, so that their answers became unreliable. On completion, the initial processing was just as for the first issue of the previous year.

3.24 The data of questionnaires 1(a) and 1(b) was read from the punched cards to tape, and thence to mini-file for printing and checking, and processing on a RAIR BLACK BOX micro-computer: print-outs of both data and results are included in the appendix.* The first 4 questions were administrative. Numbers 5 to 10 asked the students to indicate choices by ticking boxes. Question 9 concerned serious contemplation of withdrawal from the teaching course.

The graduated categories in questions 5 to 8 and 10 were dichotomised thus:-

- Q.5: Firm intention - the first 2 categories v the last 4;
- Q.6: Continuing intention - the first 4 categories v the last 2;
- Q.7: Commitment - the first 2 categories v the last 2;
- Q.8: Preferred length of course - the first category v the last 3;
- Q.10: Vocational specification of course - the second category v the 1st and 3rd.

In the tables of results the categories have the same numbers, in numerical order, as on the coding sheet. Cross-tabulations were made of the frequencies obtained in the dichotomised forms of the questions, and contingency coefficients were calculated with the x^2 values, to get measures of association, in cases where the results were not immediately obvious.

From questionnaires 1(a) and (b), given in 1974 and 1975 respectively in the Voluntary Colleges the data for year 1 and year 2 students were filed separately under the code names 24 Part VC. Dat, 14 Part VC. Dat, 25 Part VC. Dat and 15 Part VC. Dat, the first digit in each case indicating the student year and the second the calendar year. Thus 14 indicates the same group of students as 25, and included 176 students who responded in both years, of whom 49 were men and 127 women. The data for these students were printed together to facilitate comparison*. One student had recorded herself as male in the first year, but correctly as female in the second: as the other information given which could be checked was correct, the record was allowed to stand.

Similarly eight Year 1 students filled in that part of the

** Paired Records, pages 170-9.*

questionnaire labelled "Year TWO Only". As this betokened lack of care at the very least, these scripts were carefully checked for all the known data: as no other anomalies were detected it was decided to include these responses, ignoring the extraneous portions. Four Year 2 male students omitted at least one whole question in 1(a), 1974: again, as no other anomalies were detected, those responses given were included. In 1975 just five students, 1 from the smaller campus and 4 from the larger, had erased their key numbers and so cannot be entered in the pairings. They are recorded at the ends of their respective lists as 1888 and 2666 to the end. In the results that follow data for Year 2, 1974 are recorded first since the students entered college first, then data for Year 1, 1974. Those for Year 2, 1975 follow, this being the same student group, so that they lie adjacent for comparison; and finally data for Year 1, 1975 students, these being the latest college entrants, and those who came in as members of the new, amalgamated Voluntary College. No distinction has been made between records of the two separate colleges in 1974, but students from the smaller college have key numbers starting with '1', while the keys for those from the larger college start with '2'. Thus comparisons between the separate colleges may be made if desired. In this study, however, as these colleges were already "affiliated" they had come sufficiently close together for the data to be dealt with in this context as though they devolved from one institution.

3.25 The answers to the questionnaires discussed above are given in print-out form in the Appendix.* Here the results are presented question by question, with some withdrawal figures, after a table of response figures.

	1(a) Vol. Colleges (1974)		1(b) Vol. College (1975)	
	Year 2	Year 1(1974)	Year 2	Year 1(1975)
<u>No. of students</u>				
Questionnaires received by:-				
Males	136	130	123	103
Females	317	290	262	292
Total	453	420	385	395
Responses:-				
Males	93	111	60	32
Females	275	274	142	176
Total	368	385	202	208
Withdrawn since replied:-				
Males	9	8	-	4
Females	14	31	-	24
Total	23	39	-	28
Withdrawn since failed to reply:				
Males	4	2	3	12
Females	1	2	5	21
Total	5	4	8	33
Total withdrawn from year group:				
Males	13 9.6%	10 7.7%	3 2.4% ✓	16 15.5%
Females	15 4.7%	33 11.4%	5 1.9% ✓	45 15.4%
All Students	28 6.2%	43 10.2%	8 2.1%	61 15.4%

Table 2. Responses to, and withdrawals following, questionnaire 1.

Year 2 (1974) Vol. Colleges (93 Male, 275 Female)

29 questionnaires were issued to students who later withdrew.

24 responded fully or to most questions.

5 failed to respond at all.

Only one of the withdrawal students, a female, was over 23 years old.

Total withdrawals:

Men:	13 out of = 9.6%
	136
Women:	15 out of = 4.1%
	317
All students:	28 out of = 6.2%
	453

Table 2(b)-α

Year 1 (1974) Vol. College (111 Male, 274 Female)

48 questionnaires were issued to students who later withdrew.

39 responded fully or to most questions.

4 failed to respond at all.

Only one of the withdrawal students, a female, was over 22 years old.

Total withdrawals:

Men:	10 out of = 7.7%
	130
Women:	33 out of = 11.4%
	290
All students:	43 out of = 10.2%
	420

Table 2(b)-β

Year 2 (1975) Vol. College (60 Male, 142 Female)

8 questionnaires were issued to students who later withdrew.

0 responded.

8 failed to respond at all.

Total withdrawals:

Men:	3 out of = 2.0%
	188
Women:	5 out of = 1.9%
	262
All students:	8 out of = 2.1%
	385

Table 2(b)-γ

N.B. These are included in the totals for Year 1 (1974) Vol. Colleges.

Year 1 (1975) Vol. College

- 61 questionnaires were issued to students who later withdrew.
- 28 responded fully or to most questions.
- 33 failed to respond at all.

None of the withdrawal students was over 22 years old.

Total withdrawals:	Men:	15 out of 103	= 15.6%
	Women:	45 out of 292	= 15.4%
	All students:	60 out of 395	= 15.4%

Table 2(b)-5

Table 3

Answers to Qu. 5: Strength of decision to teach

Categories 1 and 2 were taken together as the dichotomised category 'a': firmly committed.

Categories 3, 4, 5 and 6 were taken together as the dichotomised category 'b': not at all strongly committed.

Category	1(a) Vol. Colleges				1(b) Vol. College			
	Year 2 (1974)		Year 1 (1974)		Year 2 (1975)		Year 1 (1975)	
	All St.	W/D St.	All St.	W/D St.	All St.	W/D St.	All St.	W/D St.
1. Male	39	4	41	1	19	-	17	2
Female	108	4	113	10	56	-	67	5
2. Male	35	4	43	4	21	-	10	2
Female	121	7	126	9	49	-	76	9
3. Male	13	2	17	2	15	-	3	-
Female	38	3	24	6	23	-	24	6
4. Male	4	-	7	-	1	-	1	-
Female	3	-	6	2	7	-	6	1
5. Male	1	-	2	-	1	-	1	1
Female	4	-	1	-	6	-	3	1
6. Male	-	-	1	-	3	-	-	-
Female	1	-	4	2	1	-	-	-
No response	1 Male	-	-	-	-	-	-	-
a) Male	74	8	84	5	40	-	27	4
Female	229	11	239	19	105	-	143	14
b) Male	18	2	27	2	20	-	5	1
Female	46	3	35	10	39	-	33	8
All students replying -								
Male	92	10	111	7	60	-	32	5
Female	275	14	274	29	142	-	176	22
Total no.	368	24	385	36	202	-	208	27

1 - very firm intention

2 - firm intention

3 - intention not at all strongly committed

a - firmly committed

4 - probably will, but may not

5 - require qualification for other purpose

6 - very uncertain

b - not at all strongly committed

A high proportion of students were firm in their intention to teach, even among the withdrawal students - though in this case the numbers are too small to generalise.

Answers to Qu.6: Stage at which intention to teach was formed

Categories 1, 2, 3 and 4 were taken together as the dichotomised category 'a': sustained intention.

Categories 5 and 6 were taken together as the dichotomised category 'b': no real intention.

Table 4

Category	Year 2 (1974) Coll.		Year 1 (1974) Coll.		Year 2 (1975) Coll.		Year 1 (1975) Coll.	
	All sts:	W/D sts:	All sts:	W/D sts:	All sts:	W/D sts:	All sts:	W/D sts:
1. Male	35	4	43	2	27	-	15	1
Female	148	6	155	14	78	-	70	9
2. Male	41	4	49	3	22	-	11	4
Female	97	7	96	13	42	-	70	8
3. Male	9	1	12	2	7	-	5	-
Female	23	1	18	1	8	-	28	4
4. Male	5	1	4	-	1	-	-	-
Female	3	-	3	-	6	-	5	-
5. Male	1	-	2	-	2	-	-	-
Female	2	-	2	1	7	-	3	1
6. Male	1	-	1	-	1	-	1	-
Female	1	-	-	-	1	-	-	-
No response	1M, 1F	-	-	-	-	-	-	-
a - Male	90	10	108	7	57	-	31	5
Female	271	14	272	28	134	-	173	21
b - Male	2	-	3	-	3	-	1	-
Female	3	-	2	-	8	-	3	1
All students replying -								
Male	92	10	111	7	60	-	32	5
Female	274	14	274	29	142	-	176	22
Total no. of students	368	24	385	36	202	-	208	27

1. Before form VI/3 or more years ago

2. Early in form VI/about 2 years ago

3. At time of applying to college

a. sustained intention to teach

4. Just in time for late application

5. No real intention yet, but may decide so

6. No intention: at college only for higher education

b. No real intention

The intention to teach had been sustained by almost all the students: the few with no real intention were not among the withdrawals, except in two cases: *Year 1, 1974 Vol. Coll. & Year 1, 1975 Vol. Coll.*, in Category 5.

Answers to Qu.7: Course selection, if non-teaching as well as teacher-training courses had been available.

Categories 1 and 2 were taken together as the dichotomised category 'a': with choice, would have continued with a vocational teaching course.

Categories 3 and 4 were taken together as the dichotomised category 'b': with choice, would have turned to a non-vocational course.

Table 5

Category	1(a) Vol. Colleges				1(b) Vol. College			
	Year 2 (1974)		Year 1 (1974)		Year 2 (1975)		Year 1 (1975)	
	All st	W/D st	Allst	W/Dst	Allst	W/Dst	All st	W/D st
1. Male	50	6	66	3	32	-	26	3
Female	177	9	174	18	81	-	136	15
2. Male	35	4	33	3	20	-	3	1
Female	72	3	88	8	48	-	32	7
3. Male	6	-	11	1	7	-	1	1
Female	26	2	12	3	7	-	5	-
4. Male	-	-	1	-	1	-	2	-
Female	-	-	-	-	4	-	2	-
No response	2 Male	-	-	-	2 Fem.	-	1 Fem.	-
a) Male	85	10	99	6	52	-	29	4
Female	249	12	262	26	129	-	168	22
b) Male	6	-	12	1	8	-	3	1
Female	26	2	12	3	11	-	7	-
All students: Male	91	10	111	7	60	-	32	5
Female	275	14	274	29	140	-	175	22
Total no. of students	368	24	385	36	202	-	208	27

1 - course definitely for intending teachers

2 - teaching course, with possible transfer to non-teaching course

a - would continue with a vocational teaching course

3 - Uncommitted course, with possible transfer to a teaching course

4 - definitely non-teaching course

b - would transfer to a non-vocational course

An overwhelming majority of students would continue with a vocational teaching course: none of the withdrawal students would have selected a definitely non-teaching course, though a few would like to keep their options open.

Answers to Qu.8: Selection of qualification if 2-year Diploma pattern had been available.

Category 1 was taken as the dichotomised category 'a': prepared to pursue a full 3-year course.

Categories 2, 3 and 4 were taken together as the dichotomised category 'b': would consider terminating after 2 years.

Category	1(a) Vol. Colleges				1(b) Vol. College			
	Year 2 (1974)		Year 1 (1974)		Year 2 (1975)		Year 1 (1975)	
	All st.	W/D st.	All st.	W/Dst.	All st.	W/Dst.	All st.	W/Dst.
1. Male	42	7	65	3	34	-	26	5
Female	110	7	105	8	72	-	125	12
2. Male	21	2	15	1	5	-	4	-
Female	85	4	95	12	20	-	22	5
3. Male	22	1	28	3	18	-	2	-
Female	78	3	74	9	45	-	22	2
4. Male	1	-	1	-	-	-	-	-
Female	-	-	-	-	-	-	-	-
No response	7 M, 2 F	-	2 Male	-	3 M, 5 F	-	7 Fem.	3 Fem.
a) Male	42	7	65	3	34	-	26	5
Female	110	7	105	8	72	-	125	12
b) Male	44	3	44	4	23	-	6	-
Female	163	7	169	21	65	-	44	7
All students replying -								
Male	86	10	109	7	57	-	32	5
Female	273	14	274	29	137	-	169	19
Total no. of students	368	24	385	36	202	-	208	27

1 - 3-year course, or longer, but not less

2 - 3-year course, but perhaps terminating after 2 years

a - prepared to pursue full 3-year course

3 - 2-year course, but perhaps continuing for at least 3 years

4 - 2-year only course, even with no teaching qualification

b - would consider terminating after 2 years

Table 6

Answers to Qu. 9: (Year Two Only): Serious contemplation of withdrawal from college

Table 7(a)

Seriously considered withdrawal	1(a) Vol. Colleges		1(b) Vol. College	
	Year 2 (1974)		Year 2 (1975)	
	All sts:	W/D sts:	All sts:	W/D sts:
1) Yes:				No replies.
Male	28	1	13	
Female	99	9	46	
2) No:				
Male	63	8	47	
Female	176	5	96	
No response	2 Male	-	-	

Students who replied "Yes" to the first part of the question were asked to give reasons for their contemplation of withdrawal.

A few replied under the headings thus:-

On personal grounds:

Because college work too demanding:

Because felt would not reach the required in college standards:

Because felt would not succeed in the classroom:

Other

The last category of replies were summarised thus:-

Other reasons given for contemplation of withdrawal:

Another career considered	-	7 students
General dissatisfaction with courses	-	6 students
Particular dissatisfaction with main course	-	4 students
Social reasons	-	5 students
Doubts about vocational success	-	3 students
Transfer to another college/ University	-	3 students
Course only as a step to a further purpose	-	2 students

Some students cited more than one reason for considering withdrawing: these were apt to differ from the "official" reasons for those who did in fact withdraw. Because of this

tendency to differ and of the fact that most students withdrawing from a college were allocated a "standard" phrase (such as "No longer wished to teach" or from another college "Wished to change his/her career") to cover all but a few contingencies, it was not considered useful to pursue the "reasons" further in the analysis of either questionnaire 1 or 2.

Those who subsequently withdrew but had not contemplated withdrawal seemed, if anything, to be avowing more firmly their commitment to the profession. Was their weakness perhaps that they were unrealistic, or was it an attempt to boost flagging self-esteem? The answers, however, do not show significant difference from those of the students who completed their courses, there being generally an apparent lien towards categories

2, 2, 1, 1, and 2 for questions 5, 6, 7, 8 and 10 respectively, *all these being 'committed answers, though not extreme where it need not be so.*

Of students who actually withdrew, of the females who replied, 9 had seriously contemplated withdrawal and 5 had not done so: of the males who replied, only 1 had seriously contemplated withdrawal and 8 had not.

Thus 10 of those who later withdrew had contemplated withdrawal, but 13 had not foreseen it. These students were all in the 24 VC group. 1 Female and 4 Male withdrawals did not reply. At least one of these male students was certainly still in college when the questionnaire was issued, but others may already have "withdrawn" since many students are "absent" before they terminate their connection officially. None of the Year 2 (1975) students who actually withdrew responded to questionnaire 1(b), though 8 out of them were still formally "in college", these being an equal number each of men and women.

Comparison of answers of withdrawal students who did and did not contemplate their withdrawal at the time of response to 1(a)

	Categories					
	1	2	3	4	5	6
Qu.5 Those contemp. w/d	3	4	3			
Those not contemp. w/d	3	8	2			
Qu.6 Those contemp. w/d	4	6	-	-		
Those not contemp. w/d	5	5	2	1		N O
Qu. 7 Those contemp. w/d	6	3	1			
Those not contemp. w/d	8	4	1			R E P L I E S
Qu.8 Those contemp. w/d	6	3	1			
Those not contemp. w/d	8	3	2			
Qu.10 Those contemp. w/d	-	5	4			
Those not contemp. w/d	-	12	1			

Table 7(b)

Although not asked to answer this question it is interesting that of the 15VC group, 3 men and 29 women volunteered the information that they had already seriously contemplated withdrawal before half term in their first term! 29 men and 143 women said they had not done so. The 14 VC group showed more conformity, only two men and two women answering that they had not contemplated withdrawal and just one woman student saying she had done so.

Answers to Qu.10:(Year Two Only): Choice with the option of turning to a general course with a non-teaching qualification in the present college.

	Voluntary Colleges			
	Year 2 (1974)		Year 2 (1975)	
	All sts:	W/D sts:	All sts:	W/D sts:
1. Turn at once to a non-teaching course - Male	1	-	3	-
Female	2	-	5	-
2. Continue with a course specifically for teaching				
Male	57	8	40	-
Female	187	11	95	-
3. Keep open option to transfer at end of year				
Male	28	2	16	-
Female	84	3	40	-
No response	7 M, 2 F	-	1 M, 2 F	-
All students replying -				
Male	86	10	59	-
Female	273	14	140	-
Total no. of students	368	24	202	-

Table 8

For the students in these colleges, with the adoption of modular courses, these options are now a reality, and have already been taken up. As reported by Illingworth, S.D. (1975), 11 students in the 15 VC group out of the 330 who responded to his questionnaire, on course choices, 11 of the B.Ed/Cert. students had changed to a non-teaching programme. 5% of B.Ed students and 17.8% of B.A/B.Sc students changed to the other programme before the end of November in their first term. It will be interesting to see, as the new system becomes established, if the facility for changing programmes reduces wastage or whether such a change creates its own difficulties.

3.26 A Copy of the answers given by the same students in consecutive years extracted from the data of groups 14 VC and 25 VC is given in the Appendix* under the heading paired records. Changes in these answers are tabulated below, first in summary form and then with more detail.

More students seem to have their decision to teach weakened rather than strengthened during their course. About half judged the time when they formulated their decision as either earlier or later than in their first year at college, about equal numbers moving in each direction. Again, slightly more students seemed to have their commitment reduced, perhaps as they became more aware of the stern realities of the situation through periods of school practice; and approximately equal numbers again would have selected longer or shorter courses, with about half keeping their selection unchanged.

* Pages 170-9

Analysis of Qu.5: Strength of decision to teach

Number of pairs = 176

Male = 49

Female = 127

Dichotomised form:

Categories 1, 2 = a, firmly committed

Categories 3, 4, 5, 6 = b, not at all strongly committed

Table 9.

α Summary

No. of students	Male		Female		All Students	
Strengthened Decision	10	20.4%	27	21.3%	37	21.0%
Unchanged	23	46.9%	58	45.7%	81	46.0%
Weakened Decision	16	32.7%	42	32.1%	58	33.0%

Change of category from b to a: 2.8% of all students strengthened their decision to teach, *from little to a firm commitment.*

& change of category from a to b: 18.2% of all students weakened their decision to teach, *from a firm to little commitment.*

β Breakdown

No change: 81 students

category a 43.2%

category b 5.1%

Category	1	2	3	4	5	a	b
Men	9	9	3	1	1	18	5
Women	30	24	3	-	1	54	4
All students	39	33	6	1	2	72	9

γ. Strengthened decision to teach

Change of category	From	2	3	4	4	6	b
	To	1	2	3	2	3	a
Men		5	2	3	-	-	2
Women		23	2	-	1	1	3
All students		28	4	3	1	1	5
Total strengthening intention		By 1 place, 35			By 2 pl., 1	By 3 pl. 1	

δ. Weakened decision to teach

Change of category	From	1	2	3	1	2	3	4	1	2	3	1	2	1	a
	To	2	3	4	3	4	5	6	4	5	6	5	6	6	b
Men		7	6	-	-	-	-	-	-	-	1	-	1	1	8
Women		14	9	1	7	3	2	1	1	2	-	1	1	-	24
All students		21	15	1	7	3	2	1	1	2	1	1	2	1	32
Total weakening intention		By 1 place, 37			By 2 pl., 13			By 3 pl., 4			By 4 pl., 3	By 5 pl., 1			

Qu.6: Stage at which intention to teach was formed.

Number of pairs = 176

Male 49

Female 127

Dichotomised form: Categories 1, 2, 3, 4 = a

Categories 5, 6 = b

Table 10. Analysis.

Summary

No. of students	Male		Female		All Students	
Stage put earlier	12	24.5%	24	18.9%	36	20.5%
Unchanged	25	51.0%	76	59.8%	101	57.4%
Stage put later	12	24.5%	27	21.3%	39	22.2%

Breakdown

No change: 101 students

Category	1	2	3	a	a
Men	14	11	-	25	
Women	54	20	2	76	
All students	68	31	2	101	57.4%

Y Gave: earlier stage at which intention to teach formed.

Change of category	From	2	3	4	4	5	5	b	b	
	To	1	2	3	2	3	2	a	a	
Men		7	2	1	1	-	1	1		
Women		16	5	1	1	1	1	1		
All students		23	7	2	2	1	1	2	1.1%	
Total giving earlier stage at which intention formed		By 1 place, 32			By 2 pl., 3		By 3 pl., 1			

δ Gave: later stage at which intention to teach formed.

Change of category	From	1	2	3	4	1	2	3	4	1	2	1	2	a	a	
	To	2	3	4	5	3	4	5	6	4	5	5	6	b	b	
Men		3	4	1	-	1	-	1	1	-	1	-	-	4		
Women		13	1	1	1	-	2	2	-	3	2	1	1	6		
All students		16	5	2	1	1	2	3	1	3	3	1	1	10	5.7%	
Total giving later stage at which intention formed		By 1 place, 24				By 2 pl., 7				By 3 pl., 6	By 4 pl., 2					

Qu. 7: Course selection if non-teaching as well as teacher-training courses had been available.

Number of pairs = 175

Male 49

Female 126

Dichotomised form: Categories 1, 2 = a

Categories 3, 4 = b

Table II. Analysis.

α Summary

Nos. of students	Male	Female	All sts.
Increased commitment	9 18.4%	27 21.4 %	36 20.6 %
Unchanged	27 55.1%	59 46.8 %	86 49.1 %
Reduced commitment	13 26.5%	40 31.7 %	53 30.3 %

(1 female student made no response in 1975 to qu.7)

β Breakdown

No change - 86 students

Category	1	2	3	a	b	a	b
Men	20	6	1	26	1		
Women	47	11	1	58	1		
All students	67	17	2	84	2	46%	1.1%

8 Increased commitment acc: to teaching course selection

Change of category	From 2 3 To 1 2	3 1	b a	b a
Men	6 3	-	3	
Women	24 2	1	3	
All students	30 5	1	6	3.4 %
Total increasing commitment	By 1 pl., 35	By 2 pl., 1		

8 Reduced commitment acc: to teaching course selection

Change of category	From 1 2 3 To 2 3 4	1 2 3 4	a b	a b
Men	7 3 1	2 -	5	
Women	31 4 -	3 2	9	
All students	38 7 1	5 2	14	8.0%
Total reducing commitment	By 1 place, 46	By 2 pl., 7		

Qu.8: Selection of qualification if 2-year Diploma pattern had been available

Number of pairs = 169
Male 46
Female 123

Dichotomised form: Category 1 = a
Categories 2, 3, 4 = b

Table 12. Analysis.

Summary

Nos. of students	Male	Female	All sts.
Lengthened course selected	8 17.4%	34 27.6%	42 24.9%
Unchanged	27 58.7%	55 44.7%	82 48.5%
Shortened course selected	11 23.9%	34 27.6%	45 26.6%

(1 male student made no response in 1974 to qu.8.
4 female & 2 male students made no response in 1975 to qu.8.

Breakdown

No change - 82 students

Category	1	2	3	a	b
Men	20	1	6	20	7
Women	39	6	10	39	16
All students	59	7	16	59	23

γ Lengthened course selected

Change of category	From	2	3	3	4	b	b
	To	1	2	1	1	a	a
Men		2	-	5	1	8	
Women		15	8	11	-	26	
All students		17	8	16	1	34	20.1%
Total lengthening course selected	By 1 place, 25			By 2 pl., 16	By 3 pl., 1		

δ Shortened course selected

Change of category	From	1	2	1	a	a
	To	2	3	3	b	b
Men		2	4	5	7	
Women		6	14	14	20	
All students		8	18	19	27	16.0%
Total shortening course selected	By 1 place, 26			By 2 pl., 19		

The answers to questions 5, 6, 7, for both first year groups, and for those questions also with 8 and 10 for both second year groups were cross-tabulated. In many cases the tables speak clearly for themselves, and give no surprises. Where the results are not so obvious, the χ^2 test has been applied and coefficients of contingency calculated. The full tables are given on the print-out in the Appendix. The results are summarised below, the question numbers being used as indicators as follows:-

- Q.5: Strength of decision to teach
- Q.6: Time over which intention already sustained
- Q.7: Commitment according to teaching course selection
- Q.8: Willingness to study for a full three-year course
- Q.9: Contemplation of withdrawal
- Q.10: Commitment according to selection of programme

A strong association indicated by the figures without further calculation is shown by a \checkmark : where the χ^2 test was used and the coefficient of contingency calculated, this is entered in the table instead.

T.e.v. = Tail end value
 c = Coefficient of contingency.

Values marked * are those indicating a result likely to occur by chance.

In each case order of elements in cross-tabulations is:-

		Smaller "question number"	
		Category a	Category b
Larger "question number"	Category a	a/a	b/a
	Category b	a/b	b/b

Table 13b.
Summary of
Cross-tabulations.

	Year 2 (1974)	Year 1 (1974)	Year 2 (1975)	Year 1 (1975)
Q.5 with Q.6	✓	✓	✓	✓
Q.5 with Q.7	✓	✓	✓	✓
Q.5 with Q.8	✓	$\chi^2 = 2.38$ T.E.V. = 0.12 C = 0.08	$\chi^2 = 8.41$ T.E.V. = 0.004 C = 0.20	$\chi^2 = 0.30$ T.E.V. = 0.59 C = 0.04
Q.5 with Q.9	✓	—	✓	—
Q.5 with Q.10	✓	—	✓	—
Q.6 with Q.7	✓	✓	✓	✓
Q.6 with Q.8	* $\chi^2 = .31$ T.E.V. = 0.58 C = 0.03	* $\chi^2 = 0.04$ T.E.V. = 0.84 C = 0.01	$\chi^2 = 0.91$ T.E.V. = 0.34 C = 0.07	✓
Q.6 with Q.9	✓	—	✓	—
Q.6 with Q.10	✓	—	✓	—
Q.7 with Q.8	✓	* $\chi^2 = 0.49$ T.E.V. = 0.48 C = 0.04	$\chi^2 = 3.47$ T.E.V. = 0.06 C = 0.13	✓
Q.7 with Q.9	✓	—	✓	—
Q.7 with Q.10	✓	—	✓	—
Q.8 with Q.9	✓	—	$\chi^2 = 6.64$ T.E.V. = 0.01 C = 0.18	—
Q.8 with Q.10	$\chi^2 = 18.4$ T.E.V. = 0.001 C = 0.22	—	$\chi^2 = 3.57$ T.E.V. = 0.06 C = 0.14	—
Q.9 with Q.10	✓	—	✓	—

Over the question of the lapse of time since the decision to teach was made, we have figures quoted by Hopkins, J; Malleson, N.B. and Sarnoff, I. (1958), for comparison.

% of students deciding on career		
In early childhood	10.8%) Before leaving school: 44%
At secondary school	43.2%	
At University/college	3.4%	Not stated: 52.6%

Table 14 (a) Career Decisions.

The comment that childhood decisions are unrealistic and influenced by parents' aspirations may be apposite, but seems to beg the question of how many potential students made equally firm decisions in early childhood but have modified them since. Perhaps many "unrealistic" ones have floundered, leaving the bulk of those remaining representing apparently realistic ones.

The above figures may, in a general sense, be compared with those given below from this study, (calculated from the actual numbers, recorded on the printout in the appendix and above, as given in answer to question 6 of the questionnaires 1(a) and 1(b)). The % of students in the year groups deciding on their careers are given below.

Categories	Year 2 (1974)		Year 1 (1974)		Year 2 (1975)		Year 1 (1975)	
	All sts:	W/D sts:	All sts:	W/D sts:	All sts:	W/D sts:	All sts:	W/D sts:
1. Male	9.5 [%]	16.7	11.2 [%]	5.6	13.4 [%]	-	7.2 [%]	3.5
Female	40.2	25	40.3	33.3	38.6	-	33.7	33.3
2. Male	11.1	16.7	12.7	8.3	10.9	-	5.3	11.1
Female	26.4	29.2	24.9	41.7	20.8	-	33.7	33.3
3. Male	2.5	4.2	3.1	5.6	3.5	-	2.4	-
Female	6.3	4.2	4.7	2.8	4.0	-	13.5	14.8
4. Male	1.4	4.2	1.0	-	0.5	-	-	-
Female	1.4	-	0.8	-	3.0	-	2.4	-
5. Male	0.3	-	0.5	-	1.0	-	-	-
Female	0.3	-	0.5	2.8	3.5	-	1.4	3.7
6. Male	0.3	-	0.3	-	0.5	-	0.5	-
Female	0.3	-	-	-	0.5	-	-	-
No response	0.7	-	-	-	-	-	-	-
All Males	25.3	41.8	28.8	19.5	29.7	-	15.4	14.8
" Females	74.7	58.4	71.2	80.3	70.3	-	84.6	85.1

1 - 3 or more years ago
 2 - About 2 years ago
 3 - About 1 year ago

4 - Only recently
 5 - Think decision made, but
 not very sure
 6 - No decision at all yet

Table 14 (b)

As no figures were specifically taken for early childhood the demarcation for "before leaving school" would have come within category 3 in general, giving the following table:-

Table 4(c)

% of students deciding on career	1974		1975		All W/D students together
	Year 2	Year 1	Year 2	Year 1	
Before leaving school	Between 87% and 96%	Between 89% and 97%	Between 84% and 91%	Between 80% and 96%	Between 60% and 68%
At college	Between 3% and 12%	Between 2% and 10%	Between 4% and 11%	Between 2% and 18%	Between 2% and 10%
Not decided	1%	-	1%	1%	-
Not stated	36%	41%	0%	50%	30%

Thus the proportion of students deciding early on their teaching vocation was higher among the students who stayed the course than among those who withdrew, which is contrary to the suggestion of the earlier study. These results are remarkably consistent across the four subgroups: this was to be expected for 1974 Year 1 and 1975 Year 2, since these were fundamentally the same people. Examining this through the paired records shows that, for consistency, answers in categories 1 and 2 of 1974 would figure in no.1 of 1975; 3 and 4 of 1974 would become 2 and 3 respectively of 1975, whilst 5 and 6 would either remain as 5 or 6, or become 4 or 5, or possibly 6.

Transformation of answers for consistency:-

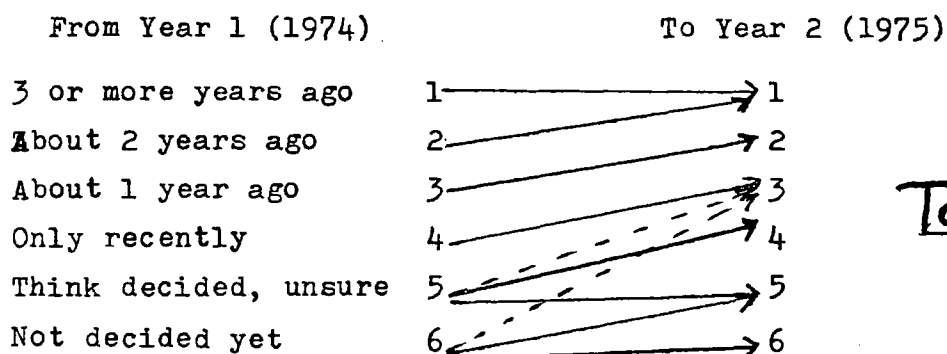


Table 15

100 students in the paired records list gave results whose consistency accorded precisely with the relationships shown in the diagram. Of the remaining 74, there were 32 claiming class 2 for 2 consecutive years, and 15 changing from 1 to 2, thereby saying that their decision had been made a little earlier. Other changes in no case involved more than 5 students, but five are of interest. These cases covered one student earlier unsure but now firm in her decision, and students who had not shown insecurity in the previous year, but now moved into categories 5 and 6, "unsure" and "not decided yet". None of these were withdrawal students. There seems therefore to be very little change indeed in students feelings about the length of time since they made their vocational decisions.

Similarly, over the question of confidence in their choice of a career, it is interesting again to compare with results from this study the figures given in the study just mentioned, even though they were obtained nearly 20 years ago in circumstances too different politically, economically and empirically to justify use of statistical procedures. In this investigation we have, not surprisingly, a greater sense of career commitment.

Table 16

% of students showing:	Little confidence	Great/Average confidence	Not stated
Hop, Mall & Sarn Sample	18.8%	47.5%	33.7%
) Least successful	10.8%	62.2%	27.5%
) successful control gr.			
1974 year 2	37.8%	61.7%	0.5%
1974 year 1 = 1975 yr 2 (average scores)	39.0%	59.1%	1.9%
1975 year 1	17.3%	77.9%	4.8%
Withdrawal students	27.4%	43.5%	29.1%

The earlier investigators found furthermore that colleges with

mature students had a fall-out from all causes slightly below that of colleges with younger students: and also that large colleges had a lower rate of fall-out from all causes than smaller ones but that the reverse was the case for "voluntary" withdrawals. These aspects figure in the results of Questionnaire 2, the administration of which is now considered.

3.3 Whilst the students forming the Voluntary College sample were proceeding with their course, a quite different questionnaire was issued to the Institutes sample, viz: to all students of two Northern Universities' Institutes of Education who started a three-year non-specialist teacher training course in September 1970 but withdrew without successful completion of the course and without transferring directly to another college or University. Students with temporary suspension of courses, who later resumed their course as planned were not counted as withdrawals.

3.31 Data initially available from forms of admission to colleges, and extracted personally, from the records of the larger Institute, consisted for these students of name, date of birth, college, dates of membership, address, and number of A level passes. The address was in most cases the home address, but a few were clearly a college address only. From the smaller Institute there were no A-level pass records but the other items mentioned were provided by the Colleges' Administration Departments. It was unfortunately impossible to obtain information for one college which had already become part of a college of Further Education. The provision of data by the other colleges was most helpfully made with suitable safeguards of confidentiality; their willingness to assist was much appreciated.

3.32 It was clear that this survey would have to be done by mailing because of the scattering of the population since the

students had left college; it was also clear that it would surely be difficult to attain a useful level of response both because of the unhappy associations of the experiences of college that many had passed through, and also of the reduction in interest in those experiences, With the passage of time and development of other careers, The questionnaire was devised and "pre-tested" informally on a few individuals and its double-sided, single folded sheet format was readjusted to give better "box" sizes, but difficulties over printing prevented it being circulated in the Spring of 1978. Preparations were completed in readiness for a November issue, this being the time suggested as "second best" to Spring in the literature, as discussed above.

The letter and a slightly rearranged form of the questionnaire are presented in the Appendix.* The letter was devised for members of a "high education" population, aiming at a tone friendly without losing respect, and deliberately underplaying the withdrawal in the first instance, but stressing the importance of a reply, and appealing to a sense of responsibility by offering information ultimately. With the questionnaire and letter both a stamped addressed envelope and a blank envelope for self-addressing were enclosed. Amidst Post Office difficulties 422 were issued in two batches on consecutive days in the third week of November 1978: the bulk were addressed directly to the withdrawal students (W/D sts:) but on a confidentiality request one college addressed the batch (already stamped) to its own ex-students, these being identified for them by a list of 'code' numbers which were covered as soon as the envelopes were sealed.

3.33 As the replies were received they were at once recorded and sorted into completed (COMPL) and BLANK or PORTD (Post Office: Returned) which included a few returned privately, and so

* Pages 180-7

represented all the "non-contact" members.

About a score returned uncompleted forms with notes explaining that they had only been in college, say, two terms: these were immediately returned with a note of thanks and a request to fill in as much as they felt they could possibly do, and another stamped addressed envelope. Just over one-fifth of these featured among the completed forms afterwards, without counting as the "second mailing". In mid-December new forms were sent to half the non-responders, taking alternate names from the "ledger", omitting those who had already replied. This halving process had a two-fold purpose besides the attempt to achieve a higher response rate. The first was the need to economise a little as the postage rates had gone up severely since the operation was planned; and the second was to see what the effect of the second mailing was on this type of population. The data from the completed questionnaires were "fed" personally by keyboard to floppy disc storage of the RAIR BLACK BOX microcomputer and thence processed. Both the data and summary of results are given in the Appendix.* The numerical analysis of the response follows.

3.34 Questionnaire 2 Copies Mailed

Table 17.

Total no. issued, 1st Mailing	422	100%
" " " 2nd " (excluding those individually mailed after replying)	148	35.1%
No. of non-responders not re-mailed	149	35.3%

The discrepancy in the halving was weighted to the non-repeat balance by one student for whom the only address was a college one, no longer useful for a repeat mailing.

* Pages 188-94, 196B and 195, 199

ResponsesTable 18.

Rates are all given as percentages of the total number issued.

No. of + ^{ve} responses before 2nd Mailing	73	17.3%
" " " + ^{ve} " By those <u>not</u> remailed	6	1.4% *
Total No. of + ^{ve} responses to 1st Mailing	79	18.7%
" " " " " " 2nd Mailing	31	7.4% *
Total No. of + ^{ve} responses	110	26.1%
No. returned "BLANK" by addresses	23	5.5%
" " by G.P.O. et al	63	14.9%
Total No. of "responses"	196	46.4%
Addresses making no response at all	226	53.6%
Total No. not completed	312	73.9%

* Of those who had not responded already, half received the second mailing and 20.9% of them afterwards replied.

Of the other half who did not receive the second mailing, 4.1% later replied nevertheless.

With hindsight it remains an open question whether the expense of re-mailing all non-responders at that time would have been justified if it had led to approximately 25 more responses.

Rate of response to mailings1st Mailing Ratios of replies

No. replying by end of December (within approximately 5 weeks)	:	No. replying in January (within approximately 5-9 weeks)
= 13	:	3

One further reply was received in each of February and March

2nd Mailing

No. replying in December (within approximately 1 further week)	:	No. replying in January (within approximately 5 more weeks)
= 1	:	3

3.35 Throughout the data-listing "no response" is indicated by 9, or 99--- for numerical answers and by Z, ZZ---, for alphabetically recorded answers. By using the lower digit(s) of an age-range, as in question 3, the use of 9 was avoided. (A range, as for example 5 to 7, was represented by 57 since this could not possibly be the single age of a pupil in school). In part 3(d) the teaching focus was coded thus :-

Nursery School	(9) 2
Infant	(9) 5
Junior	(9) 7
Middle School	(9) 8
Up: Junior/Middle	10
Secondary	11
Vith form/F.E.	16

Table 19.

Code for Focus of Teacher-Training.

Where appropriate the data has been analysed according to sex. Results are given below, those preceding the issue of the questionnaire being given first.

Number of Students Mailed (Questionnaire 2)

	Men	Women	Total
1st Mailing (all students)	137	285	422
2nd Mailing ($\frac{1}{2}$ non-responders to date)	8	140	148
COMPL(eted)	29 = 21.2%	81 = 28.4%	110 = 26.1%
P.O. R(e)T(urne)D returned BLANK	25 4	38 19	63 23
with NO RES(ponse)	79	147	226
NON-COMPL(eted)	108 = 78.8%	204 = 71.6%	312 = 73.9%

Table 20.

Results related to Constituent Colleges

Table (21)

College	W/Ds as % of Coll. Intake	COMPLETED Questionnaire 2			NON-COMPL. Questionnaire (2)		
		Men	Women	Total	Men	Women	Total
B	4.5%	4	4	8	5	9	14
C	5.0%	7	12	19	15	12	27
D	(7.1%)	4	1	5	1	8	9
E	(4.0%)	1	1	2	7	10	17
F	3.0%	-	1	1	4	35	39
G	(1.5%)	-	1	1	9	6	15
H	4.5%	2	4	6	6	8	14
I	(1.5%)	-	1	1	-	2	2
J	4.1%	1	5	6	10	8	18
K	3.0%	2	8	10	12	5	17
L	2.7%	-	3	3	-	10	10
M	3.6%	1	9	10	11	25	36
N	(5.0%)	1	9	10	6	15	21
P	(3.9%)	-	7	7	1	20	21
R	3.3%	2	5	7	3	17	20
S	4.7%	-	6	6	1	6	7
T	3.1%	4	4	8	16	9	25

In the second column the figures in brackets are estimates as accurate figures were unavailable.

Colleges D, E, H, J normally took a high proportion of older mature students: the percentages of withdrawals do not however differ in general from those of the other colleges, based as they are on small numbers. The data contributing to the age distribution of these Institute students was too incomplete to bear analysis, though it would have been useful to compare figures for this population with those for the total 3-year college entrant population given by the Central Statistical Office (C.S.O.).

Such a comparison can however be done between the 1971 entrance figures and ^{the 66.0% of} the Institute population for which ~~66.0%~~ of their numbers of A-levels attained are known, yielding the following tables :-

Summary of Results : A-level Attainment *

Table 22

Number attained	All Students		Men		Women	
	COMP.	NON-COMPL.	COMPL.	NON-COMPL.	COMPL.	NON-COMPL.
Not known	27	79	9	24	8	55
0	26	86	4	25	22	61
(Qual. by O's/ Alt. qual.)	(20/6)	(74/12)	(4/0)	(18/7)	(16/6)	(56/5)
1	28	58	9	21	19	37
2	23	59	5	26	18	33
3	5	26	1	8	4	18
4	1	4	1	3	-	1
Total known	83	233	20	83	63	150
Mean	1.12	1.16	1.3	1.31	1.06	1.07
Std. deviation	0.96	1.09	1.00	1.11	0.94	1.08

COMPL: = Those who returned completed forms.

NON-COMPL: = Those who did not return completed forms, and comprises:

those who returned BLANKs,

those returned by the GPO, and others, PO RTD,

and those from whom there was no response, NO RES.

The A-level results come from the larger Institute, comprising 12 colleges. The data appear to confirm the suggestion (section 2.3) that the "middle ability" range as judged by A-levels is the most vulnerable.

* Data, obtained from registration forms, given on pages 188-202.

Table 23.

Comparison with National Population,

for general 3/4 year College course entrance, 1970, from Statistical Records Office Data.

Known no. of A-levels	Institutes Population		National Population	
	Men	Women	Men	Women
0 *	29	83	3314 (760)	8846 (1854)
1	30	56	2485	6737
2	31	51	2274	6508
3	9	22		
3.16	13	23	1244	3433
4	4	1		
Total No. of Students	103	213	9317	25 524
Mean	1.29	1.08	1.18	1.20
Std. deviation	1.04	1.06	1.09	1.09

* Including alternative qualifications, i.e. not by O-levels, as well as O-level qualification for entry to college.

Observation of the means and standard deviations suggests that the figures for men and women, completing and not completing the questionnaire, are consistent among themselves and with the national figures.

The first question, asking for dates of entering and leaving College, besides being obviously "expected" by the recipients, provided a reliability check, since the information was already known from the admission lists. The information given was of a very high accuracy level, especially considering the time lag. In conversion to 'number of terms' from the dates, a term was counted if at least half of it had clearly been "in college."

As indicated above, the questions asked may be found on pages 183-187, with the responses recorded and analysed on pages 188-195 for the uncompleted and pages 196-202 for the completed questionnaires.

Question 1

Number of terms "completed"*

Table 2A.

No. of Terms	Questre. COMPL.		Questre. NON-COMPL.	
	Men	Women	Men	Women
1	4	12	16	48
2	4	12	20	40
3	6	20	19	35
4	4	9	9	15
5	4	7	19	29
6	4	12	10	22
7	2	4	11	8
8	1	5	2	9
Mean	3.86	3.79	3.75	3.39
Std. deviation	1.96	2.06	2.01	2.07

For both A-levels and number of terms, the means and standard deviations calculated give a comparison between responders and non-responders in the population. There appears to be no substantial bias from the non-responders as regards either of these characteristics of the population, though they may of course vary considerably on other attributes.

The data appear to confirm the vulnerability of students at the end of year 1: the small numbers with difficulties in terms 7 and 8, if they survive to the 9th term, usually succeed with extra practice or retakes. The second slight increase in vulnerability at the end of year two may perhaps reflect the desire to complete the year from considerations of the grant received, and may apply also from term two to term three.

Question 2

This concerned time spent "out of college" on continuous school practice and for other reasons. The purpose was not only to check the relation of withdrawal to school practice if possible, but also to see if many withdrawal students were out of college abnormally due to sickness or other cause. Since the timing of school practices varies from college to college, the results have been analysed by colleges. In the

* See Appendix p: 200-2

tables below, one for each year of the college course :-

- (i) each digit indicates one student in the category.
- (ii) the digit gives the number of terms that student completed.
- (iii) a digit marked with a prime indicates that the student had at least 2 weeks out of college for "other reasons." (The reasons are listed below).
- (iv) a digit marked with a double prime indicates that the student was out of college for at least 5 weeks for "other reasons."
- (v) points (i) and (ii) apply to the "No response" column also.

First Year School Practice

Table 25 (a)

College	No. of weeks claimed by students						Total no. of s/s. W/D fr. College	No response
	0	2	3	4	5	7		
B	-	33	-	3	233	-	8	1
C	1	2226	-	-	11112 6 445568	8	19	1
D	2	48	-	4	-	2	5	-
E	-	7	-	-	-	-	2	1
F	-	3	-	-	-	-	1	-
G	-	-	-	-	3	-	1	-
H	2	-	-	-	56	46'' 8	6	-
I	-	-	-	-	6	-	1	-
J	111	4	-	-	33	-	6	-
K	2 3333 5588	-	-	-	-	-	10	3
L	-	3	-	-	6	-	3	1
M	-	2333 446	-	-	3	-	10	11
N	-	45 6	-	3	33 6	1	10	12
P	2	3'' 567	-	-	7	-	7	2
R	466	334	-	-	-	-	7	6
S	-	455	-	-	122	-	6	-
T	-	6	-	-	2456 77	-	8	5

Table 25(b)

Second Year School Practice					Third Year School Practice				
College	Number of weeks claimed by students				No response	Number of weeks claimed by students			No response
	0	2	5	7		0	5	7	
B	-	-	-	-	-	-	-	-	-
C	-	-	666	-	4455	7	8	-	-
D	-	88	-	-	44	-	88	-	-
E	-	-	7	-	-	-	-	7	-
F	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-
H	5	-	-	668	4	-	-	8	-
I	-	6	-	-	-	-	-	-	-
J	-	-	-	-	4	-	-	-	-
K	-	-	5588	-	-	8	-	8	-
L	-	-	-	6	-	-	-	-	-
M	-	46	4	-	-	-	-	-	-
N	-	45	66	-	-	-	-	-	-
P	-	6	577	-	-	-	77	-	-
R	-	44	66	6	-	-	-	-	-
S	-	-	55	-	4	-	-	-	-
T	4	7	566	7	5	7	-	7	-

Students who stayed on into year 3 all responded.

The small number of isolates who seemed as if they should have been in a group again indicates higher reliability than was to be expected, especially as these "isolates" seemed to also have "weeks out" for some other reason.

The 'other reasons' given in question 2(b) for being out of college, besides school practice periods, consisted of :-

operation/hospitalisation
children ill
drama in schools
teaching in summer school
English field study (Stratford)
field/environmental study
and 'outward bound' training.

Each item was only mentioned once or twice.

Question 3

In recording the data of this question, odd numbers were used for English, even numbers for Mathematics.

Thus:

English Maths.
 1 and 2 represent "1 or 2 hours";
 3 and 4 represent "3 or 4 hours";
 5 and 6 represent "5 or 6 hours";
 and 7 and 8 represent "7 or more hours".

Digits are used in the tables as described in question 2.

(a) Colleges of students claiming more than 1 main subject.

College	B	C	F	G	H	K	L	M	N	P	S	T
2 mains	3	15	3	3	4	38	-	2	133	2	122	6
3 mains	-	1	-	-	-	-	6	-	6*	-	-	-

Table 26(a)

* This result is likely to be due to misunderstanding: the other two "three mains" claims are likely to be substantiated.

Number of main subjects taken

Table 26(b)

College	Just 1 Main Subject			2 Main Subjs.		3 Main Subjs.		
	No. of Sts.	Anal. of Sts. by terms completed			No. of Sts.	Anal.	No. of Sts.	Anal.
B	7	1	2	33333	1	3	-	
C	15	111	2222	445 666 7 8	2	15	1	1
D	6		22	44	88	-	-	
E	1				7	-	-	
F	-					1	3	-
G	-					1	3	-
H	5		2	5 66 8	1	4	-	
I	1				6	-	-	
J	4	1		4		-	-	
K	3		2	33 55 8	2	38	-	
L	4	1				-	1	6
M	9	11		3 44 6	1	2	-	
N	4			4 5 6	4	133*	1	6
P	5			5 6 77	1	2	-	
R	7			44 666	-		-	
S	3			4 55	3	122	-	
T	6		2	4 55 6 7	1	6	-	

* The answers of this student, the only one from the college to claim 2 main subjects, strongly suggest a change of main subject from Mathematics to English.

(b) Answers to the question concerning the number of subsidiary subjects were so variable as to suggest differing interpretations of the term, some clearly including a range of professional subjects, others not. These have therefore not been analysed in detail, but the answers are nevertheless included in the appendix.

(c) Each optional subject mentioned had only one or at most a couple of entries, no item being repeated often. The topics given for such courses consisted of :-

E.S.N.
 B.S.A. Swimming (Teaching) Certificate.
 TV and Visual Aids.
 Art.
 English for Foreign Students.
 A Field Study Course.
 Living Science.
 R.E. (-"Compulsory" in most Vol. Colleges).
 Dance and Movement.
 Music.

(d) Focus of Teaching

The majority of these students who had withdrawn had been working with a primary focus. The question arises as to what extent they had thought that this would be "easier" than teaching either very young children or older ones.

Twenty students had been working with a secondary focus, but only 7 of them were taking 2 main courses. The twenty 'secondary' students are analysed by terms completed into colleges, in the following table.

Terms completed	College	No. of Students
1	C	1
2	D,K	1 each
3	L,P	1 each
	B,K	2 each
4	H	1
5	C,H	1 each
	K	2
6	C,H,L,P,T	1 each
7	-	-
8	K	1

Table
27.

This steady spread suggests that for students training to be secondary teachers, at least, there seems to be no effect of "mass hysteria" reaching withdrawal levels, even under the strain of school practice.

Of 19 students who did secondary school practice, one of them twice, 6 were among the 9 males claiming a secondary focus, but 3 of them had no secondary practice before they withdrew. 4 had such practice in Year 1, 2 in Year 2, and none in Year 3.

Eleven females claimed a secondary focus of whom 6 had not had any secondary practice, though the rest had done so, one twice.

For students with a secondary focus for their teacher training, the records of the Central Statistical Office show that from 1963-4 to 1969-70:

- (1) the percentage of men dropped steadily from 36.4% to 30.4%;
- (2) the percentage of women too dropped steadily from 23.0% to 14.3%.

For students who completed questionnaire 2, who started their training in 1970-71, we have :-

	Male	Female	Total
All students (COMPL)	29	81	110
Students with secondary focus	9 = 31.0%	11 = 13.6%	20 = 18.2%

Table 28

These figures are consistent with the national trend.

The parts of the question concerning English were "throwaway" questions, aiming to increase the involvement of those answering: it would in any case not have been possible to analyse these 'English' answers through lack of data. So few showed any sign of taking mathematics courses that it was equally impossible to analyse these through lack of data.

Table
29

Analysis by Terms Completed (110 students)

(a) A-level attainment

No. of A-levels achieved	No. of terms completed							
	1	2	3	4	5	6	7	8
0	3	1	7	3	-	1	1	1
1	5	3	6	3	2	7	2	-
2	2	6	6	2	3	2	-	2
3	1	-	1	-	1	-	-	2
4	-	-	-	1	-	-	-	-
Other entry qualif.	2	-	1	1	-	2	-	-
Total	13	10	21	10	6	12	3	5
Not known *	3	6	5	3	5	4	3	1

*

No A-level numbers were known for the Colleges in the smaller of the two Institutes.

(b) Response to Mailing

Mailing to which responded	No. of terms completed							
	1	2	3	4	5	6	7	8
First	10	10	23	8	7	11	4	6
Second	6	6	3	5	4	5	2	-
All responders	16	16	26	13	11	16	6	6

(c) Focus of Training

School level	No. of terms completed							
	1	2	3	4	5	6	7	8
Nursery/Infant	2	4	9	5	4	3	2	2
Junior	7	8	9	5	2	8	4	3
Secondary	1	2	6	1	4	5	-	1
Total of responders	10	14	24	11	10	16	6	6
No response	6	2	2	2	1	-	-	-

As shown by the fall-off in numbers of "No Response," the focus becomes clearer as more of the course is completed, as would be expected.

N.B. Percentages have not been calculated as these numbers are themselves as close to the percentages, the total number of students being 110, as could be used for any inference with the overall response rate being only 26.1%.

(d) Early Withdrawals

It was clear that a number of students who withdrew very early in their courses had considered it not worth replying to the questionnaire, but of those who did we have the following analysis by Colleges :-

<u>College</u>	<u>W/D after 1 term</u>	<u>W/D after 2 terms</u>
B	1	1
C	5 *	4 *
D	-	2
E	1	-
F	-	-
G	-	-
H	-	1
I	-	-
J	3 *	-
K	-	1
L	1	-
M	2	1
N	2	1
P	-	2
R	-	-
S	-	2
T	-	1
	15	16

* These Colleges show a "high" proportion of day students: either there may be a higher rate of early withdrawal at these Colleges, or among day students; or day students may have tended to remain at the same address, and so have been more easily contacted.

In any case the numbers are too small to do anything more than suggest ideas for possible follow-up.

Question 4

Although only about two-thirds of the respondees answered question 4, the rest saying simply that they could not remember, the responses given were more encouraging than was expected.

Some allocated in very general terms the key letters they were asked to assign to mathematical topics they remembered studying: these gave the following distribution :-

Table 30.

	Boring B	Difficult D	Easy E	Interesting I	Surprising S	Useful U
No. of Students	11	5	5	13	3	2

The number using U is very small, reflecting the atmosphere surrounding question 8 below; E and D balance out, but I does just outweigh B, whilst it is encouraging that S features at all ! The variety of topics recalled was, overall, wider than might have been expected, though the relatively high incidence of the first few recalls the tendency to teach these in school rather too strongly as ends in themselves.

Table 31.

The topics are now presented in order of their frequency of occurrence indicated in the columns for the key letters :

Topics Mentioned	B	D	E	I	S	U	frequency
Binary System & Base Work (inc. 'Dienes)	1	3	6	7	3	2	22
Sets & Venn Diagrams	2	1	4	4	2	3	16
Graphs	1		2	7		2	12
Making Teaching Aids		1		2	1	3	7
History of Number, Patterns & Games				4		3	7
Colour Factor/Cuisenaire Rods	1	2		2	1		6
Tessellation			1	3		2	5
Area		1	1	3			6
Relations	1	1	1	2			5
Time	1			3		1	5
Fractions	1		1		1	1	4
Geometry	1			1	1	1	4
Measurement				2		2	4
Metrication (Weight)			1	2		1	4
Arithmetic	1		1		1		3
Calculators		1		2			3
Algebra	1	1					2
Calculus		1		1			2
Computer programs	1	1					2
Decimals			1			1	2
Logic Blocks		1		1			2
Percentages			1			1	2
Shape			1			1	2
Statistics		2					2
Symmetry				2			2
Envelopes			1				1
Money						1	1
Encoders & Decoders (= Matrices?)							-
Frequency of code letters	12	16	22	48	10	25	133

The "Further Comment" column was used only a little, but we were told that base work was "irrelevant," number bonds and formal operations "boring but useful," whilst a few more general comments allowed some perhaps therapeutic release of emotions including the following comments:

- a) "Asking questions made me feel afraid of being disruptive, so my personal tutor explained to the lecturer who did not understand."
- b) "Erratic, irrational behaviour by lecturer (teaching 'modern mathematics') - very little time spent in mathematics."
- c) "Difficult," but "not the lecturer's fault: he was competent."
- d) "Bias towards teaching children and based upon maths already known to students from school."

- e) "We didn't know what was expected of us."
- f) "Tiered lecture room and too long lectures put one off - Lecturer couldn't talk properly."
- g) "Most topics not tackled in sufficient depth."
- h) "One 1-hour lecture once a week for 2 terms is not adequate preparation for teaching such a vital topic."
- i) "I found making notes (from Nuffield Books) boring and pointless."
- j) "Calculations involving enormous figures, i.e. How many 1/2p. pieces would it take to fill the Hall? were difficult."
- k) "How many blades of grass in a square foot - I must have been interested."
- l) "Related mainly to how well I can control my panic."

Question 5

Students were asked about the kind of accommodation they used at college, since this has been mentioned as a contributory cause of withdrawal. In the data-listing the following code was used :-

C H S	-	College Hostel
C L F	-	College Lodgings or Flat
P L F	-	Private Lodgings or Flat
R E L	-	Living at home, with relatives

If two different types were indicated, both are recorded. If all four were indicated, the entry would be ALL TYP; and for three of the four it would be "NOT ***." As elsewhere, ZZZ indicates no response, and is used in the second 'box' if only one type of accommodation at college was shown. The data is here tabulated in relation to the number of terms completed by the responder.

Table 32.No. of students using different types of accommodation

<u>No. of terms completed</u>	<u>C H S</u>	<u>R E L</u>	<u>P L F</u>	<u>C L F</u>	<u>Other</u>
Year 1 { 1 2 3	7	4	-	-	-
	9 (1)	1	1	2 (1)	-
	21 (2)	3	1	1	-
Year 2 { 4 5 6	8 (3)	2 (4)	2	1	-
	9 (1)	-	1 (1)	1 (5)	1 NOT REL
	12	2	-	1	1 FLT
Year 3 { 7 8	4	1	1	-	-
	4	2	-	-	-

Notes: (1) plus 1 for 1 term.

(2) including 1 for 1 term, plus CLF for 2 terms, and 2 for 2 terms, plus CLF for 1 term each.

(3) plus 3 PLF and 2 CLF for 1 term each.

(4) including 1 PLF for 1 term.

(5) one term only.

(b) 69 ex-students are now living in homes that they, or their relatives own.

37 are in rented accommodation.

4 gave no reply to this question, not seeing its relevance to the college course. In fact the question was put in as a sample comparison point for adults; as such the data are compared in general terms with the most comparable available from the published records of the Central Statistical Office, those for 1976.

Table 33

<u>Types of Dwelling</u>				Flat/ Maisonette	Rooms	Other dwg.	Back to Back	No Response
Whole house (inc. bungalow)	Detached	Semi-det.	Terr'd. Bung.					
13	45	32	1	12	2	2	1	1

1976 (CSO) Owner-occupied stock of dwellings : 10 957

Rented from LA, private owners and
other tenures : 9 650

Ratio for "Owner-occupied" : "Rented" = approx. 10 : 8½

Questionnaire 2

Owner-occupied : no. of responses 69

Rented : no. of responses 37

Ratio for Owner-occupied : Rented = approx. 10 : 5½

Question 6 Occupations after withdrawal from College

This question served a valuable function in detecting those students who, rather than fully withdrawing from college, had in fact either transferred to another college - usually nearer home - or had a year's intermission and resumed at their own college. Such intermission was either through illness or for the birth of a child. Some students fully withdrew and after a year or two took up some form of higher education in a quite different institution. In this case the response was included in this investigation, but in the event of a resumption of the original course, as for a direct transfer to another teacher-training college or university, the responder was cast out of the survey.

Unfortunately one or two 'students' went no further than 'No' in

answer to "After leaving College, did you immediately take up a teaching post?", ignoring the request to "continue with the questions below your tick" and sometimes even writing at some length to explain that because they had withdrawn from college they were not teaching and so could not answer this question at all !

Table 34.

The occupations given were grouped and counted thus :-

Occupation "group"	No. of Sts.
Taking a degree elsewhere	6
Working/Living abroad	4
Some form of teaching (1)	6
Residential work with children	10
Nursing/Medical Auxilliary (2)	14
Financial work (Banking, Insurance, etc.)	11
Secretarial and Clerical work	19
Civil Service and Administration (3)	21
Self-employed Business/Management Service	9
Computer Services	10
Library and Publishing assistant	2
Uniformed Services	3
Catering and Retail Trades	2
Rural and Industrial (Manual)	4
Freelance Musician	2
Housewife (often with a job as above)	several (4)

- Notes:
- (1) Nursery nursing and teaching, teaching of Riding, Craft (Asst.), English as a Foreign Language.
 - (2) Including Psychiatric Nursing and Junior Lab. Scientist.
 - (3) Including Post Office Telecommunications, Social Services adviser and Administration in the DHSS.
 - (4) No attempt was made to put a figure on this item as some had clearly mentioned it as a "job" whilst equally clearly others had not.

Stating these occupations played an important role in providing an opportunity, in the light of the uncompleted college course, to make a positive statement about career achievement, since the careers referred to in Question 7 were in many cases fore-shadowed by the interim occupations taken up immediately upon, or soon after, leaving College. However, although a full analysis of these careers, preceded by further follow-up work, could be of great interest, it is unfortunately beyond the scope of this study. Nevertheless the occupations tabulated above

can offer a point of comparability with other social study surveys.

Question 8

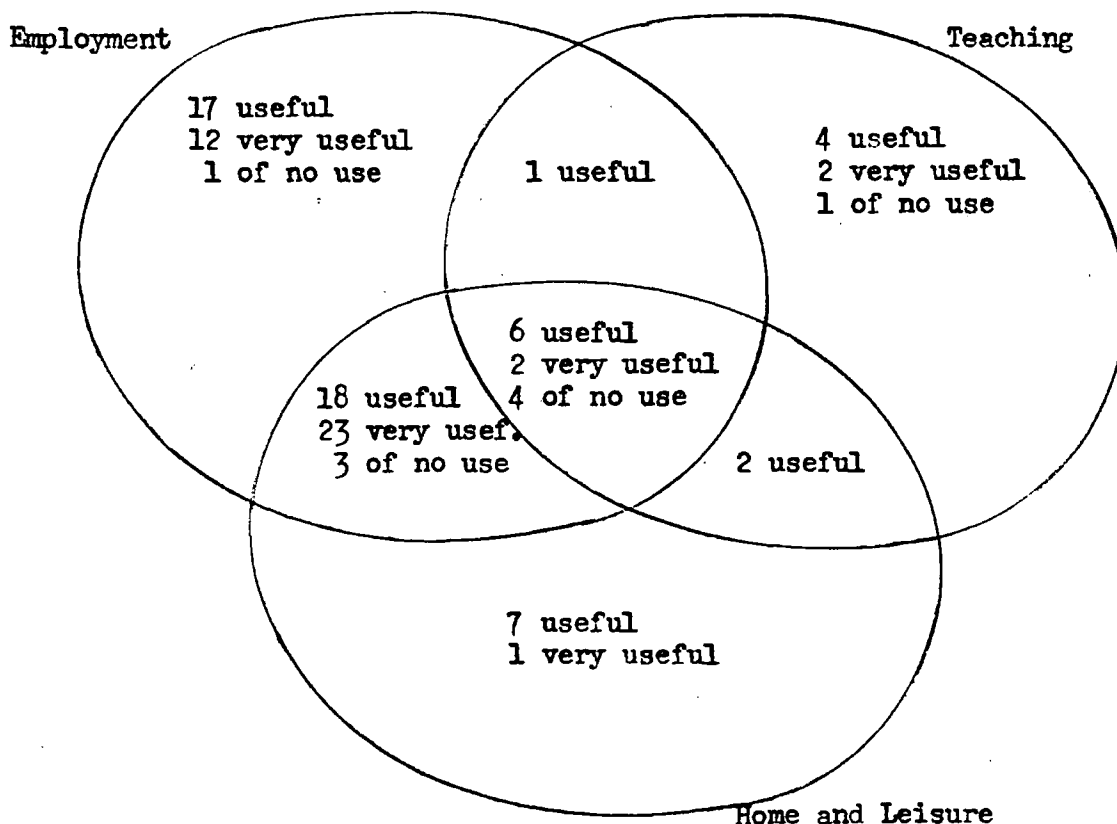
The answers to this question have been counted according to categories and are recorded in the printout in the Appendix under the heading "Mathematics."

In the data listing:

- A = All, of Teaching, other Employment, and 'everyday Home life or Leisure.'
- B = Both, Employment and 'everyday Home life or Leisure.'
- X = Both Teaching and Employment.
- Y = Both Teaching & Homelife or Leisure.

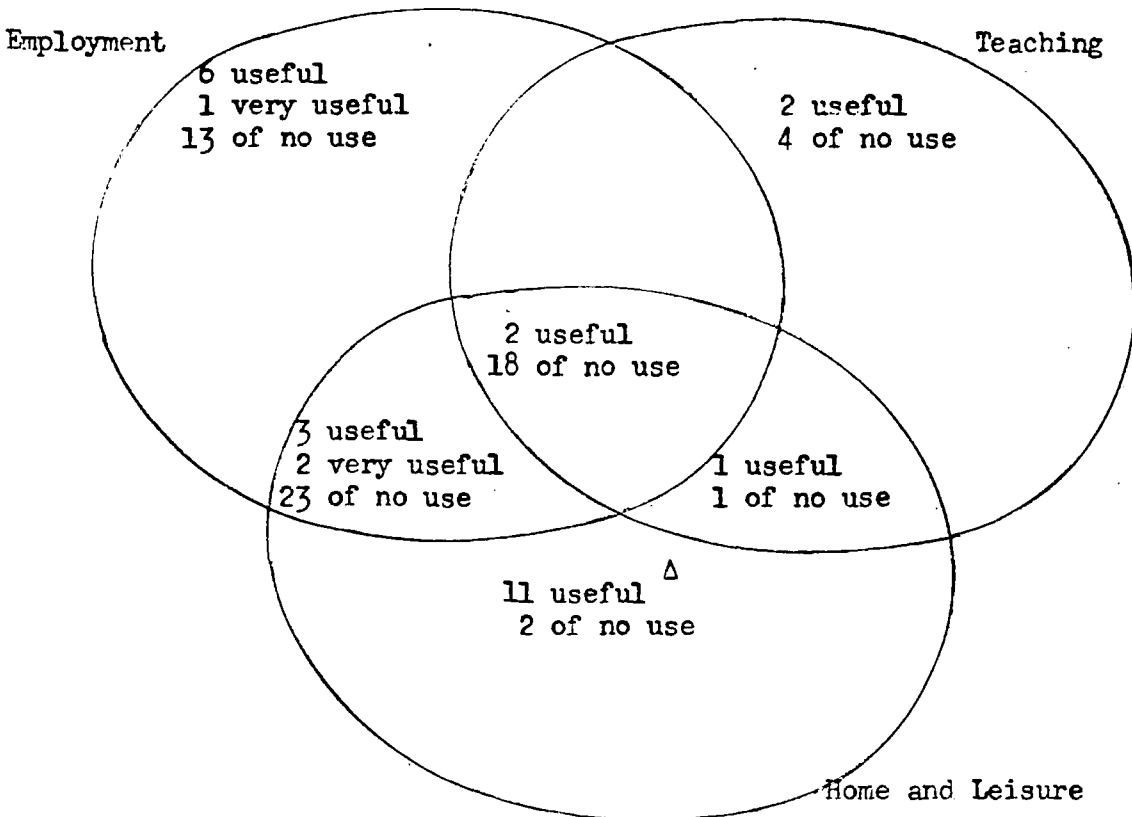
Here the answers to part (a) are summarised in the form of Venn diagrams:

School Mathematics



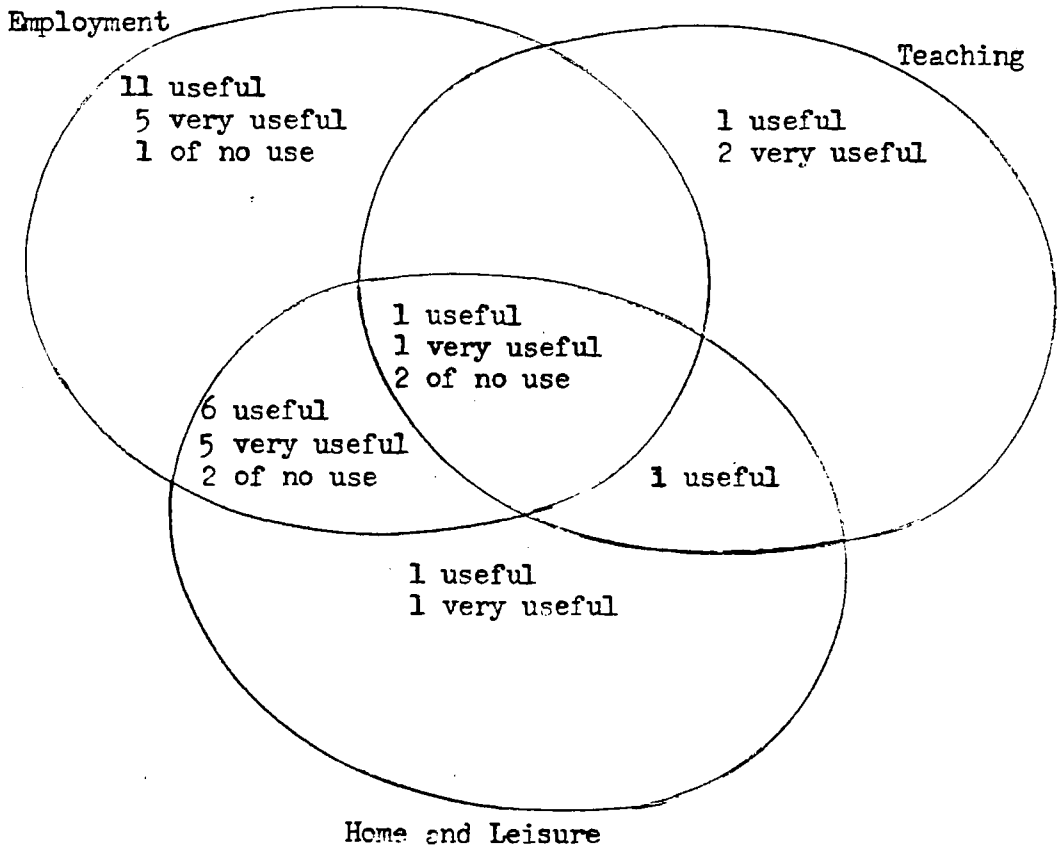
[Out of 110 responses]

College Mathematics



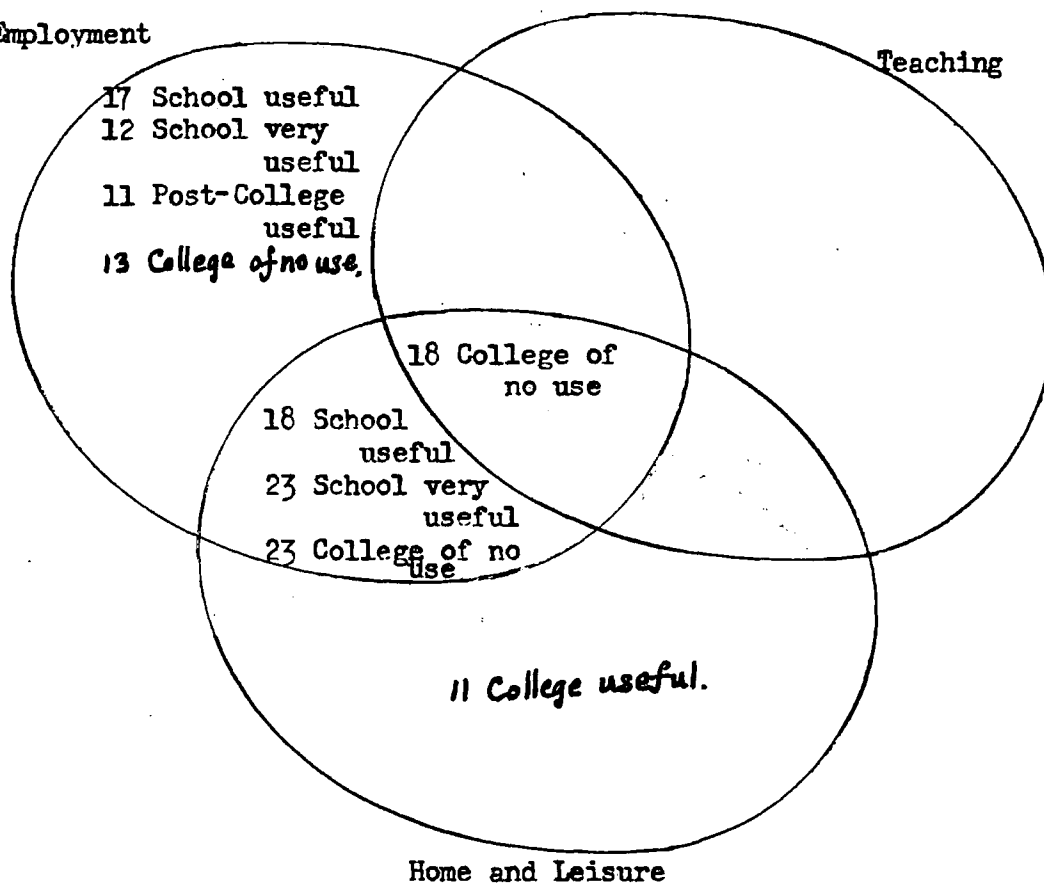
Δ - Majority specified it was for helping children with their school-work.

Post - College Classes, etc.



Superimposing these three diagrams, for the entries with the largest numbers only, we get:-

Employment



[Entries made only where at least 10 per cent. of the responders were involved.
Highest 'score' was only just over 20 per cent.]

In ~~no. 4~~, the last Venn diagram, entries have been collected together for cases in which at least 10% of the responders were involved, the highest "score" being just over 20%. Sadly it stresses how little use the College Mathematics course was found to be by those who did not pursue teaching. It must however be borne in mind that many of these critics did not see their mathematical work through to its conclusion, so that they may well not be in a very good position to pass judgment; nor were they regarding it from the intended point of view *of their courses*.

Part (b) asked about the acquisition of any further mathematical knowledge that was needed, with the following results :- Table 35

<u>Mathematical knowledge</u>	<u>No. of responders</u>			<u>% of total responders</u>
	<u>Men</u>	<u>Women</u>	<u>All Sts.</u>	
Obtained easily (OB ESY)	9	16	25	22.7%
Obtained, but with difficulty (WI DIF)	3	8	11	10.0%
Not obtained (NOT OB)	3	9	12	10.9%
No more needed (N MORE)	11	39	49	44.5%
No Entry (ZZZZZ)	2	11	13	11.8%

One student was currently studying to take A-level Mathematics. The combination of comments made on topics recalled in question 4 above, and the fact that 44.5% had not felt they needed any more Mathematics, while another almost 21% had either obtained only with difficulty or not at all the further Mathematics they needed, confirms the fears raised about the position of, and attitudes to, Mathematics discussed in Section 1.

Question 9 gave the responders a chance to say a little constructively of what they thought should be "done about" the courses from which they had withdrawn.

Nearly half of them said firmly, but in general terms, that "English" should be retained. A few referred to specific aspects like comprehension, spoken and written English, creative writing, grammar and clear speech or spelling, punctuation, parts of speech, syntax.

Topics some wished to be introduced included letter writing, how to read, verbal communication and basic grammar with formal constructions - all closely related to the study skills (as discussed in section 2.56) which they probably had lacked.

A few said that both English and Maths should be retained - a view with which few would disagree! - but "in a different form" or "made more interesting," and one, probably seeking security, said "in a more traditional manner." Nearly half the respondents said that Mathematics, in general terms, should be retained, mention being made of graphs of conversions, history of maths, and - by one - "basic sciences."

More worrying were those who said that Maths should be introduced! A few specifically referred to "how to teach maths., especially for young children or pre-maths., and "shop (everyday life topics," "commercial maths" , while 5.5% asked for "more emphasis on the importance of understanding basic Arithmetic.

Many wanted aspects of "Education" and curriculum subjects retained, including work on Youth Service, Social Environmental Services, reading and environmental education together with the standard elements of child development, psychology and physiology, sociology and teaching practice, but with the introduction of professional visual aid courses and some on science, reading for infants, children's artistic development and comparative systems of education, current affairs, education for leisure, sex education, moral education, social history and rural studies. They

did not of course face up to the problems of overfilled time-tables and the organisation of all their hoped-for courses, though some wished to jettison "most of Education -- as totally irrelevant," and "All" English, with creative writing, literature and linguistics and Mathematics, with "Gimmicks and apparatus" specifically mentioned. That they were taking this investigation seriously was emphasised by the fact that several took the trouble to write a special letter saying how much more helpful they felt it would be if all teacher-trainees had "at least a year in the big wide world" between leaving school and going to college and therefore back into the school-orientated situation," without having seen anything of industrial life. This they felt would promote a higher proportion of applications from students who really did want to teach, since - as one said - many "of medium ability in the 6th form at school, who don't really want to go to university, drift into teaching - this situation gives rise to a lot of 'drop-outs' such as myself or teachers who are not really dedicated."

SECTION FOUR

Discussion of Results, and Conclusions;
and
Summary.

Section 4

Discussion of Results and Conclusions

Two quite distinct surveys have been undertaken with different, though closely related, populations. We now look at the results from these from a slightly more distant viewpoint.

4.1 From Questionnaires 1(a) and 1(b) looked at together, as explained in Section 3.2, the order adopted for recording was that of entrance to College, so that Year 1 (1974) lies next to Year 2 (1975), its parallel group. It is thus clear that by the time the questionnaire was 'repeated' a year later, 7 men and 28 women who had received the first one had already fallen out of the survey of their chosen career. Whereas under the "old" course structure 7.7% of the men and 11.4% of the women - just over 10% of the whole year group - had withdrawn during the first year, among the first entry to the "modular" course there was a drop-out rate of just over 15% for each in their first year, there being little sex difference, but an increased figure for both. The corresponding year 2 students, however, showed an appreciable fall in the % withdrawing during the 2nd year, the men's rate dropping by only 2.4% and the women's by 1.9% whereas the 1974 Year 2 rates had been 9.6% and 4.7% respectively. It is probable that the high rate in Year 1 (1975) reflected the welcomed opportunity to transfer to a BA or BSc course rather than leave college entirely. At the same time Illingworth, SD(1975) pointed out that transfer was also taking place in the opposite direction.

A general comment was made on each of questions 5, 6 and 7 in section 3.25. The firmness of intention to teach, the sustaining of this intention and preference for a vocational-type course are consistent, and suggest that these attributes could perhaps be used to form a scale by which to "measure" commitment.

Answers to question 9 concerned with serious contemplation of withdrawal, when analysed subsequently in comparison with known actual withdrawals, suggest that serious contemplation is not at all the same thing as actual withdrawal, since among the withdrawal students the ratio of "seriously contemplated" to "not contemplated" was

1 : 5 for females and 1 : 8 for males.

It was a pity that none of the Year 2 (1975) students who actually withdrew subsequently had completed the second questionnaire as there were thus no future withdrawal students for comparison with those who completed their courses. In section 3.26 the comparative data for the same students in consecutive years reinforced the "pattern of declining certainty" described by McNamara, DR(1972), though perhaps not to quite the same extent.

4.2 Although it had been rather disappointing, but understandable, that the response to questionnaire 1(b) had not been as high as to 1(a), it was a matter of relief when replies to questionnaire 2 reached the 100 level, and still came in. There was nevertheless no hope of reaching that "all but 10%" level at which non-response bias could be assumed not to matter at all, but the 26.1% response achieved did fall in the upper half of the range from 10% to 40%, that Boreham, J and Holmes, C (1974) suggested could be expected from a mail survey: Kendall, MN (1973) reported: "Just under $\frac{1}{2}$ sent in completed questionnaires" for his survey of University students without such a long time lag to cause difficulty in contacting the addressees; and Brown, G and Cherrington, DE (1970) had found the response rate from qualifying students falling towards half after 6 years of teaching service. The checks for non-response bias which were made, by reference to A-level achievement and number of terms completed, suggest that on these counts at least the bias is not a problem. Thus it appears reasonable to accept in their context the results recorded in section 3.35, *but with warning (i) of page 54 noted.*

In general, as may so often happen, the evidence of the survey confirms opinions held intuitively, as also does the evidence of 'history,' where, for example, lengthening courses increases the "wastage." Much work is still needed before we can hope to answer at all definitively the questions raised in section 2.1 of the circumstances in which wastage is most - and least - likely to occur, and of the early detection of potential drop-outs. One approach here, as suggested above, could be to use the attributes examined in questionnaire 1 to develop a scale for possible use as a predictor in assessing depth of commitment and motivation without which likelihood of success seems very tenuous. Sensitive and anxious students with a genuine vocation may by understanding counselling be helped over a 'difficult patch' and so achieve their qualification. Halstead, DK (1974) pointed out that with pressure of demands for excellence, leisure vanishes and communication difficulties increase. We have seen, however, that "drop-outs," though seen as "wastage" from the viewpoint of a College's economics, are not by any means necessarily to be deemed failures in the long run.

We asked what happens after those who withdraw have left, and what they recall of college experience particularly in the realm of mathematics: perhaps towards the end of questionnaire 2 we have the most interesting part of our evidence. We saw the great variety of occupations now being pursued by those who gave up the idea of teaching, some now holding positions of considerable responsibility and influence while others have settled for less demanding jobs from this point of view.

4.3 There is scope for much more work on the analysis of these occupations and the attitude of the students towards their careers. What has been the effect on their self-concepts? Have the three-quarters who did not reply fared less well?

There is need here for follow-up work to try and answer this question too. Such work would be closely allied to a study of the motivations to respond, bearing in mind the references of Wallace, D (1954) to persistent repliers and non-repliers.

4.4 In the context of response rate it appears that the use of the "throw-away questions" on the generally more popular topic of English to balance those on Mathematics, as suggested by Moser, CA and Kalton, G (1971), may well have been justified. Although some of the comments are encouraging, others are equally disturbing.

If potential teachers see their mathematics at college as so unrelated to life outside the classroom one is bound to question its relevance for genuine education. As Millington, A (1972) said, "the process { of mathematical education } can be boring and frustrating if it does not develop the power to challenge, permit intuitive jumps and encourage experiments with ideas. Techniques should be servants and not masters of thought ---"

"The prerequisite of survival in our society is the capacity to adjust rapidly in a new situation. To adjust is to look at a problem, identify and classify the elements of the situation, decide on priorities and possible routes towards a solution. This is precisely what we should try to do in mathematics." Similarly, Williams, E (1972) said "Mathematical ideas and language are essential for understanding the natural world and the structure of society. They are the necessary instruments of scientific knowledge and of community organisation and forward planning."

We are in danger from the present vicious circle of shortage of candidates interested in studying mathematics leading to a shortage of places being available for its study and so to even more serious shortage of specialist teachers. We must therefore see that the view of mathematics held by students in the Colleges is such that they see its relevance

to whatever careers they pursue, wherever they make their homes and in whatever context they may influence children.

Summary

This thesis has attempted to probe some aspects of student wastage from Colleges of Education as seen both in written accounts and through surveys issued to students attending courses in colleges and having withdrawn from teacher training. Section 1 described how the structure of such courses has changed almost unrecognisably since they were lengthened from 2 to 3 years, with corresponding alterations in entry qualifications and attitudes to mathematics and science: some of the consequences of Governmental decisions in the period were noted. Effects of these have been considered, though of necessity briefly, together with, in Section 2, some aspects of the problem of wastage both in Universities, as they may throw some light on college situations with the implementation of diversified programmes, and in the Colleges themselves. Influences on the rate of withdrawal, such as selection procedures, the effect of a College's philosophy, personality differences, self-concept issues and socio-economic effects were mentioned. Students' attitude to study and their motivation were reviewed and some of the personal aspects touched upon. Inevitably questions were raised and the two questionnaires devised to explore the theme of "withdrawal" were described in detail in Section 3. The answers were analysed question by question and wherever possible comparisons were made. Some of the present occupations of the students who withdrew are listed, as also their comments on topics from their college courses. From these surveys arose other questions, stated in Section 4 where some suggestions for possible future work are made. The study ends with some thoughts on the need for relevance in maths. courses, both in colleges and schools, to the successful organisation of daily life where the need to make adjustments is constant.

APPENDICES

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QUESTIONNAIRE 1(b) -

given to both first and second year students of the
new voluntary college in 1975

(This is a modification of the 1974 version 1(a))

This questionnaire was originally on a single sheet of foolscap paper. Instead of the date 1975 which now heads the A4 sheet, there was the following "letter", with the College's new name:-

To Students of the (Voluntary College)

I shall be most grateful for your help in the research I am doing, about the work students expect to do on leaving college, and the helpfulness of the course. Please complete this questionnaire fully and return it as soon as you can, either through your Studies Adviser or one of the Mathematics Staff.

If you wish to rub out your name, please do so That is why I have used pencil for it! In any case no names will be used in processing information or publicised in any way.

Thank you for your help

A.I.G. Renton
(Mathematics Section)

As it was clear that a considerable number of Year 2 students on one campus had not been at the meeting at which the sheets were distributed, their forms were "posted" to them in their pigeon-holes, with the following note:-

(1975)

To -----Campus, some of Year 2 students.

Although you were unable to collect your copy of this questionnaire last Friday, I shall greatly appreciate your help by taking the trouble to fill it in. Please return the completed form to the Education Office -----(Campus) as soon as you can, so that it can be passed on to me well before the end of term.

(This is probably easier for you than the course I suggested on the questionnaire form).

Thank you so much.

A.I.G. Renton
(Mathematics Section,
-----Campus)

6. When was your decision as to the type of your future work made?

3 or more years ago	About 2 years ago	About 1 year ago	Only recently	Think decision is made but not very sure yet	No decision at all as yet
---------------------	-------------------	------------------	---------------	--	---------------------------

7. How closely are you selecting your programme for the work you are planning to do, as stated in 5 (a)?

Definitely for that work	For that work but with another possibility in mind as well	A general uncommitted programme but keeping open a particular option	Definitely on an uncommitted basis
--------------------------	--	--	------------------------------------

If you have ticked the second or third box, please give further details you can, here:.....

8. If you could choose between a 2 year 'Diploma' or a 3 year Certificate/Degree qualification, how long a programme would you select?

At least 3 years	3 year, with chance of settling later for 2 yrs. with a lesser qualification	2 year, with the option of extending later to 3 years with a better qualification	Definite 2 year only, even with no teaching qualification
------------------	--	---	---

9. Have you at any time since you came to college seriously contemplated withdrawal?

Yes	No
-----	----

If 'yes' please also answer: During which months?

Month	Year
	197

For what reasons:

- On personal grounds
- College work was too demanding
- You felt you would not reach the required standard in assessment in college.
- You felt you would not succeed in the classroom or other practical work.
- Other reasons (please specify)

Please tick all that you feel really apply, and give any further detail you can.....

10. Year two only (Tick just one)

If you had the option now of turning to a general non-teaching qualification would you choose:

- To turn at once to a non-teaching course
- To continue on a course specifically for teaching
- To keep open the option to transfer at the end of year 2

-oOo-

May I thank very sincerely all those of you who have taken the trouble to fill in this questionnaire for me. I am particularly grateful as I know that some of you have been asked to fill in several others lately, and some of you are very busy preparing for School Practice, or other special activities!

I offer my best wishes for success in your work at College and for a rewarding and happy career.

Thank you all

A1 Gwendolen Renton.
(Mathematics Section)

CODING FORMAT

This was the same for both the 1974 and 1975 questionnaires.

		<u>PUNCHED CARD COLUMN NOS.</u>
	Student Number	1 - 6
	(Of the 6 digits, the first indicated the calendar year, the second "	
	the third "	
	the last three" counted the student)	
	Blank	7
Q1	College Year (1 or 2)	8
Q2	Date of Birth, transformed to Age (2 digits)	9, 10
Q3	(Secondary schools attended) Blank	11, 28
Q4	Sex (Male 1, Female 2)	29
	Blank	30
Q5	Strength of decision to teach, on entry to college	
	(Very firm intention	1
	Firm	2
	Not strongly committed	3
	Probably, but may not	4
	Required for other purpose	5
	Very uncertain	6
	No response	9) 31
Q6	Length of intention to teach	
	(Before form VI/3+ years ago	1
	Early in form VI/c2 years ago	2
	At time of applying to college	3
	Just in time for late applic.	4
	Will decide so if like course	5
	Only for want of other H.E.	6
	No response	9) 32

PUNCHED CARD
COLUMN NOS.

Q7	Selection choice if there had been alternative course		
	(Definitely for teaching	1	
	Teaching, with transfer poss.	2	
	Uncommitted " " "	3	
	Definitely non-teaching	4	
	No response	9)	33
Q8	Selection choice if there had been 2-year alternative		
	(At least three years	1	
	3 year with possible cut to 2 yr.	2	
	2 year with possible continuation to 3 year	3	
	2 year only	4	
	No response	9)	34
	Blank		35
(Q9	Year Two only)		
Q91	Any serious contemplation of withdrawal		
	Yes	1	
	No	2	
	No response	9)	36
Q92	Reasons: Personal		37
Q93	College work too demanding		38
Q94	Would not reach in-college standards		39
Q95	Would not succeed in the classroom		40
Q96	Other reason given		41
	(Position ticked: 1, Not ticked: Blank)		
	Blank		42 - 69
(Q10	Year Two only)		
Q10	Selection choice if non-teaching immediately available in present college		
	(Turn at once to non-teaching	1	
	Continue teaching course	2	
	Keep open option to transfer at end of year	3	
	No response	9)	70

N.B. On transfer of the data to the file of the micro-computer, the student label numbers were reduced to 4 digits. The data was recorded in four sub-files, so that the first and third digits were dispensable. This enabled the same student, first year in 1974 and second year in 1975, to have data with the same label.

YEAR 2 (1974) VOL : COLLEGES - QUESTIONNAIRE 1(a)

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					10
			1M	2F	5	6	7	8	9	
1101	2	19	2		3	2	3	3	1	3
1103	2	19	2		2	1	1	1	2	2
1104	2	19	2		2	1	2	1	2	2
1105	2	19	2		1	1	1	1	2	2
1106	2	19	2		2	1	1	2	2	2
1107	2	19	2		3	5	3	2	1	3
1108	2	19	2		2	2	2	1	1	3
1109	2	19	2		2	2	1	2	2	2
1110	2	20	2		3	3	2	2	1	2
1111	2	19	2		2	1	2	2	1	2
1112	2	19	2		3	2	2	3	1	2
1113	2	19	2		2	1	1	1	2	2
1114	2	19	2		1	1	1	2	1	2
1115	2	19	2		2	1	2	2	2	3
1116	2	19	2		2	1	1	1	1	2
1117	2	19	2		1	1	1	1	2	2
1118	2	19	2		2	2	2	1	2	3
1119	2	19	2		2	1	2	1	2	2
1120	2	19	2		3	2	1	2	1	3
1121	2	19	2		2	1	2	2	2	3
1122	2	19	2		2	1	1	2	2	2
1123	2	19	2		2	1	1	3	1	2
1201	2	19	2		2	2	1	1	2	2
1202	2	19	2		2	1	1	3	1	2
1203	2	19	2		2	1	1	1	2	2
1204	2	20	2		1	1	1	2	2	2
1205	2	19	2		1	2	1	1	2	3
1206	2	19	2		1	1	1	2	1	2
1207	2	19	2		2	1	1	3	2	2
1208	2	19	2		2	2	2	3	2	3
1209	2	19	2		2	2	1	1	1	2
1210	2	19	2		1	1	1	3	1	2
1211	2	19	2		1	1	1	3	2	2
1212	2	19	2		1	2	1	3	1	2
1213	2	19	2		2	1	1	1	2	2
1214	2	19	2		2	1	1	1	1	3
1215	2	19	2		2	1	1	2	1	2
1216	2	20	2		2	2	1	1	1	3
1217	2	19	2		1	1	1	3	2	2
1218	2	20	2		2	1	1	1	1	2
1219	2	19	2		1	1	1	3	2	2
1220	2	19	2		1	1	1	2	1	2
1221	2	19	2		2	1	1	2	2	2
1222	2	19	2		3	2	1	3	1	3
1223	2	20	2		1	2	1	3	1	2
1224	2	19	2		1	2	1	1	1	2
1301	2	20	2		1	1	1	1	2	2
1302	2	19	2		1	1	1	2	2	2
1303	2	19	2		3	2	2	3	1	3
1304	2	19	2		1	1	1	2	1	2

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					
			1M	2F	5	6	7	8	9	10
1308	2	19	2		2	3	2	1	2	2
1309	2	19	2		6	5	3	3	1	1
1310	2	19	2		2	2	2	3	1	3
1311	2	23	2		1	1	1	3	2	2
1312	2	21	1		2	3	2	1	2	3
1313	2	22	2		1	1	1	1	2	2
1314	2	19	2		2	1	2	3	2	3
1315	2	27	1		2	2	1	3	2	2
1316	2	19	2		1	1	1	1	2	2
1317	2	19	2		1	1	1	3	2	2
1318	2	19	2		1	4	1	2	2	2
1319	2	20	2		3	1	2	3	1	3
1320	2	19	2		4	2	2	3	1	3
1321	2	19	2		2	1	2	3	1	2
1322	2	19	2		2	2	2	2	2	2
1323	2	19	1		2	2	1	3	2	2
1324	2	19	2		1	1	1	1	2	2
1325	2	40	1		1	1	1	3	2	2
1326	2	22	1		1	1	1	3	2	2
1401	2	19	2		2	2	1	1	2	2
1402	2	19	2		1	3	1	2	2	2
1403	2	19	2		2	1	2	1	1	3
1404	2	20	2		1	1	1	2	2	2
1405	2	19	2		1	1	1	2	2	2
1406	2	20	2		1	1	1	3	1	2
1407	2	19	2		1	1	1	2	2	2
1408	2	19	2		2	1	3	2	2	3
1409	2	19	2		1	1	1	2	2	2
1410	2	19	2		1	1	1	1	2	2
1411	2	19	2		1	1	1	1	2	1
1412	2	19	2		1	2	1	2	2	2
1413	2	19	2		2	1	1	2	2	2
1414	2	20	2		1	1	1	2	1	2
1415	2	19	2		1	1	1	1	2	2
1416	2	19	2		1	1	1	1	2	2
1417	2	23	2		1	2	2	2	1	3
1418	2	19	2		2	2	2	2	1	2
1419	2	19	2		1	2	1	3	2	2
1420	2	20	2		2	2	1	2	2	2
1421	2	19	2		2	1	1	3	2	2
1422	2	19	2		1	1	2	3	1	2
1423	2	19	2		1	1	1	2	1	3
1501	2	20	2		2	2	2	2	2	2
1504	2	19	2		2	1	2	3	1	3
1505	2	19	2		1	1	1	3	2	2
1506	2	19	2		1	1	1	1	2	2
1509	2	19	2		2	1	1	2	1	2
1510	2	19	2		1	1	1	1	2	2
1512	2	21	1		1	2	1	1	2	2
1514	2	19	2		2	2	1	1	2	2

STUDENT NO.	YEAR	AGE	--SEX--		-----QUESTION NO.-----					10
			1M	2F	5	6	7	8	9	
1515	2	19	1		2	2	2	2	1	3
1518	2	20	1		2	1	1	1	2	2
1519	2	27	1		1	1	1	1	1	2
1520	2	19	1		1	1	1	1	2	2
1522	2	19	1		3	2	1	1	2	2
1523	2	19	2		3	3	1	1	2	2
1601	2	38	2		1	1	1	1	2	2
1602	2	20	2		1	1	1	1	2	2
1604	2	19	2		5	4	2	3	1	3
1605	2	19	2		2	1	1	3	2	3
1606	2	19	2		1	2	1	2	2	2
1607	2	19	2		2	2	3	3	2	3
1608	2	22	2		1	1	1	1	2	3
1609	2	19	2		1	1	1	1	2	3
1610	2	19	2		1	1	1	3	2	2
1611	2	19	2		1	1	1	3	2	2
1612	2	30	2		1	1	1	2	2	2
1613	2	19	2		2	1	1	2	2	2
1614	2	19	2		1	1	1	1	2	2
1615	2	19	2		1	1	1	2	2	2
1616	2	19	2		2	1	1	2	2	2
1617	2	37	2		1	1	1	1	2	2
1618	2	19	2		5	2	2	3	1	2
1619	2	19	2		2	2	2	2	2	3
1620	2	20	2		3	2	1	3	2	2
1621	2	19	2		2	2	3	1	2	2
1622	2	19	2		1	1	1	2	2	2
1623	2	19	2		1	1	1	1	1	2
1701	2	19	2		1	2	2	2	2	2
1702	2	19	2		2	3	1	1	2	2
1703	2	19	2		1	1	1	3	2	3
1704	2	19	2		1	1	1	1	2	2
1705	2	19	2		2	1	3	3	1	2
1706	2	26	2		3	3	2	1	2	3
1707	2	19	2		3	1	3	1	2	3
1708	2	19	2		3	1	1	3	2	3
1709	2	19	2		3	1	2	3	2	3
1710	2	19	2		2	2	2	2	1	3
1711	2	19	2		2	2	1	3	1	3
1712	2	19	2		1	1	1	1	2	2
1713	2	19	2		1	1	1	1	2	2
1714	2	19	2		2	1	2	2	1	3
1715	2	19	2		2	2	2	3	2	2
1716	2	19	2		2	1	1	2	1	2
1717	2	19	2		2	1	1	2	2	2
1718	2	19	2		3	2	3	3	2	3
1719	2	19	2		2	2	2	1	2	2
1720	2	19	2		3	2	1	2	1	3
1721	2	19	2		2	1	2	1	2	2
1722	2	19	2		2	2	1	3	2	2

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					4
			1M	2F	5	6	7	8	9	10
1723	2	19	2		2	3	3	3	2	2
1724	2	22	2		2	3	1	1	2	2
1801	2	20	1		2	4	2	2	2	2
1802	2	19	1		2	2	1	1	1	2
1803	2	20	2		5	2	3	3	1	3
1804	2	20	1		2	2	1	1	2	2
1805	2	19	2		2	2	1	1	1	2
1806	2	19	2		2	2	1	2	1	2
1807	2	19	2		3	1	2	1	1	3
1808	2	31	2		1	1	1	1	1	2
1809	2	19	2		1	1	1	2	2	2
1810	2	19	2		3	3	2	2	1	3
1811	2	19	2		2	2	3	3	1	3
1812	2	19	2		2	2	3	3	1	2
1813	2	20	1		3	4	1	1	2	2
1814	2	43	2		1	1	1	1	1	2
1815	2	19	2		2	2	1	2	2	3
1816	2	19	2		2	3	3	3	2	3
1817	2	20	2		2	1	1	2	2	3
1818	2	20	1		3	2	1	1	2	2
1819	2	20	2		1	1	1	3	2	2
1820	2	20	1		2	1	1	1	1	2
1821	2	19	2		2	2	3	1	2	2
1822	2	19	2		2	2	2	2	1	3
1823	2	20	2		2	2	1	3	2	3
1824	2	20	1		2	2	1	1	1	2
1825	2	20	1		2	1	1	1	2	2
1826	2	19	2		1	1	1	1	2	2
1827	2	19	2		2	2	1	2	2	2
1828	2	19	2		3	1	3	3	1	3
2101	2	19	2		2	1	1	1	1	2
2102	2	19	2		2	2	2	2	2	3
2103	2	19	2		2	6	2	3	1	3
2104	2	19	2		3	2	1	1	2	2
2105	2	19	2		2	2	1	2	2	2
2106	2	19	2		1	1	1	1	2	3
2107	2	19	2		3	3	2	3	2	2
2108	2	20	2		2	1	1	1	2	2
2109	2	19	2		2	3	1	1	2	2
2110	2	37	2		1	9	1	1	1	2
2111	2	19	2		2	1	1	3	2	2
2113	2	19	2		1	1	1	9	2	2
2114	2	19	2		2	1	1	1	2	9
2116	2	20	2		2	2	1	3	2	2
2117	2	21	2		2	2	1	3	2	2
2119	2	19	2		1	1	2	1	1	2
2121	2	32	2		1	1	1	9	1	2
2122	2	19	2		2	2	1	1	2	2
2123	2	19	2		2	3	2	1	2	3
2124	2	19	2		1	1	1	3	2	2

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----						5
			1M	2F	5	6	7	8	9	10	
2125	2	19	2		2	1	2	2	2	2	3
2126	2	20	2		1	2	1	2	2	2	2
2127	2	19	2		1	1	1	3	2	2	2
2128	2	19	2		2	1	1	1	2	2	2
2129	2	19	2		1	1	1	1	2	2	2
2130	2	19	2		1	1	1	1	2	2	2
2131	2	19	2		1	2	1	1	2	2	2
2132	2	19	2		2	1	1	1	2	2	2
2133	2	19	2		1	1	1	1	1	2	2
2134	2	19	1		3	1	2	3	1	2	2
2135	2	19	2		4	3	2	1	1	3	3
2136	2	19	2		1	2	1	3	2	2	2
2139	2	19	2		3	2	3	2	1	3	3
2141	2	19	2		3	2	3	3	1	3	3
2142	2	19	2		1	1	1	1	2	2	2
2143	2	19	2		1	1	1	1	2	2	2
2147	2	19	2		2	1	2	1	2	3	3
2148	2	19	2		2	3	2	1	2	3	3
2149	2	20	2		2	1	1	1	2	2	2
2150	2	40	2		1	1	1	3	2	2	2
2151	2	21	2		2	2	1	2	1	2	2
2152	2	19	2		2	2	2	1	2	3	3
2156	2	19	2		1	1	1	1	2	2	2
2158	2	19	2		3	2	2	3	1	2	2
2159	2	19	2		1	1	1	1	2	2	2
2161	2	32	2		2	4	2	3	1	3	3
2162	2	31	2		1	2	1	2	1	2	2
2163	2	19	2		2	2	2	3	2	3	3
2164	2	19	2		2	2	2	2	1	2	2
2165	2	19	2		2	2	2	2	1	3	3
2166	2	19	2		2	1	1	1	2	2	2
2167	2	19	2		2	2	2	1	1	3	3
2168	2	19	2		1	2	1	1	1	2	2
2169	2	19	2		2	2	2	2	2	2	2
2170	2	20	2		2	1	2	2	1	2	2
2171	2	20	2		3	2	1	3	2	2	2
2172	2	19	2		2	2	3	2	2	3	3
2173	2	19	2		1	2	2	1	2	2	2
2174	2	19	2		3	2	2	1	2	2	2
2175	2	19	2		2	2	2	1	2	2	2
2176	2	19	2		2	1	1	1	2	2	2
2177	2	20	2		1	2	1	2	1	2	2
2178	2	19	2		3	2	2	2	1	3	3
2179	2	19	2		2	2	2	2	2	3	3
2201	2	19	2		4	3	2	2	1	3	3
2202	2	39	2		3	1	3	2	1	3	3
2204	2	20	2		1	2	1	2	1	2	2
2205	2	19	2		2	2	1	1	2	2	2
2206	2	19	2		1	2	1	2	2	3	3
2208	2	19	2		1	2	1	2	2	2	2

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					6
			1M	2F	5	6	7	8	9	10
2210	2	19	2		3	2	2	3	1	3
2211	2	19	2		3	1	2	2	1	3
2212	2	19	2		2	2	3	3	2	3
2213	2	19	2		2	2	2	2	2	2
2214	2	20	2		2	1	1	2	1	2
2215	2	19	2		2	2	1	2	2	2
2216	2	19	2		3	2	1	2	2	2
2217	2	20	2		3	1	1	3	1	3
2218	2	19	2		1	1	1	1	2	2
2220	2	20	2		3	1	2	3	1	3
2221	2	19	2		2	2	1	1	1	2
2222	2	20	2		3	2	3	1	1	3
2223	2	19	2		3	3	1	1	1	3
2224	2	19	2		1	1	1	1	2	2
2225	2	19	2		1	1	1	1	2	2
2226	2	19	2		3	3	3	3	1	3
2227	2	20	2		1	3	2	3	2	2
2230	2	20	2		5	3	3	3	2	3
2231	2	20	2		1	3	1	1	2	2
2232	2	20	2		2	1	1	2	2	2
2233	2	19	2		2	2	2	3	2	2
2234	2	19	2		2	1	1	1	1	2
2235	2	19	2		1	1	2	2	1	3
2236	2	19	2		1	1	1	1	2	2
2237	2	19	2		2	1	1	2	1	2
2238	2	20	2		1	1	1	1	2	2
2239	2	20	2		3	3	3	3	2	2
2240	2	19	2		1	1	1	1	2	2
2242	2	19	1		1	1	2	1	2	2
2243	2	27	2		2	2	2	3	1	3
2244	2	19	2		1	1	1	1	2	2
2245	2	19	2		1	1	1	2	2	2
2246	2	19	2		1	1	1	1	2	2
2247	2	41	2		2	2	1	1	1	2
2248	2	20	2		2	2	2	3	2	3
2250	2	19	2		1	1	1	3	2	2
2252	2	19	2		1	1	1	1	1	2
2254	2	19	2		1	1	1	1	2	2
2255	2	19	2		1	1	1	3	2	2
2256	2	19	2		2	2	2	2	1	3
2257	2	19	2		1	1	1	1	2	2
2258	2	19	2		1	1	1	1	2	2
2259	2	19	2		2	1	1	1	2	3
2261	2	19	2		3	3	3	2	2	3
2262	2	19	2		2	2	1	1	1	2
2301	2	19	1		2	1	2	1	1	2
2302	2	19	1		2	2	1	1	2	2
2304	2	20	1		2	2	2	1	2	2
2305	2	19	1		1	1	1	9	2	2
2307	2	20	1		2	2	1	3	2	2

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----						7
			1M	2F	5	6	7	8	9	10	
2308	2	20	1		1	2	2	2	1		9
2309	2	19	1		1	1	1	1	2		2
2310	2	19	1		2	2	1	3	2		3
2311	2	20	1		1	2	1	9	2		3
2312	2	26	1		1	2	1	3	2		2
2313	2	19	1		3	4	2	2	2		3
2317	2	39	1		1	1	1	3	2		2
2318	2	20	1		3	2	2	2	2		3
2319	2	19	1		2	2	2	2	1		3
2320	2	20	1		1	1	1	1	2		2
2323	2	20	1		3	2	2	1	1		3
2325	2	20	1		2	1	1	1	1		3
2327	2	35	1		1	1	9	4	2		9
2328	2	20	1		1	4	1	3	2		2
2329	2	20	1		2	3	2	2	2		2
2330	2	19	1		1	1	1	1	2		2
2333	2	19	1		2	2	2	3	2		3
2334	2	20	1		1	1	1	9	1		2
2336	2	19	1		2	1	2	2	2		3
2337	2	20	1		1	2	1	1	2		2
2338	2	20	1		5	6	3	2	1		3
2339	2	19	1		4	2	3	1	1		2
2343	2	22	1		1	3	1	2	1		2
2344	2	20	1		1	2	3	9	1		9
2345	2	19	1		2	1	2	1	2		2
2346	2	19	1		2	2	2	3	2		3
2349	2	20	1		2	2	2	2	1		3
2350	2	20	1		3	2	2	2	2		2
2352	2	19	1		1	2	1	3	2		9
2355	2	21	1		1	2	1	1	2		2
2356	2	20	1		1	1	1	1	2		2
2361	2	23	1		1	4	2	3	2		2
2363	2	20	1		1	1	1	1	2		2
2364	2	20	1		2	2	2	3	2		3
2365	2	20	1		3	2	3	9	9		9
2370	2	19	1		1	1	1	3	2		2
2371	2	19	1		1	1	1	3	2		2
2374	2	19	1		2	3	2	2	1		3
2375	2	19	1		2	2	2	2	2		3
2376	2	20	1		1	2	1	1	2		2
2378	2	27	1		2	2	2	3	2		3
2379	2	21	1		2	2	2	1	2		2
2402	2	19	1		3	2	2	2	2		2
2403	2	47	1		1	2	1	2	1		2
2406	2	19	1		1	1	2	2	2		2
2407	2	19	1		1	1	2	1	2		9
2408	2	19	1		1	1	1	1	2		2
2410	2	20	1		2	3	2	3	2		3
2412	2	24	1		2	3	2	1	2		3
2414	2	19	1		9	9	9	9	1		9

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----					
			1M	2F	5	6	7	8	9	10
2417	2	20	1		2	1	1	3	9	7
2418	2	19	1		3	2	3	2	1	3
2420	2	20	1		3	1	2	2	1	3
2422	2	19	1		4	3	2	1	2	3
2425	2	19	1		4	5	2	1	1	3
2426	2	21	1		4	3	3	3	1	3
2427	2	19	1		1	2	1	1	1	2
2428	2	20	1		1	1	1	1	2	2
2429	2	19	1		1	2	2	2	2	3
2430	2	19	1		2	1	1	1	1	2
2431	2	20	1		1	1	1	1	2	2
2432	2	20	1		1	1	1	1	2	1
2433	2	20	1		3	3	1	9	2	2
2434	2	19	1		2	2	1	3	2	2
2435	2	19	1		1	2	2	2	1	3
2436	2	19	1		2	1	1	1	2	2
2437	2	19	1		1	1	1	1	1	2
2439	2	19	2		2	1	1	1	2	9

QUESTIONS 5 / 6		QUESTIONS 5 / 7		QUESTIONS 5 / 8		QUESTIONS 5 / 9		QUESTIONS 5 / 10	
301	60	290	44	136	16	215	24	224	20
1	4	12	20	161	46	87	39	72	43

QUESTIONS 6 / 7		QUESTIONS 6 / 8		QUESTIONS 6 / 9		QUESTIONS 6 / 10	
331	2	150	1	239	0	243	0
29	3	203	4	120	5	110	5

QUESTIONS 7 / 8		QUESTIONS 7 / 9		QUESTIONS 7 / 10	
147	5	225	13	237	7
181	25	108	18	92	23

QUESTIONS 8 / 9		QUESTIONS 8 / 10	
113	122	120	119
39	84	29	85

QUESTIONS 9 / 10	
179	65
55	59

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STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					10
			1M	2F	5	6	7	8	9	
1101	1	19	2		2	1	1	2	9	9
1102	1	18	2		4	1	1	2	9	9
1103	1	18	2		2	1	2	3	9	9
1104	1	18	2		2	2	1	1	9	9
1105	1	18	2		1	1	1	3	9	9
1106	1	18	2		3	2	2	1	9	9
1107	1	18	2		2	2	1	3	9	9
1108	1	18	2		1	1	1	1	1	9
1109	1	20	2		2	2	3	3	9	9
1110	1	18	2		2	1	1	1	9	9
1111	1	18	2		2	2	1	1	9	9
1112	1	36	2		1	1	1	1	2	9
1113	1	18	2		2	1	2	3	9	9
1114	1	18	2		1	1	1	1	9	9
1115	1	18	2		1	1	1	3	9	9
1116	1	18	2		1	1	1	1	9	9
1117	1	18	2		2	1	2	2	9	9
1118	1	19	2		1	1	1	2	9	9
1119	1	18	2		1	1	1	2	9	9
1120	1	33	2		1	1	1	2	9	9
1122	1	18	2		2	2	2	3	9	9
1123	1	18	2		2	3	1	3	9	9
1201	1	18	2		2	2	2	1	9	9
1202	1	18	2		1	2	1	3	9	9
1203	1	18	2		1	1	1	2	9	9
1204	1	18	2		1	1	1	1	9	9
1205	1	19	2		1	1	1	2	9	9
1206	1	18	2		2	1	1	3	9	9
1207	1	18	2		1	1	1	3	9	9
1208	1	18	2		2	2	1	3	9	9
1209	1	18	2		1	1	1	3	9	9
1210	1	18	2		1	2	1	2	9	9
1211	1	18	2		1	1	1	1	9	9
1212	1	18	2		3	2	2	2	9	9
1213	1	18	2		2	1	1	2	9	9
1214	1	19	2		1	1	1	3	9	9
1215	1	18	2		2	1	2	1	9	9
1216	1	18	2		2	2	1	2	9	9
1217	1	18	2		2	1	1	2	9	9
1218	1	20	2		1	1	1	1	9	9
1219	1	18	2		1	1	1	1	9	9
1220	1	18	2		2	1	2	2	9	9
1221	1	18	2		2	1	1	2	9	9
1222	1	18	2		1	1	1	2	9	9
1223	1	18	2		1	1	1	1	9	9
1301	1	18	2		1	1	1	1	9	9
1302	1	18	1		3	2	2	1	9	9
1303	1	19	2		3	3	2	2	9	9
1304	1	18	2		1	1	1	3	9	9
1305	1	19	2		2	4	2	3	9	9

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					2
			1M	2F	5	6	7	8	9	
1306	1	18	1		2	2	2	2	9	9
1307	1	19	2		3	2	2	3	9	9
1308	1	18	2		2	1	2	3	9	9
1309	1	18	2		3	2	2	2	9	9
1310	1	18	2		2	1	2	2	9	9
1311	1	18	1		2	1	2	1	2	9
1312	1	19	1		1	2	1	1	9	9
1313	1	18	1		2	3	1	1	9	9
1314	1	18	2		1	1	1	1	9	9
1315	1	18	2		1	1	1	2	9	9
1316	1	18	2		2	2	2	2	9	9
1317	1	18	2		1	1	1	3	9	9
1318	1	18	2		2	1	1	1	9	9
1319	1	19	2		2	1	1	3	9	9
1320	1	19	1		1	1	1	3	9	9
1321	1	18	2		2	1	1	3	9	9
1322	1	19	2		2	1	1	3	9	9
1323	1	18	1		2	1	1	1	9	9
1401	1	18	2		2	1	1	2	9	9
1402	1	18	2		3	2	2	3	9	9
1403	1	18	2		1	1	1	1	9	9
1404	1	18	2		2	2	1	2	9	9
1405	1	18	2		1	1	2	3	9	9
1406	1	18	2		1	1	1	1	9	9
1407	1	18	2		3	3	2	3	9	9
1408	1	18	2		1	1	1	1	9	9
1409	1	18	2		1	2	1	2	9	9
1410	1	18	2		2	1	1	3	9	9
1411	1	19	2		1	1	1	2	9	9
1412	1	18	2		1	1	1	3	9	9
1413	1	19	2		1	1	1	1	9	9
1414	1	18	2		6	2	3	3	9	9
1415	1	18	2		2	1	1	3	9	9
1416	1	18	2		2	2	2	3	9	9
1417	1	18	2		1	1	1	3	9	9
1418	1	18	2		1	1	1	1	9	9
1419	1	18	2		2	1	1	2	9	9
1420	1	18	2		2	3	1	2	9	9
1421	1	18	2		4	3	2	2	9	9
1422	1	19	2		2	2	1	3	9	9
1423	1	19	2		2	2	1	3	9	9
1501	1	21	1		1	3	2	3	9	9
1502	1	18	2		2	2	2	2	9	9
1503	1	18	2		3	2	2	1	9	9
1505	1	18	2		2	1	2	3	9	9
1506	1	19	1		3	2	2	3	9	9
1507	1	19	1		1	1	1	2	9	9
1508	1	19	1		1	1	1	1	9	9
1509	1	18	2		2	3	1	1	9	9
1511	1	18	2		2	1	2	3	9	9

STUDENT NO.	YEAR	AGE	--SEX--		-----QUESTION NO.-----						3
			1M	2F	5	6	7	8	9	10	
1512	1	18	2		1	1	2	1	2	9	
1513	1	20	1		1	2	1	1	9	9	
1514	1	18	2		1	1	1	1	9	9	
1515	1	18	2		1	2	1	1	9	9	
1516	1	18	1		1	2	2	3	9	9	
1517	1	18	2		6	2	3	3	9	9	
1518	1	19	1		2	1	1	3	9	9	
1519	1	19	1		1	1	1	1	9	9	
1520	1	18	2		2	3	1	1	9	9	
1521	1	18	1		1	1	1	1	9	9	
1523	1	18	2		2	2	2	1	9	9	
1601	1	18	2		2	2	2	2	9	9	
1602	1	18	2		3	3	2	3	9	9	
1603	1	18	2		1	1	1	3	9	9	
1604	1	22	2		3	5	2	2	9	9	
1605	1	18	2		1	1	1	2	9	9	
1606	1	18	2		2	1	1	2	9	9	
1607	1	21	2		2	3	1	2	9	9	
1608	1	41	2		2	2	2	3	9	9	
1609	1	18	2		2	2	1	1	9	9	
1610	1	18	2		2	2	1	3	9	9	
1611	1	18	2		2	2	2	2	9	9	
1612	1	18	2		3	2	2	2	9	9	
1613	1	18	2		1	1	1	1	9	9	
1614	1	18	2		1	2	2	1	9	9	
1615	1	18	2		2	1	2	2	9	9	
1616	1	18	2		2	2	2	3	9	9	
1617	1	24	2		1	2	1	1	9	9	
1618	1	18	2		2	1	1	2	9	9	
1619	1	18	2		1	1	1	1	9	9	
1620	1	31	2		2	1	1	3	9	9	
1621	1	18	2		2	2	1	2	9	9	
1622	1	18	2		1	1	1	3	9	9	
1623	1	18	2		2	1	1	3	9	9	
1701	1	18	2		2	1	1	2	9	9	
1702	1	18	2		2	2	1	3	9	9	
1703	1	18	2		2	2	1	1	9	9	
1704	1	18	1		1	1	1	1	9	9	
1705	1	18	2		3	1	1	2	9	9	
1706	1	18	2		1	1	1	3	9	9	
1707	1	27	1		1	2	1	1	9	9	
1708	1	18	2		2	2	2	1	9	9	
1709	1	18	1		3	1	2	2	9	9	
1710	1	19	2		1	1	1	1	9	9	
1711	1	19	1		1	3	1	1	9	9	
1712	1	18	1		2	2	2	2	9	9	
1713	1	18	2		1	1	1	1	9	9	
1714	1	18	2		2	2	1	1	9	9	
1715	1	18	1		2	2	1	1	9	9	
1716	1	18	2		2	1	1	2	9	9	

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					4
			1M	2F	5	6	7	8	9	10
1717	1	19	1		2	2	1	1	9	9
1718	1	18	1		1	1	1	1	9	9
1719	1	18	2		2	1	1	1	9	9
1720	1	18	2		1	1	1	3	9	9
1721	1	18	2		1	1	1	2	9	9
1722	1	18	2		6	3	2	3	9	9
1801	1	18	2		2	1	2	2	9	9
1802	1	18	2		1	1	1	1	9	9
1803	1	19	2		1	1	1	1	9	9
1804	1	18	2		1	1	1	1	9	9
1805	1	18	2		1	2	1	2	9	9
1806	1	18	2		1	1	2	1	9	9
1807	1	18	2		2	2	2	2	9	9
1808	1	18	2		1	1	1	2	9	9
1809	1	19	2		1	1	1	1	9	9
1810	1	18	2		2	2	2	3	9	9
1811	1	18	2		2	1	1	1	9	9
1812	1	18	2		1	1	1	2	9	9
1813	1	18	2		2	2	1	3	9	9
1814	1	18	2		5	1	3	2	9	9
1815	1	18	2		4	1	2	2	9	9
1816	1	18	2		2	3	2	1	9	9
1817	1	19	2		1	2	1	1	9	9
1818	1	18	2		1	1	3	2	9	9
1819	1	18	2		2	2	2	2	9	9
1820	1	18	2		1	1	1	1	9	9
1821	1	18	2		2	2	2	2	9	9
1822	1	18	2		1	1	1	3	9	9
2101	1	18	2		1	1	1	1	9	9
2103	1	18	2		2	2	2	2	9	9
2104	1	18	2		1	1	1	1	9	9
2105	1	35	2		2	1	1	2	9	9
2106	1	18	2		2	2	3	1	9	9
2107	1	18	2		3	2	2	3	9	9
2108	1	18	2		2	1	1	2	9	9
2109	1	18	2		2	3	2	3	9	9
2111	1	18	2		1	2	1	1	9	9
2112	1	19	2		2	3	2	2	9	9
2113	1	18	2		2	2	2	3	9	9
2115	1	18	2		1	1	2	1	9	9
2116	1	18	2		1	1	1	2	9	9
2117	1	18	2		2	1	2	2	9	9
2118	1	18	2		2	1	2	1	9	9
2120	1	18	2		2	1	2	2	9	9
2121	1	18	2		2	2	2	2	9	9
2122	1	18	2		1	1	1	3	9	9
2123	1	18	2		6	5	3	2	9	9
2124	1	18	2		2	1	1	3	9	9
2125	1	18	2		1	2	2	1	9	9
2126	1	18	2		4	2	3	3	9	9

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----						5
			1M	2F	5	6	7	8	9	10	
2127	1	19	2		3	4	3	2	9	9	
2128	1	18	2		1	1	1	1	9	9	
2129	1	18	2		1	1	2	1	9	9	
2130	1	18	2		2	3	2	2	9	9	
2131	1	18	2		2	1	2	2	9	9	
2132	1	19	2		1	1	1	1	9	9	
2133	1	18	2		2	1	1	2	9	9	
2134	1	18	2		1	1	1	1	9	9	
2135	1	33	2		4	1	2	1	9	9	
2136	1	18	2		2	2	2	1	9	9	
2137	1	18	2		2	1	1	3	9	9	
2138	1	18	2		2	2	2	3	9	9	
2139	1	18	2		2	2	1	2	9	9	
2140	1	18	2		1	2	1	2	9	9	
2141	1	18	2		1	1	1	1	9	9	
2143	1	18	2		2	2	1	2	9	9	
2144	1	18	2		1	1	1	1	9	9	
2145	1	18	2		1	1	3	3	9	9	
2146	1	18	2		2	2	2	1	9	9	
2147	1	18	2		2	2	1	1	9	9	
2148	1	18	2		3	2	2	2	9	9	
2149	1	18	2		1	1	2	2	9	9	
2150	1	18	2		1	1	2	1	9	9	
2201	1	18	2		1	1	1	1	9	9	
2202	1	18	2		2	2	2	2	9	9	
2203	1	18	2		1	1	1	2	9	9	
2204	1	19	2		1	4	1	3	9	9	
2205	1	18	2		1	3	2	2	9	9	
2206	1	18	2		4	2	3	2	9	9	
2208	1	18	2		1	1	1	1	9	9	
2210	1	18	2		3	2	2	1	9	9	
2211	1	18	2		1	1	1	3	9	9	
2212	1	18	2		1	1	1	1	9	9	
2213	1	19	2		1	2	1	2	9	9	
2214	1	18	2		1	1	1	1	9	9	
2215	1	18	2		2	2	1	2	9	9	
2216	1	18	2		2	1	1	3	9	9	
2217	1	18	2		1	1	1	1	9	9	
2218	1	18	2		1	1	1	2	9	9	
2220	1	19	2		2	2	1	2	9	9	
2221	1	18	2		2	1	1	2	9	9	
2222	1	18	2		3	2	2	1	9	9	
2223	1	29	2		1	1	1	3	9	9	
2224	1	18	2		1	2	1	1	9	9	
2225	1	19	2		2	2	1	2	9	9	
2226	1	18	2		1	1	1	1	9	9	
2227	1	18	2		2	1	1	1	9	9	
2229	1	18	2		2	2	1	2	9	9	
2230	1	18	2		1	2	1	2	9	9	
2231	1	18	2		3	1	1	1	9	9	

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----					6
			1M	2F	5	6	7	8	9	10
2233	1	18	2		1	1	1	1	9	9
2234	1	19	2		3	1	1	1	9	9
2236	1	18	2		2	2	1	1	9	9
2237	1	18	2		3	2	2	2	9	9
2238	1	36	2		2	3	1	3	9	9
2239	1	18	2		1	1	1	1	9	9
2240	1	18	2		2	1	1	1	9	9
2241	1	18	2		1	1	1	2	9	9
2242	1	18	2		2	2	1	1	9	9
2243	1	19	2		2	2	1	1	9	9
2244	1	21	2		1	1	1	1	9	9
2245	1	20	2		1	2	1	1	9	9
2246	1	18	2		1	1	1	1	9	9
2247	1	18	2		2	1	2	1	9	9
2248	1	18	2		2	3	2	3	9	9
2249	1	18	2		1	1	1	1	9	9
2301	1	32	2		2	1	1	1	9	9
2302	1	18	2		3	1	1	1	9	9
2303	1	18	2		2	2	2	2	9	9
2304	1	18	2		2	1	1	1	9	9
2305	1	18	2		3	1	3	3	9	9
2306	1	18	2		2	1	2	3	9	9
2307	1	19	2		3	3	2	2	9	9
2309	1	18	2		2	2	1	1	9	9
2310	1	18	2		2	2	1	1	9	9
2311	1	18	2		1	2	1	1	9	9
2312	1	18	2		2	2	2	1	9	9
2313	1	19	2		1	2	2	3	9	9
2314	1	18	2		2	2	2	1	9	9
2315	1	19	2		2	2	2	1	9	9
2316	1	18	2		2	1	1	1	9	9
2318	1	18	2		1	1	1	2	9	9
2319	1	18	2		1	1	1	1	9	9
2320	1	18	2		1	2	1	2	9	9
2321	1	18	2		2	2	2	2	9	9
2322	1	18	2		2	2	2	1	9	9
2323	1	18	2		2	1	1	3	9	9
2324	1	18	2		2	2	2	2	9	9
2325	1	18	2		1	2	1	2	9	9
2326	1	18	2		1	1	1	1	9	9
2327	1	18	2		2	1	2	3	9	9
2328	1	18	2		1	2	1	2	9	9
2329	1	18	2		1	2	1	2	9	9
2330	1	19	2		3	2	2	3	9	9
2331	1	19	2		2	1	1	3	9	9
2332	1	18	2		2	1	2	3	9	9
2333	1	19	2		2	1	2	2	9	9
2334	1	18	2		1	1	1	1	9	9
2401	1	21	1		2	1	1	3	9	9
2402	1	19	1		2	2	3	1	9	9

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----					7
			1M	2F	5	6	7	8	9	10
2403	1	19	1		2	2	1	2	9	9
2404	1	19	1		2	2	2	1	9	9
2405	1	20	1		1	2	1	3	9	9
2406	1	18	1		2	2	2	2	9	9
2407	1	19	1		4	3	2	2	9	9
2408	1	18	1		2	2	1	1	9	9
2409	1	18	1		1	2	1	1	9	9
2411	1	18	1		1	1	2	4	9	9
2412	1	18	1		2	2	1	1	9	9
2413	1	19	1		1	1	1	1	9	9
2414	1	30	1		1	1	1	2	9	9
2415	1	19	1		1	2	1	1	9	9
2417	1	18	1		3	2	3	3	9	9
2418	1	20	1		2	2	1	3	9	9
2419	1	18	1		2	2	1	2	9	9
2420	1	19	1		1	1	1	1	9	9
2421	1	18	1		4	3	3	3	9	9
2422	1	18	1		2	2	2	3	9	9
2423	1	18	1		2	1	1	1	9	9
2424	1	19	1		2	3	1	1	9	9
2425	1	19	1		2	1	3	1	9	9
2426	1	19	1		4	4	2	3	9	9
2427	1	18	1		3	2	3	3	9	9
2428	1	19	1		2	1	1	1	9	9
2429	1	19	1		3	3	2	1	9	9
2430	1	19	1		1	2	1	1	9	9
2431	1	19	1		2	1	1	3	9	9
2432	1	18	1		3	2	2	1	9	9
2435	1	18	1		2	2	2	1	9	9
2436	1	19	1		1	1	1	3	9	9
2437	1	18	1		1	1	1	1	9	9
2438	1	19	1		1	2	1	1	9	9
2439	1	19	1		2	3	2	1	9	9
2440	1	18	1		1	1	1	1	9	9
2441	1	19	1		2	1	1	1	9	9
2442	1	18	1		2	2	2	2	9	9
2443	1	18	1		3	2	1	1	9	9
2444	1	18	1		2	2	1	1	9	9
2501	1	19	1		6	6	3	3	9	9
2502	1	19	1		1	1	1	2	9	9
2503	1	18	1		3	1	2	3	9	9
2505	1	18	1		1	1	1	1	9	9
2506	1	18	1		3	4	3	1	9	9
2508	1	19	1		2	2	1	1	9	9
2509	1	18	1		2	2	2	3	9	9
2510	1	19	1		2	4	1	3	9	9
2511	1	19	1		1	1	1	2	9	9
2512	1	18	1		1	2	1	1	9	9
2513	1	18	1		1	1	2	1	9	9
2514	1	19	1		2	2	1	1	9	9

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					8	
			1M	2F	5	6	7	8	9	10	
2516	1	18	1		5	5	4	1		9	9
2517	1	19	1		1	1	1	3		9	9
2519	1	18	1		1	1	1	1		9	9
2520	1	18	1		5	5	3	1		9	9
2522	1	18	1		1	1	1	1		9	9
2523	1	18	1		2	2	1	1		9	9
2524	1	23	1		1	1	1	3		9	9
2525	1	19	1		4	3	3	1		9	9
2526	1	20	1		3	3	3	1		9	9
2527	1	18	1		1	1	2	3		9	9
2530	1	18	1		1	2	1	1		9	9
2531	1	19	1		3	3	2	1		9	9
2532	1	18	1		3	1	2	1		9	9
2533	1	18	1		2	1	1	1		9	9
2534	1	18	1		2	1	1	9		9	9
2535	1	18	1		4	2	2	1		9	9
2537	1	18	1		3	2	1	2		9	9
2539	1	18	1		3	3	2	3		9	9
2540	1	20	1		3	3	2	2		9	9
2541	1	19	1		2	4	2	3		9	9
2542	1	18	1		1	2	1	3		9	9
2543	1	18	1		2	2	1	1		9	9
2544	1	18	1		2	1	1	3		9	9
2545	1	18	1		3	2	2	3		9	9
2548	1	19	1		4	1	3	1	2	2	3
2602	1	18	1		1	1	1	1		9	9
2603	1	18	1		2	2	1	1		9	9
2604	1	18	1		2	2	1	9		9	9
2605	1	19	1		1	1	1	1		9	9
2607	1	18	1		2	2	2	1		9	9
2608	1	18	1		2	2	2	2		9	9
2609	1	18	1		1	2	1	1		9	9
2610	1	18	1		2	2	1	3		9	9
2611	1	18	1		1	1	1	1		9	9
2613	1	18	1		4	1	2	1		9	9

QUESTIONS 5 / 6

323 57
0 E

QUESTIONS 5 / 7

317 44
5 18

QUESTIONS 5 / 9

148 22
173 40

QUESTIONS 6 / 7

360 1
20 4

QUESTIONS 6 / 8

168 2
210 3

QUESTIONS 7 / 9

161 9
198 15

YEAR 2 (1975) VOL : COLLEGE - QUESTIONNAIRE 1(b)

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					1
			1M	2F	5	6	7	8	9	10
1103	2	19	2		1	1	1	2	2	2
1105	2	19	2		2	1	2	2	2	2
1110	2	19	2		1	1	1	3	2	2
1111	2	19	2		1	1	1	3	2	2
1114	2	19	2		1	1	1	1	2	2
1117	2	19	2		1	2	1	1	1	2
1119	2	19	2		1	1	1	1	2	2
1120	2	34	2		1	1	1	1	2	2
1207	2	19	2		3	1	1	9	1	2
1209	2	19	2		1	1	1	2	2	9
1210	2	19	2		1	1	1	2	2	2
1213	2	19	2		3	1	1	3	1	3
1217	2	19	2		1	1	2	2	2	3
1218	2	21	2		1	1	2	3	1	2
1301	2	19	2		2	1	1	1	2	2
1304	2	19	2		1	2	2	2	2	2
1305	2	20	2		3	2	1	3	2	2
1308	2	19	2		1	1	1	3	2	2
1310	2	19	2		2	4	2	2	1	3
1311	2	19	1		1	3	2	3	2	2
1312	2	20	1		1	2	1	1	2	2
1317	2	19	2		2	1	1	1	2	2
1318	2	19	2		2	1	2	1	1	9
1401	2	19	2		1	1	1	1	2	2
1403	2	19	2		2	2	2	2	2	2
1404	2	19	2		2	1	1	3	2	2
1405	2	19	2		2	2	1	1	2	3
1406	2	19	2		3	1	2	3	1	2
1407	2	19	2		4	2	2	3	1	1
1409	2	19	2		1	2	1	1	2	2
1413	2	20	2		1	1	1	1	1	2
1416	2	19	2		1	1	1	1	2	3
1501	2	22	1		1	2	1	3	1	2
1508	2	20	1		1	1	1	1	2	2
1509	2	19	2		1	2	2	3	2	2
1511	2	19	2		1	1	3	3	2	2
1515	2	19	2		1	1	1	1	2	2
1520	2	19	2		5	5	3	1	1	2
1521	2	19	1		1	1	3	1	2	2
1522	2	19	2		2	1	2	3	1	3
1523	2	19	2		2	2	1	1	2	3
1602	2	19	2		3	3	1	1	1	3
1603	2	19	2		5	4	2	1	2	2
1604	2	23	2		3	3	1	3	1	3
1608	2	42	2		1	2	1	2	1	2
1609	2	19	2		3	1	2	3	2	2
1611	2	19	2		2	2	1	1	2	1
1612	2	19	2		2	4	2	1	1	2
1613	2	19	2		1	4	2	1	2	2
1614	2	19	2		1	1	2	2	2	3

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					10
			1M	2F	5	6	7	8	9	
1617	2	25	2		1	2	1	1	2	2
1618	2	19	2		2	1	2	3	2	2
1619	2	19	2		1	1	1	3	1	2
1621	2	19	2		4	3	2	3	1	2
1622	2	19	2		1	1	1	3	2	2
1706	2	19	2		1	1	1	1	2	2
1707	2	28	1		1	1	1	1	2	2
1708	2	19	2		1	2	1	1	2	2
1710	2	20	2		4	1	1	3	2	2
1713	2	19	2		2	1	2	2	2	2
1714	2	19	2		3	2	2	1	1	3
1722	2	19	2		3	3	3	3	1	3
1801	2	19	2		2	1	1	1	1	3
1802	2	19	2		1	1	2	1	2	2
1803	2	20	2		1	1	1	1	2	2
1804	2	19	2		1	1	1	3	2	3
1806	2	19	2		3	1	1	3	1	3
1808	2	19	2		2	1	2	3	2	2
1810	2	19	2		2	2	1	2	1	3
1811	2	19	2		2	1	1	1	2	3
1813	2	19	2		3	5	3	2	1	3
1814	2	19	2		5	2	2	2	1	3
1817	2	20	2		1	2	2	2	2	2
1818	2	19	2		1	1	2	2	2	2
1820	2	19	2		3	1	2	1	1	3
1888	2	19	2		2	3	1	1	2	2
2106	2	19	2		2	1	1	1	2	3
2109	2	19	2		2	2	1	1	2	3
2110	2	20	2		3	3	2	3	2	2
2111	2	19	2		2	1	2	1	2	2
2112	2	20	2		2	2	2	3	2	3
2113	2	19	2		1	1	2	1	2	2
2114	2	19	2		2	1	1	1	2	3
2116	2	18	2		2	1	2	1	1	3
2117	2	19	2		2	2	1	1	2	2
2118	2	19	2		2	2	1	1	2	2
2119	2	19	2		2	1	1	1	2	2
2125	2	19	2		1	2	1	1	2	2
2127	2	20	2		5	5	3	3	1	1
2128	2	19	1		3	1	3	2	2	2
2130	2	19	2		2	4	3	1	1	2
2131	2	19	2		1	2	1	1	2	2
2132	2	20	2		1	1	1	1	2	2
2133	2	19	2		1	1	1	1	2	2
2135	2	34	2		2	1	2	1	1	3
2141	2	19	2		2	2	1	1	2	2
2142	2	19	2		1	1	1	2	2	2
2143	2	19	2		2	1	1	1	2	2
2144	2	19	2		2	1	2	1	2	2
2147	2	19	2		1	2	1	1	2	2

STUDENT NO.	YEAR	AGE	-SEX- 1M 2F	-----QUESTION NO.-----						3
				5	6	7	8	9	10	
2201	2	19	2	1	1	1	9	1	2	
2202	2	19	2	1	1	2	1	2	2	
2204	2	20	2	3	3	2	3	1	2	
2208	2	19	2	1	2	1	1	2	2	
2209	2	19	2	3	2	2	3	2	3	
2212	2	19	2	3	1	2	1	2	3	
2216	2	19	2	1	1	1	2	2	2	
2218	2	19	2	2	1	1	3	2	2	
2219	2	19	2	2	1	1	1	2	2	
2220	2	20	2	1	1	1	3	2	2	
2221	2	19	2	2	1	1	3	2	2	
2222	2	19	2	2	2	1	1	2	2	
2224	2	19	2	1	2	1	1	2	2	
2225	2	20	2	2	2	1	3	2	2	
2227	2	19	2	1	1	1	1	2	2	
2228	2	19	2	4	2	9	1	1	3	
2230	2	19	2	2	2	1	3	2	3	
2232	2	30	2	1	1	1	3	2	3	
2233	2	19	2	2	1	2	1	2	2	
2234	2	20	2	5	5	2	1	1	3	
2235	2	19	2	2	1	2	3	2	2	
2236	2	19	2	1	1	1	3	2	2	
2238	2	37	2	2	2	1	1	1	2	
2242	2	19	2	2	2	1	1	2	2	
2243	2	20	2	2	2	1	1	1	3	
2246	2	19	2	1	1	1	1	2	2	
2303	2	19	2	6	6	3	2	1	1	
2304	2	19	2	5	1	2	1	2	2	
2306	2	19	2	4	1	2	3	1	3	
2307	2	20	2	3	5	2	3	1	3	
2308	2	19	2	3	3	4	1	1	2	
2309	2	19	2	3	5	2	9	1	3	
2310	2	19	2	3	4	2	3	2	3	
2311	2	19	2	1	1	2	2	2	2	
2312	2	19	2	3	2	1	1	1	1	
2313	2	20	2	2	2	4	1	2	2	
2314	2	19	2	4	1	4	3	1	2	
2316	2	19	2	2	1	1	1	2	2	
2317	2	19	2	4	5	4	3	1	3	
2319	2	19	2	1	1	1	3	1	2	
2321	2	19	2	1	2	1	9	1	2	
2322	2	19	2	2	2	9	1	1	2	
2323	2	19	2	1	2	2	3	2	2	
2326	2	19	2	1	1	1	1	2	2	
2327	2	19	2	2	2	1	3	2	2	
2332	2	19	2	3	1	2	1	2	3	
2402	2	20	1	3	2	2	1	1	3	
2403	2	20	1	6	5	2	1	2	3	
2404	2	20	1	2	1	1	1	2	2	
2405	2	21	1	2	1	1	3	2	3	

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----					
			1M	2F	5	6	7	8	9	10
2407	2	20	1		4	5	3	3	1	1
2411	2	19	1		6	1	1	1	2	3
2418	2	20	1		3	2	3	3	2	2
2419	2	18	1		3	2	2	3	2	3
2428	2	20	1		3	1	2	1	2	2
2431	2	20	1		2	1	1	3	2	2
2438	2	20	1		1	3	1	1	2	2
2440	2	19	1		1	1	1	1	2	2
2441	2	20	1		1	1	1	1	2	2
2442	2	19	1		1	2	1	3	2	3
2444	2	19	1		2	2	1	3	2	3
2503	2	19	1		2	1	3	3	1	3
2505	2	19	1		1	1	1	1	2	2
2506	2	19	1		6	6	4	1	1	3
2508	2	20	1		2	1	1	2	2	2
2509	2	19	1		3	2	1	3	1	9
2510	2	20	1		1	2	1	1	2	2
2514	2	20	1		2	2	2	1	2	2
2517	2	20	1		2	1	2	1	2	2
2518	2	19	1		1	1	1	1	2	2
2520	2	19	1		5	2	2	3	1	1
2521	2	19	1		3	3	2	1	2	3
2522	2	19	1		2	2	1	1	2	2
2524	2	24	1		2	1	1	1	2	2
2525	2	20	1		3	2	2	1	2	3
2526	2	21	1		3	4	3	3	2	2
2529	2	37	1		1	1	1	3	2	2
2530	2	19	1		2	2	1	1	2	2
2534	2	19	1		2	2	1	1	2	2
2535	2	19	1		3	3	2	2	1	3
2536	2	19	1		3	2	1	3	1	3
2537	2	19	1		2	3	2	3	2	3
2540	2	21	1		3	2	1	1	2	3
2541	2	20	1		1	3	2	1	2	2
2544	2	20	1		2	1	1	1	2	2
2545	2	19	1		3	1	3	9	2	2
2546	1	19	1		2	2	2	9	2	2
2601	2	19	1		1	1	1	1	2	2
2602	2	19	1		2	1	1	1	2	1
2603	2	19	1		1	1	1	1	2	2
2605	2	20	1		1	2	2	1	2	2
2607	2	19	1		3	3	2	3	1	2
2608	2	19	1		2	2	2	2	2	2
2609	2	19	1		2	1	1	1	2	2
2612	2	20	1		2	1	2	2	1	2
2613	2	19	1		3	1	2	9	2	3
2617	2	20	1		1	1	1	1	2	2
2666	2	19	1		1	2	1	1	1	2
2667	2	19	2		3	2	1	3	2	3
2668	2	19	2		2	1	1	9	2	2

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----					5
			1M	2F	5	6	7	8	9	10
2676	2	19	2		1	1	1	1	2	2
2677	2	19	1		2	2	2	3	1	2

QUESTIONS 5 / 6 QUESTIONS 5 / 7 QUESTIONS 5 / 8 QUESTIONS 5 / 9 QUESTIONS 5 / 10

145	46	139	42	86	20	120	23	116	19
0	11	5	14	55	33	25	34	27	37

QUESTIONS 6 / 7 QUESTIONS 6 / 8 QUESTIONS 6 / 9 QUESTIONS 6 / 10

177	4	102	4	142	1	134	1
12	7	82	6	49	10	54	10

QUESTIONS 7 / 8 QUESTIONS 7 / 9 QUESTIONS 7 / 10

98	6	136	7	123	11
76	12	45	12	55	8

QUESTIONS 8 / 9 QUESTIONS 8 / 10

84	55	77	52
22	33	28	34

QUESTIONS 9 / 10

111	24
31	33

YEAR 1 (1975) VOL : COLLEGE - QUESTIONNAIRE 1(b)

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					10
			1M	2F	5	6	7	8	9	
1001	1	18	2		3	1	1	2	2	9
1011	1	19	2		3	1	2	1	2	9
1014	1	18	2		1	2	1	1	2	9
1019	1	18	2		2	2	1	1	2	9
1020	1	18	2		4	3	3	1	1	9
1022	1	37	2		1	1	1	1	2	9
1023	1	18	2		1	2	1	1	2	9
1024	1	18	2		1	3	1	3	1	9
1026	1	18	2		2	2	1	2	2	9
1027	1	18	2		1	1	9	9	9	9
1029	1	18	2		5	2	2	1	2	9
1031	1	21	1		2	3	1	1	2	9
1032	1	18	2		1	1	1	2	2	9
1033	1	18	2		2	2	1	1	2	9
1034	1	18	2		1	1	1	1	2	9
1035	1	18	2		2	2	2	1	2	9
1036	1	18	2		1	1	1	3	2	9
1037	1	18	2		2	3	2	1	2	9
1038	1	18	2		2	2	1	1	2	9
1040	1	18	2		3	2	2	2	1	9
1041	1	18	2		1	1	1	9	2	9
1042	1	18	2		1	1	1	1	9	9
1043	1	18	2		2	1	1	1	2	9
1044	1	18	1		1	1	1	1	2	9
1045	1	18	2		1	3	1	1	2	9
1046	1	18	2		3	3	1	1	1	9
1048	1	19	2		4	4	4	1	2	9
1049	1	19	2		3	1	2	1	2	9
1050	1	18	2		2	1	2	1	2	9
1052	1	18	2		2	2	1	1	2	9
1053	1	18	2		1	1	1	9	2	9
1054	1	18	2		2	1	1	1	9	9
1057	1	19	1		1	2	1	1	1	9
1058	1	18	2		2	3	1	2	2	9
1061	1	18	2		1	2	1	2	2	9
1063	1	18	2		2	2	2	1	2	9
1064	1	18	2		2	2	1	3	2	9
1065	1	18	2		1	1	2	1	2	9
1066	1	18	2		2	1	1	1	2	9
1067	1	18	2		1	2	1	1	2	9
1071	1	18	2		2	1	2	2	1	9
1074	1	18	2		2	2	3	1	1	9
1075	1	18	2		1	2	1	1	2	9
1076	1	18	2		2	2	1	1	2	9
1077	1	18	2		2	2	1	1	2	9
1078	1	19	1		1	1	1	1	2	9
1080	1	18	2		3	2	2	9	2	9
1081	1	18	2		2	4	1	1	1	9
1082	1	18	2		2	2	1	1	2	9
1083	1	18	2		1	1	1	1	2	9

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----						2
			1M	2F	5	6	7	8	9	10	
1084	1	18	2		1	2	1	1		9	9
1085	1	19	2		1	1	1	1		2	9
1086	1	18	2		2	1	1	3		2	9
1087	1	18	1		1	3	2	3		2	9
1088	1	18	2		2	2	2	1		1	9
1089	1	18	2		1	1	1	1		2	9
1090	1	19	2		2	2	1	3		2	9
1091	1	18	1		1	1	2	1		2	9
1092	1	18	2		2	1	1	3		1	9
1096	1	18	2		2	1	1	1		2	9
1097	1	18	2		2	1	1	1		2	9
1098	1	18	1		1	1	1	1		2	9
1099	1	19	2		1	1	1	1		2	9
1100	1	19	1		4	6	4	1		2	9
1101	1	18	2		2	4	2	1		2	9
1102	1	18	2		1	1	1	1		2	9
1103	1	19	2		4	2	1	3		2	9
1104	1	18	2		1	1	1	3		2	9
1105	1	18	2		2	3	1	1		2	9
1106	1	18	2		2	1	1	2		1	9
1107	1	18	2		2	3	1	9		1	9
1108	1	18	2		2	1	1	1		1	9
1109	1	18	2		2	2	1	2		2	9
1113	1	18	2		2	2	1	1		2	9
1114	1	18	1		1	2	1	1		2	9
1116	1	18	2		2	1	2	1		1	9
1117	1	18	2		2	1	1	1		1	9
1119	1	18	2		3	2	1	1		2	9
1120	1	18	2		1	2	3	3		2	9
1122	1	18	2		3	1	1	3		1	9
1123	1	19	2		1	2	1	2		2	9
1124	1	19	2		1	1	1	3		2	9
1125	1	18	2		2	3	1	1		2	9
1127	1	18	2		1	1	1	1		2	9
1128	1	18	2		2	1	1	1		1	9
1129	1	18	1		2	2	1	1		2	9
1130	1	18	2		2	2	2	9		2	9
1132	1	22	1		1	1	1	1		2	9
1133	1	18	2		2	2	1	2		2	9
1134	1	19	2		2	3	1	3		2	9
1136	1	18	2		1	3	1	1		2	9
1137	1	19	2		2	3	1	1		2	9
1138	1	19	2		2	2	2	1		2	9
1141	1	18	2		2	2	1	1		2	9
1142	1	18	2		3	2	2	1		2	9
1143	1	18	1		2	2	1	1		2	9
1144	1	18	2		2	1	2	2		1	9
1145	1	18	2		1	1	1	3		2	9
1149	1	18	2		1	1	1	1		2	9
1150	1	18	2		3	1	1	2		2	9

STUDENT NO.	YEAR	AGE	--SEX--		-----QUESTION NO.-----						3
			1M	2F	5	6	7	8	9	10	
1154	1	18	2		1	2	1	1	2	9	
1158	1	18	2		5	1	2	1	2	9	
1159	1	18	2		2	2	1	1	2	9	
1161	1	18	2		2	2	1	2	1	9	
1162	1	18	2		2	2	1	1	1	9	
1164	1	18	2		2	2	1	2	2	9	
1166	1	18	2		3	5	1	2	2	9	
2002	1	18	2		2	2	1	9	2	9	
2003	1	18	2		1	1	1	1	2	9	
2004	1	18	2		1	1	1	1	2	9	
2006	1	18	2		1	2	1	1	2	9	
2007	1	18	2		2	2	1	1	2	9	
2016	1	18	2		1	3	2	3	2	9	
2020	1	18	2		1	2	2	2	1	9	
2023	1	18	2		1	3	1	1	2	9	
2027	1	18	2		3	2	1	1	2	9	
2028	1	17	2		2	2	1	1	2	9	
2029	1	18	2		2	1	1	3	2	9	
2030	1	18	2		2	3	1	1	2	9	
2031	1	18	2		1	3	1	1	2	9	
2037	1	18	2		1	1	1	1	2	9	
2039	1	18	2		3	1	1	1	2	9	
2040	1	18	2		1	2	2	2	2	9	
2043	1	18	2		2	1	1	1	2	9	
2045	1	18	2		1	1	1	1	2	9	
2046	1	19	2		3	2	1	1	2	9	
2048	1	20	1		5	2	1	1	2	9	
2049	1	18	2		4	2	2	1	2	9	
2050	1	19	2		3	2	2	1	2	9	
2051	1	18	1		3	1	1	1	2	9	
2052	1	18	2		3	1	1	3	1	9	
2056	1	18	2		1	1	1	1	2	9	
2060	1	19	1		3	2	1	2	1	9	
2061	1	18	2		1	1	2	1	2	9	
2062	1	18	2		2	2	1	3	2	9	
2066	1	18	2		1	3	2	1	2	9	
2067	1	18	1		2	2	1	2	2	9	
2068	1	18	1		2	2	1	1	2	9	
2069	1	18	1		2	2	1	1	2	9	
2072	1	18	2		2	1	1	2	2	9	
2073	1	18	2		2	2	4	1	2	9	
2076	1	18	2		2	2	1	1	2	9	
2083	1	18	2		1	1	1	1	1	9	
2085	1	18	2		1	1	2	1	2	9	
2086	1	18	2		1	2	1	1	2	9	
2092	1	18	1		1	1	1	1	2	9	
2095	1	18	1		1	1	1	1	2	9	
2097	1	18	2		2	1	1	1	2	9	
2102	1	18	2		2	3	1	1	2	9	
2104	1	19	2		1	2	1	1	2	9	

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----					4 10
			1M	2F	5	6	7	8	9	
2105	1	18	2		3	2	2	1	2	2
2107	1	18	2		2	3	1	1	1	9
2108	1	18	2		2	3	1	1	2	9
2109	1	18	2		2	1	1	1	2	9
2110	1	18	2		2	2	1	1	2	9
2112	1	18	1		2	1	1	1	2	9
2114	1	18	2		3	3	1	1	2	9
2116	1	18	2		2	5	1	1	2	9
2120	1	18	2		2	4	1	1	2	9
2125	1	18	2		1	1	1	1	2	9
2126	1	18	2		2	2	2	1	2	9
2128	1	18	2		1	2	1	2	2	9
2129	1	18	2		1	2	1	1	2	9
2134	1	18	2		5	2	2	1	2	9
2136	1	18	2		2	1	1	1	2	9
2138	1	18	1		2	2	1	2	2	9
2140	1	18	1		1	2	1	1	2	9
2141	1	18	1		1	1	3	1	2	9
2142	1	18	2		2	2	1	1	2	9
2143	1	19	2		4	2	3	2	2	9
2145	1	19	2		3	3	2	1	2	9
2146	1	18	2		2	2	1	1	2	9
2150	1	18	2		2	2	1	1	2	9
2155	1	18	2		1	3	1	1	2	9
2160	1	19	2		3	3	1	1	2	9
2161	1	18	2		1	2	3	1	2	9
2162	1	18	2		2	2	1	1	2	9
2163	1	18	2		1	3	1	1	2	9
2165	1	19	2		1	1	1	1	1	9
2176	1	18	2		1	1	1	1	2	9
2177	1	18	2		4	5	1	1	1	9
2178	1	18	1		2	3	1	3	2	9
2179	1	19	2		3	2	1	3	1	9
2182	1	18	1		1	3	1	2	2	9
2184	1	19	2		3	4	1	1	2	9
2185	1	18	1		1	1	1	1	2	9
2187	1	19	1		2	1	1	1	2	9
2190	1	18	2		1	1	1	1	2	9
2193	1	18	2		2	2	1	3	2	9
2194	1	18	2		1	1	1	3	2	9
2198	1	18	2		3	1	1	3	2	9
2199	1	18	2		1	1	1	1	2	9
2201	1	18	2		1	1	1	1	2	9
2204	1	19	1		1	1	2	1	1	9
2208	1	18	2		2	3	1	1	1	9
2209	1	18	2		1	1	1	1	2	9
2211	1	18	2		1	1	1	1	2	9
2212	1	18	2		1	1	1	1	2	9
2213	1	18	2		1	1	1	3	2	9
2217	1	19	1		1	1	4	1	2	9

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----					5
			1M	2F	5	6	7	8	9	10
2219	1	17	2		1	2	2	1	2	9
2223	1	19	2		1	1	1	1	2	9
2224	1	19	2		1	3	1	1	2	9
2230	1	18	1		3	3	1	1	2	9
2231	1	18	2		2	3	1	1	1	9
2232	1	18	2		3	1	1	1	1	9
2233	1	19	2		2	2	1	2	2	9
2292	1	24	1		1	1	1	1	2	9

QUESTIONS 5 / 6

35

3

QUESTIONS 5 / 7

163

6

34

4

QUESTIONS 5 / 8

125

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26

11

QUESTIONS 6 / 7

194

9

3

1

QUESTIONS 6 / 8

148

49

3

1

QUESTIONS 7 / 8

143

48

8

2

YEAR 2 (1974) VOL 3 COLLESES, 1(a)

MALE 93

AGE NUMBER

19	40
20	36
21	5
22	2
23	1
24	1
26	1
27	3
35	1
39	1
40	1
47	1

QUESTION RESPONSE	5	6	7	8	9	10
1	39	35	50	42	28	1
2	35	41	35	21	63	57
3	13	9	6	22	0	28
4	4	5	0	1	0	0
5	1	1	0	0	0	0
6	0	1	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	1	1	2	7	2	7

FEMALE 275

AGE NUMBER

19	217
20	37
21	2
22	3
23	2
26	1
27	1
30	1
31	2
32	2
37	2
38	1
39	1
40	1
41	1
43	1

QUESTION ---> RESPONSE	5	6	7	8	9	10
1	108	148	177	110	99	2
2	121	97	72	85	176	187
3	38	23	26	78	0	84
4	3	3	0	0	0	0
5	4	2	0	0	0	0
6	1	1	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	1	0	2	0	2

YEAR 1 (1974) VOL : COLLEGES, 1(a)

MALE 111

AGE NUMBER

18	62
19	39
20	5
21	2
23	1
27	1
30	1

QUESTION ---->	5	6	7	8	9	10
RESPONSE						
1	41	43	66	65	0	0
2	43	49	33	15	2	0
3	17	12	11	28	0	1
4	7	4	1	1	0	0
5	2	2	0	0	0	0
6	1	1	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	2	109	110

FEMALE 274

AGE NUMBER

18	226
19	32
20	3
21	2
22	1
24	1
29	1
31	1
32	1
33	2
35	1
36	2
41	1

QUESTION --->	5	6	7	8	9	10
RESPONSE						
1	113	155	174	105	1	0
2	126	96	88	95	2	0
3	24	18	12	74	0	0
4	6	3	0	0	0	0
5	1	2	0	0	0	0
6	4	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	271	274

YEAR 2 (1975) VOL 1 COLLEGE, 1(b)

MALE 60

AGE NUMBER

18	1
19	31
20	21
21	3
22	1
24	1
28	1
37	1

QUESTION RESPONSE	5	6	7	8	9	10
-------------------	---	---	---	---	---	----

1	19	27	32	34	13	3
2	21	22	20	5	47	40
3	15	7	7	18	0	16
4	1	1	1	0	0	0
5	1	2	0	0	0	0
6	3	1	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	3	0	1

FEMALE 142

AGE NUMBER

18	1
19	117
20	16
21	1
23	1
25	1
30	1
34	2
37	1
42	1

QUESTION ---> RESPONSE	5	6	7	8	9	10
1	56	78	81	72	46	5
2	49	42	48	20	96	95
3	23	8	7	45	0	40
4	7	6	4	0	0	0
5	6	7	0	0	0	0
6	1	1	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	2	5	0	2

YEAR 1 (1975) VOL : COLLEGE, 1(b)

MALE 32

AGE NUMBER

18	21
19	7
20	1
21	1
22	1
24	1

QUESTION --->	5	6	7	8	9	10
RESPONSE						

1	17	15	26	26	3	0
2	10	11	3	4	29	1
3	3	5	1	2	0	0
4	1	0	2	0	0	0
5	1	0	0	0	0	0
6	0	1	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	31

FEMALE 176

AGE NUMBER

17	2
18	150
19	23
37	1

QUESTION RESPONSE	5	6	7	8	9	10
1	67	70	136	125	29	0
2	76	70	32	22	143	1
3	24	28	5	22	0	0
4	6	5	2	0	0	0
5	3	3	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	1	7	4	175

YEAR 1 (1974) - YEAR 2 (1975) VOL 1 COLLEGES PAIRED RECORDS

STUDENT NO.	YEAR	AGE	-SEX-		-----QUESTION NO.-----						10
			1M	2F	5	6	7	8	9		
1103	1	18	2		2	1	2	3	9	9	
	2	19	2		1	1	1	2	2	2	
1105	1	18	2		1	1	1	3	9	9	
	2	19	2		2	1	2	2	2	2	
1110	1	18	2		2	1	1	1	9	9	
	2	19	2		1	1	1	3	2	2	
1111	1	18	2		2	2	1	1	9	9	
	2	19	2		1	1	1	3	2	2	
1114	1	18	2		1	1	1	1	9	9	
	2	19	2		1	1	1	1	2	2	
1117	1	18	2		2	1	2	2	9	9	
	2	19	2		1	2	1	1	1	2	
1119	1	18	2		1	1	1	2	9	9	
	2	19	2		1	1	1	1	2	2	
1120	1	33	2		1	1	1	2	9	9	
	2	34	2		1	1	1	1	2	2	
1207	1	18	2		1	1	1	3	9	9	
	2	19	2		3	1	1	9	1	2	
1209	1	18	2		1	1	1	3	9	9	
	2	19	2		1	1	1	2	2	9	
1210	1	18	2		1	2	1	2	9	9	
	2	19	2		1	1	1	2	2	2	
1213	1	18	2		2	1	1	2	9	9	
	2	19	2		3	1	1	3	1	3	
1217	1	18	2		2	1	1	2	9	9	
	2	19	2		1	1	2	2	2	3	
1218	1	20	2		1	1	1	1	9	9	
	2	21	2		1	1	2	3	1	2	
1301	1	18	2		1	1	1	1	9	9	
	2	19	2		2	1	1	1	2	2	
1304	1	18	2		1	1	1	3	9	9	
	2	19	2		1	2	2	2	2	2	
1305	1	19	2		2	4	2	3	9	9	
	2	20	2		3	2	1	3	2	2	
1308	1	18	2		2	1	2	3	9	9	
	2	19	2		1	1	1	3	2	2	

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					
			1M	2F	5	6	7	8	9	10
1310	1	18	2		2	1	2	2	9	9
	2	19	2		2	4	2	2	1	3
1311	1	18	1		2	1	2	1	2	9
	2	19	1		1	3	2	3	2	2
1312	1	19	1		1	2	1	1	9	9
	2	20	1		1	2	1	1	2	2
1317	1	18	2		1	1	1	3	9	9
	2	19	2		2	1	1	1	2	2
1318	1	18	2		2	1	1	1	9	9
	2	19	2		2	1	2	1	1	9
1401	1	18	2		2	1	1	2	9	9
	2	19	2		1	1	1	1	2	2
1403	1	18	2		1	1	1	1	9	9
	2	19	2		2	2	2	2	2	2
1404	1	18	2		2	2	1	2	9	9
	2	19	2		2	1	1	3	2	2
1405	1	18	2		1	1	2	3	9	9
	2	19	2		2	2	1	1	2	3
1406	1	18	2		1	1	1	1	9	9
	2	19	2		3	1	2	3	1	2
1407	1	18	2		3	3	2	3	9	9
	2	19	2		4	2	2	3	1	1
1409	1	18	2		1	2	1	2	9	9
	2	19	2		1	2	1	1	2	2
1413	1	19	2		1	1	1	1	9	9
	2	20	2		1	1	1	1	1	2
1416	1	18	2		2	2	2	3	9	9
	2	19	2		1	1	1	1	2	3
1501	1	21	1		1	3	2	3	9	9
	2	22	1		1	2	1	3	1	2
1508	1	19	1		1	1	1	1	9	9
	2	20	1		1	1	1	1	2	2
1509	1	18	2		2	3	1	1	9	9
	2	19	2		1	2	2	3	2	2
1511	1	18	2		2	1	2	3	9	9
	2	19	2		1	1	3	3	2	2
1515	1	18	2		1	2	1	1	9	9
	2	19	2		1	1	1	1	2	2

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					3
			1M	2F	5	6	7	8	9	
1520	1	18	2		2	3	1	1	9	9
	2	19	2		5	5	3	1	1	2
1521	1	18	1		1	1	1	1	9	9
	2	19	1		1	1	3	1	2	2
1523	1	18	2		2	2	2	1	9	9
	2	19	2		2	2	1	1	2	3
1602	1	18	2		3	3	2	3	9	9
	2	19	2		3	3	1	1	1	3
1603	1	18	2		1	1	1	3	9	9
	2	19	2		5	4	2	1	2	2
1604	1	22	2		3	5	2	2	9	9
	2	23	2		3	3	1	3	1	3
1608	1	41	2		2	2	2	3	9	9
	2	42	2		1	2	1	2	1	2
1609	1	18	2		2	2	1	1	9	9
	2	19	2		3	1	2	3	2	2
1611	1	18	2		2	2	2	2	9	9
	2	19	2		2	2	1	1	2	1
1612	1	18	2		3	2	2	2	9	9
	2	19	2		2	4	2	1	1	2
1613	1	18	2		1	1	1	1	9	9
	2	19	2		1	4	2	1	2	2
1614	1	18	2		1	2	2	1	9	9
	2	19	2		1	1	2	2	2	3
1617	1	24	2		1	2	1	1	9	9
	2	25	2		1	2	1	1	2	2
1618	1	18	2		2	1	1	2	9	9
	2	19	2		2	1	2	3	2	2
1619	1	18	2		1	1	1	1	9	9
	2	19	2		1	1	1	3	1	2
1621	1	18	2		2	2	1	2	9	9
	2	19	2		4	3	2	3	1	2
1622	1	18	2		1	1	1	3	9	9
	2	19	2		1	1	1	3	2	2
1706	1	18	2		1	1	1	3	9	9
	2	19	2		1	1	1	1	2	2
1707	1	27	1		1	2	1	1	9	9
	2	28	1		1	1	1	1	2	2

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					4
			1M	2F	5	6	7	8	9	
1708	1	18	2		2	2	2	1	9	9
	2	19	2		1	2	1	1	2	2
1710	1	19	2		1	1	1	1	9	9
	2	20	2		4	1	1	3	2	2
1713	1	18	2		1	1	1	1	9	9
	2	19	2		2	1	2	2	2	2
1714	1	18	2		2	2	1	1	9	9
	2	19	2		3	2	2	1	1	3
1722	1	18	2		6	3	2	3	9	9
	2	19	2		3	3	3	3	1	3
1801	1	18	2		2	1	2	2	9	9
	2	19	2		2	1	1	1	1	3
1802	1	18	2		1	1	1	1	9	9
	2	19	2		1	1	2	1	2	2
1803	1	19	2		1	1	1	1	9	9
	2	20	2		1	1	1	1	2	2
1804	1	18	2		1	1	1	1	9	9
	2	19	2		1	1	1	3	2	3
1806	1	18	2		1	1	2	1	9	9
	2	19	2		3	1	1	3	1	3
1808	1	18	2		1	1	1	2	9	9
	2	19	2		2	1	2	3	2	2
1810	1	18	2		2	2	2	3	9	9
	2	19	2		2	2	1	2	1	3
1811	1	18	2		2	1	1	1	9	9
	2	19	2		2	1	1	1	2	3
1813	1	18	2		2	2	1	3	9	9
	2	19	2		3	5	3	2	1	3
1814	1	18	2		5	1	3	2	9	9
	2	19	2		5	2	2	2	1	3
1817	1	19	2		1	2	1	1	9	9
	2	20	2		1	2	2	2	2	2
1818	1	18	2		1	1	3	2	9	9
	2	19	2		1	1	2	2	2	2
1820	1	18	2		1	1	1	1	9	9
	2	19	2		3	1	2	1	1	3
2106	1	18	2		2	2	3	1	9	9
	2	19	2		2	1	1	1	2	3

STUDENT NO.	YEAR	AGE	SEX		QUESTION NO.					E
			1M	2F	5	6	7	8	9	
2109	1	18	2		2	3	2	3	9	9
	2	19	2		2	2	1	1	2	3
2111	1	18	2		1	2	1	1	9	9
	2	19	2		2	1	2	1	2	2
2112	1	19	2		2	3	2	2	9	9
	2	20	2		2	2	2	3	2	3
2113	1	18	2		2	2	2	3	9	9
	2	19	2		1	1	2	1	2	2
2116	1	18	2		1	1	1	2	9	9
	2	18	2		2	1	2	1	1	3
2117	1	18	2		2	1	2	2	9	9
	2	19	2		2	2	1	1	2	2
2118	1	18	2		2	1	2	1	9	9
	2	19	2		2	2	1	1	2	2
2125	1	18	2		1	2	2	1	9	9
	2	19	2		1	2	1	1	2	2
2127	1	19	2		3	4	3	2	9	9
	2	20	2		5	5	3	3	1	1
2128	1	18	2		1	1	1	1	9	9
	2	19	1		3	1	3	2	2	2
2130	1	18	2		2	3	2	2	9	9
	2	19	2		2	4	3	1	1	2
2131	1	18	2		2	1	2	2	9	9
	2	19	2		1	2	1	1	2	2
2132	1	19	2		1	1	1	1	9	9
	2	20	2		1	1	1	1	2	2
2133	1	18	2		2	1	1	2	9	9
	2	19	2		1	1	1	1	2	2
2135	1	33	2		4	1	2	1	9	9
	2	34	2		2	1	2	1	1	3
2141	1	18	2		1	1	1	1	9	9
	2	19	2		2	2	1	1	2	2
2143	1	18	2		2	2	1	2	9	9
	2	19	2		2	1	1	1	2	2
2144	1	18	2		1	1	1	1	9	9
	2	19	2		2	1	2	1	2	2
2147	1	18	2		2	2	1	1	9	9
	2	19	2		1	2	1	1	2	2

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					6
			1M	2F	5	6	7	8	9	
2201	1	18	2		1	1	1	1	9	9
	2	19	2		1	1	1	9	1	2
2202	1	18	2		2	2	2	2	9	9
	2	19	2		1	1	2	1	2	2
2204	1	19	2		1	4	1	3	9	9
	2	20	2		3	3	2	5	1	2
2208	1	18	2		1	1	1	1	9	9
	2	19	2		1	2	1	1	2	2
2212	1	18	2		1	1	1	1	9	9
	2	19	2		3	1	2	1	2	3
2216	1	18	2		2	1	1	3	9	9
	2	19	2		1	1	1	2	2	2
2218	1	18	2		1	1	1	2	9	9
	2	19	2		2	1	1	3	2	2
2220	1	19	2		2	2	1	2	9	9
	2	20	2		1	1	1	3	2	2
2221	1	18	2		2	1	1	2	9	9
	2	19	2		2	1	1	3	2	2
2222	1	18	2		3	2	2	1	9	9
	2	19	2		2	2	1	1	2	2
2224	1	18	2		1	2	1	1	9	9
	2	19	2		1	2	1	1	2	2
2225	1	19	2		2	2	1	2	9	9
	2	20	2		2	2	1	3	2	2
2227	1	18	2		2	1	1	1	9	9
	2	19	2		1	1	1	1	2	2
2230	1	18	2		1	2	1	2	9	9
	2	19	2		2	2	1	3	2	3
2233	1	18	2		1	1	1	1	9	9
	2	19	2		2	1	2	1	2	2
2234	1	19	2		3	1	1	1	9	9
	2	20	2		5	5	2	1	1	3
2236	1	18	2		2	2	1	1	9	9
	2	19	2		1	1	1	3	2	2
2238	1	36	2		2	3	1	3	9	9
	2	37	2		2	2	1	1	1	2
2242	1	18	2		2	2	1	1	9	9
	2	19	2		2	2	1	1	2	2

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					7
			1M	2F	5	6	7	8	9	
2243	1	19	2		2	2	1	1	9	9
	2	20	2		2	2	1	1	1	3
2246	1	18	2		1	1	1	1	9	9
	2	19	2		1	1	1	1	2	2
2303	1	18	2		2	2	2	2	9	9
	2	19	2		6	6	3	2	1	1
2304	1	18	2		2	1	1	1	9	9
	2	19	2		5	1	2	1	2	2
2306	1	18	2		2	1	2	3	9	9
	2	19	2		4	1	2	3	1	3
2307	1	19	2		3	3	2	2	9	9
	2	20	2		3	5	2	3	1	3
2309	1	18	2		2	2	1	1	9	9
	2	19	2		3	5	2	9	1	3
2310	1	18	2		2	2	1	1	9	9
	2	19	2		3	4	2	3	2	3
2311	1	18	2		1	2	1	1	9	9
	2	19	2		1	1	2	2	2	2
2312	1	18	2		2	2	2	1	9	9
	2	19	2		3	2	1	1	1	1
2313	1	19	2		1	2	2	3	9	9
	2	20	2		2	2	4	1	2	2
2314	1	18	2		2	2	2	1	9	9
	2	19	2		4	1	4	3	1	2
2316	1	18	2		2	1	1	1	9	9
	2	19	2		2	1	1	1	2	2
2319	1	18	2		1	1	1	1	9	9
	2	19	2		1	1	1	3	1	2
2321	1	18	2		2	2	2	2	9	9
	2	19	2		1	2	1	9	1	2
2322	1	18	2		2	2	2	1	9	9
	2	19	2		2	2	9	1	1	2
2323	1	18	2		2	1	1	3	9	9
	2	19	2		1	2	2	3	2	2
2326	1	18	2		1	1	1	1	9	9
	2	19	2		1	1	1	1	2	2
2327	1	18	2		2	1	2	3	9	9
	2	19	2		2	2	1	3	2	2

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					
			1M	2F	5	6	7	8	9	10
2332	1	18	2		2	1	2	3	9	9
	2	19	2		3	1	2	1	2	3
2402	1	19	1		2	2	3	1	9	9
	2	20	1		3	2	2	1	1	3
2403	1	19	1		2	2	1	2	9	9
	2	20	1		6	5	2	1	2	3
2404	1	19	1		2	2	2	1	9	9
	2	20	1		2	1	1	1	2	2
2405	1	20	1		1	2	1	3	9	9
	2	21	1		2	1	1	3	2	3
2407	1	19	1		4	3	2	2	9	9
	2	20	1		4	5	3	3	1	1
2411	1	18	1		1	1	2	4	9	9
	2	19	1		6	1	1	1	2	3
2418	1	20	1		2	2	1	3	9	9
	2	20	1		3	2	3	3	2	2
2419	1	18	1		2	2	1	2	9	9
	2	18	1		3	2	2	3	2	3
2428	1	19	1		2	1	1	1	9	9
	2	20	1		3	1	2	1	2	2
2431	1	19	1		2	1	1	3	9	9
	2	20	1		2	1	1	3	2	2
2438	1	19	1		1	2	1	1	9	9
	2	20	1		1	3	1	1	2	2
2440	1	18	1		1	1	1	1	9	9
	2	19	1		1	1	1	1	2	2
2441	1	19	1		2	1	1	1	9	9
	2	20	1		1	1	1	1	2	2
2442	1	18	1		2	2	2	2	9	9
	2	19	1		2	2	1	3	2	3
2444	1	18	1		2	2	1	1	9	9
	2	19	1		2	2	1	3	2	3
2503	1	18	1		3	1	2	3	9	9
	2	19	1		2	1	3	3	1	3
2505	1	18	1		1	1	1	1	9	9
	2	19	1		1	1	1	1	2	2
2506	1	18	1		3	4	3	1	9	9
	2	19	1		6	6	4	1	1	3

STUDENT NO.	YEAR	AGE	-SEX-		QUESTION NO.					9
			1M	2F	5	6	7	8	9	
2508	1	19	1		2	2	1	1	9	9
	2	20	1		2	1	1	2	2	2
2509	1	18	1		2	2	2	3	9	9
	2	19	1		3	2	1	3	1	9
2510	1	19	1		2	4	1	3	9	9
	2	20	1		1	2	1	1	2	2
2514	1	19	1		2	2	1	1	9	9
	2	20	1		2	2	2	1	2	2
2517	1	19	1		1	1	1	3	9	9
	2	20	1		2	1	2	1	2	2
2520	1	18	1		5	5	3	1	9	9
	2	19	1		5	2	2	3	1	1
2522	1	18	1		1	1	1	1	9	9
	2	19	1		2	2	1	1	2	2
2524	1	23	1		1	1	1	3	9	9
	2	24	1		2	1	1	1	2	2
2525	1	19	1		4	3	3	1	9	9
	2	20	1		3	2	2	1	2	3
2526	1	20	1		3	3	3	1	9	9
	2	21	1		3	4	3	3	2	2
2530	1	18	1		1	2	1	1	9	9
	2	19	1		2	2	1	1	2	2
2534	1	18	1		2	1	1	9	9	9
	2	19	1		2	2	1	1	2	2
2535	1	18	1		4	2	2	1	9	9
	2	19	1		3	3	2	2	1	3
2537	1	18	1		3	2	1	2	9	9
	2	19	1		2	3	2	3	2	3
2540	1	20	1		3	2	2	2	9	9
	2	21	1		3	2	1	1	2	3
2541	1	19	1		2	4	2	3	9	9
	2	20	1		1	3	2	1	2	2
2544	1	18	1		2	1	1	3	9	9
	2	20	1		2	1	1	1	2	2
2545	1	18	1		3	2	2	3	9	9
	2	19	1		3	1	3	9	2	2
2602	1	18	1		1	1	1	1	9	9
	2	19	1		2	1	1	1	2	1

STUDENT NO.	YEAR	AGE	--SEX--		-----QUESTION NO.-----					
			1M	2F	5	6	7	8	9	10
2603	1	18	1		2	2	1	1	9	9
	2	19	1		1	1	1	1	2	2
2605	1	19	1		1	1	1	1	9	9
	2	20	1		1	2	2	1	2	2
2607	1	18	1		2	2	2	1	9	9
	2	19	1		3	3	2	3	1	2
2608	1	18	1		2	2	2	2	9	9
	2	19	1		2	2	2	2	2	2
2609	1	18	1		1	2	1	1	9	9
	2	19	1		2	1	1	1	2	2
2613	1	18	1		4	1	2	1	9	9
	2	19	1		3	1	2	9	2	3

QUESTIONNAIRE 2

mailed to all students who had withdrawn from 3-year teacher training courses starting in September 1970 in the colleges of two Northern Institutes of Education, with the accompanying letter:

N.B. "Boxes" in the questionnaire have been slightly reduced in size to accommodate A4 format.

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The College of Ripon & York St. John,
College Road,

Ripon,

North Yorkshire, HG4 2QX.

Date: As postmark.

Dear -----

I am sure you are aware of the great changes recently in colleges of Education, and of the many discussions on literacy and numeracy.

As part of some work with the Durham University Department of Education, I am trying to find out how relevant students' College work has been. Your name has come up as one of a sample of students who took courses with the ----- and ----- Institutes of Education, not all of whom are necessarily now teaching. I am therefore, asking you to help in this investigation by completing the enclosed questionnaire.

As it is very important for the numbers in the sample to be accurate, I shall be most appreciative of your help as no-one else can take your place in the sampling pattern. In addition, in the present climate of changing attitudes and the development of new college structures, your assistance could contribute to the planning of more satisfying courses for your successors.

When you have filled in the question sheets, please check that you have not overlooked any parts of questions, and return your answers as soon as you possibly can in the stamped envelope provided.

Without you this study cannot be effective, so I am grateful for

your help. If you are willing to assist further, or would like a summary of results, please address the enclosed blank envelope to yourself and return it, with the questionnaire, in the stamped addressed envelope provided.

Thank you so much for your co-operation.

Yours very sincerely,

A.I. Gwendolen Renton (Mrs.)

THE COLLEGE OF RIPON AND YORK ST. JOHN, WITH THE DEPARTMENT OF
EDUCATION, DURHAM UNIVERSITY.

Please answer each part of all the questions as fully as you can, in the boxes provided.

1. Length of time at College of Education:

At what dates did you enter and leave College?

	Month	Year
Enter		
Leave		

2. Time spent "out of college" during your course.

(a) How many weeks did you spend on (continuous) school practice?

Please put a tick in the box for the numbers of weeks, and fill in the age-group of the children.

No. of weeks	None	1-3	4-6	7 or more	Age Group
In Year One					
In Year Two					
In Year Three					

(b) Did you have any other continuous periods out of college, and if so how long?

Please put a tick in the box for the number of weeks and fill in the reason.

No. of weeks	None	1-3	4-6	7 or more	Reason
In Year One					
In Year Two					
In Year Three					

3. Chosen parts of your College course.

(a) Did you take one/two/or three main subjects?

How many?	
-----------	--

If your main subject(s) included English or Mathematics (but not otherwise) please fill in this table for the time spent on lectures:

Write E in the space right for English, M for Mathematics.

No. of hours per week	None	1 or 2	3 or 4	5 or 6	7 or more	Comment
In Year One						
In Year Two						
In Year Three						

(b) Did you take any subsidiary subject(s)?

How many?	
-----------	--

If your subsidiary subjects included English or Mathematics, but not otherwise, please fill in this table for the time spent on lectures. Write E in the space correct for English, M for Mathematics.

No. of hours per week	None	1 or 2	3 or 4	5 or 6	7 or more	Comment
In Year One						
In Year Two						
In Year Three						

(c) Did you take any optional extra courses not taken by all the students preparing to teach the same age of children as yourself?

	Length of Course	Title of Course	Topics Covered
English			
Mathematics			
Other Subjects			

(d) To which of these age groups of children was your teaching course directed?

Please tick the box(es) that best fit your own course.

Age of children (years)	2-5	5-7	7-11	11-16	16+

4. Please answer this question before you read any further

We would like to know if you have by now forgotten what you did in Mathematics at College, or whether you still remember. So, without looking up any records you may have, please list the mathematical topics you remember studying at college, and if they represent your feelings correctly, given them key letters from the code below:

If you found it

(boring, write B
(difficult, write D
(easy, write E
(interesting, write I
(surprising, write S
(useful since, write U

PLEASE FEEL FREE TO ADD ANY FURTHER COMMENT(S) YOU FEEL APPROPRIATE.

Topic in Mathematics	Key Letter(s)	Further Comment

5.(a) Type of residence during College of Education course

While you were at College, for how many terms were you in hostels or lodgings?

	In a College hostel	In College Lodgings/ Coll: Flat	In Private Lodgings/ Flat	At home or living with relatives
No. of terms				

(b) In What Type of dwelling do you live now?

Please tick appropriate box.

Whole house (including 'bungalow')			Flat/ Masionette (Self-contained)	Rooms	Caravan	Other type of dwelling (Please State)
Detached	Semi-detached	Terrace				

Is your family the owner of your dwelling?

Yes	No

6. AFTER LEAVING COLLEGE, did you immediately take up a teaching post? Please tick the appropriate box, and continue with the questions below your ticks.

(a)

Yes	
-----	--

No	
----	--

Have you changed your position since?

Yes	No

Did you take up some other employment?

Yes	No

Have you been promoted since?

Yes	No

If, so, was it full-time or part-time?

Full time	Part time

Please give as much detail as you can.

Have you taken up a teaching post since?

Yes	No

(b) Have you taken any further professional training for teaching? If so, please give as much detail as you can, and state any qualifications obtained:

Yes	No

(c) Have you taken any non-teaching professional training? If so, please give as much detail as you can, and state any qualifications obtained:

Yes	No

7. Your Present Occupation

Please fill in the table below for your employment situations during the last two years

	Occupation (Describe as fully as you can)	Industry trade or profession	Employer or write Self-Employed	Approx. No. of pupils in school. OR No. of employees in the establishment	Grade or Status, Responsibility etc.
Present					
<u>Just Previous,</u> only if you have changed within the last 2 yrs.					

8.(a) How relevant has your mathematics been:

- In your teaching (T)
- In other Employment (E)
- In everyday home life or leisure (H)

Please put T, E and H in the appropriate squares of the table below:

	Very useful	Useful	No Use	Comments
School Maths:				
College Maths:				
Maths: learnt during employment/post-College classes etc.				

(b) Have you been able to obtain any further mathematical knowledge you need?

	Obtained easily	Obtained, but with difficulty	Not obtained	No more needed
Please tick the most suitable box				

Comments: _____

9. From your experience since leaving College, are there any items or topics which you feel should be retained in, or introduced into, or taken out from courses you took at College?

	English	Mathematics	Other Subjects
Should be Retained			
Should be Introduced			
Should be Taken Out			

THANK YOU.

A.I.G.R.

NON-RESPONSE INSTITUTE DATA : ADMINISTRATION QUESTION 1

ORIGINAL LIST						1	TERM ORDERED					
STNO	A	C	M	RESLT	TM		STNO	A	C	M	RESLT	TM
A 91	0	F	F	BLANK	7		A 15	9	N	S	BLANK	1
A 92	3	B	F	NORES	4		B 93	3	F	F	NORES	1
A 94	0	J	F	NORES	3		B 93	3	F	F	NORES	1
A 95	2	C	S	PORTD	5	♀	B 94	2	F	S	NORES	1
A 97	1	M	F	NORES	2		B 19	9	S	F	NORES	1
A 10	7	L	F	PORTD	5		B 26	0	R	S	NORES	1
A 11	1	L	F	NORES	4		B 35	2	T	F	NORES	1
A 12	0	R	F	PORTD	4		B 42	9	P	F	PORTD	1
A 15	9	N	S	BLANK	1		C 91	1	F	F	NORES	1
A 16	9	P	F	PORTD	3		C 97	7	J	S	NORES	1
A 17	9	E	F	NORES	3		C 25	0	T	F	PORTD	1
B 91	1	F	F	PORTD	4		C 30	9	N	F	BLANK	1
B 92	0	F	S	NORES	3		C 31	9	P	S	NORES	1
B 93	3	F	F	NORES	1		D 92	3	B	F	NORES	1
B 93	3	F	F	NORES	1		D 94	0	J	F	BLANK	1
B 94	2	F	S	NORES	1		D 95	3	C	F	NORES	1
B 95	0	F	F	NORES	6		D 10	1	M	F	NORES	1
B 97	2	B	F	PORTD	7	♀	D 11	2	M	S	NORES	1
B 98	0	B	S	NORES	2		D 13	2	R	F	NORES	1
B 10	7	J	F	PORTD	5	♂	E 91	2	C	S	NORES	1
B 11	1	J	F	PORTD	5	♂	E 96	3	H	F	NORES	1
B 13	3	C	F	NORES	3		F 91	1	F	S	NORES	1
B 15	0	M	F	NORES	2	♂	G 95	0	B	S	NORES	1
B 16	0	M	S	NORES	2		G 12	2	S	S	NORES	1
B 19	9	S	F	NORES	1		H 92	1	F	F	PORTD	1
B 20	2	L	S	NORES	2		H 94	0	F	F	NORES	1
B 22	1	H	F	NORES	2		H 95	0	B	F	PORTD	1
B 24	9	H	F	NORES	8		H 12	7	J	F	NORES	1
B 25	2	R	F	NORES	2		H 16	3	C	S	NORES	1
B 26	0	R	S	NORES	1		H 28	1	S	S	PORTD	1
B 28	7	K	F	BLANK	3	♂	H 42	9	P	S	NORES	1
B 29	1	K	S	NORES	8	♂	H 44	9	P	F	PORTD	1
B 30	3	T	F	PORTD	6		J 94	2	S	S	BLANK	1
B 31	1	T	F	NORES	6	♀	J 99	9	N	S	NORES	1
B 35	2	T	F	NORES	1		K 94	1	M	S	NORES	1
B 36	2	T	S	NORES	3		K 95	2	M	S	NORES	1
B 37	9	G	F	NORES	3		K 99	9	G	S	NORES	1
B 38	9	N	S	NORES	5	♀	M 12	2	M	F	NORES	1
B 39	9	N	F	NORES	2		M 16	2	R	F	NORES	1
B 41	9	H	S	NORES	2		N 91	2	L	F	PORTD	1
B 42	9	P	F	PORTD	1		N 93	0	H	S	NORES	1
B 43	9	E	F	NORES	5	♂	P 92	0	F	F	NORES	1
B 44	9	E	S	BLANK	5		P 11	1	M	S	PORTD	1
C 91	1	F	F	NORES	1		R 93	0	F	F	NORES	1
C 92	1	F	S	NORES	5		R 94	0	F	S	NORES	1
C 94	0	F	F	BLANK	3		R 20	9	P	F	NORES	1
C 95	2	F	F	NORES	6		S 94	0	J	F	BLANK	1
C 97	7	J	S	NORES	1	♂	S 98	0	C	F	NORES	1
C 98	3	C	F	PORTD	3	♂	S 26	9	N	S	NORES	1
C 11	1	C	F	BLANK	3		S 31	9	P	F	PORTD	1

ORIGINAL LIST

2

TERM ORDERED

STNO	A	C	M	RESLT	TM	Sex (09, male)
C 13	1	M	F	PORTD	4	
C 14	3	M	F	NORES	6	
C 15	0	M	S	PORTD	4	
C 17	2	M	F	NORES	3	
C 20	1	L	S	NORES	3	
C 21	1	R	F	NORES	5	
C 22	2	R	F	BLANK	6	
C 23	0	R	S	NORES	3	
C 25	0	T	F	PORTD	1	♂
C 26	2	T	F	NORES	5	♂
C 27	1	T	S	NORES	8	♂
C 29	9	G	F	NORES	6	♀
C 30	9	N	F	BLANK	1	
C 31	9	P	S	NORES	1	
C 33	9	P	F	NORES	3	
D 92	3	B	F	NORES	1	♂
D 93	7	I	S	PORTD	3	
D 94	0	J	F	BLANK	1	
D 95	3	C	F	NORES	1	♂
D 98	1	C	F	PORTD	2	
D 10	1	M	F	NORES	1	
D 11	2	M	S	NORES	1	
D 13	2	R	F	NORES	1	
D 15	2	T	S	NORES	3	♂
D 16	9	G	F	NORES	4	
D 18	9	E	F	NORES	4	
E 91	2	C	S	NORES	1	♂
E 92	1	C	F	NORES	6	♂
E 93	3	C	S	NORES	3	♂
E 96	3	H	F	NORES	1	♀
E 97	1	K	S	NORES	2	
E 98	9	G	F	NORES	6	♂
E 99	9	G	F	NORES	4	
F 91	1	F	S	NORES	1	
F 92	1	F	F	NORES	2	
F 93	1	F	S	NORES	7	
F 96	1	C	F	NORES	5	♂
F 97	3	C	S	NORES	3	
F 98	3	C	F	NORES	5	
F 11	1	R	S	NORES	7	
F 12	0	K	F	NORES	5	♂
F 13	7	K	S	NORES	8	
F 14	2	T	F	NORES	6	
F 15	1	T	F	NORES	6	
F 16	9	G	S	NORES	6	♂
F 17	9	N	F	NORES	3	♂
F 19	9	P	F	NORES	6	
F 20	9	P	S	NORES	3	
F 21	9	P	F	NORES	7	
G 92	1	F	S	NORES	3	

STNO	A	C	M	RESLT	TM
T 91	3	F	S	NORES	1
T 12	2	R	S	NORES	1
T 17	9	N	F	NORES	1
T 19	9	E	F	PORTD	1
W 92	0	F	S	BLANK	1
W 94	3	B	S	PORTD	1
W 15	0	M	F	NORES	1
W 17	1	M	F	NORES	1
W 24	4	K	F	PORTD	1
W 26	0	T	F	NORES	1
W 30	9	P	S	NORES	1
Y 91	0	D	F	NORES	1
Y 92	0	D	S	NORES	1
Y 93	1	D	F	NORES	1
A 97	1	M	F	NORES	2
B 98	0	B	S	NORES	2
B 15	0	M	F	NORES	2
B 16	0	M	S	NORES	2
B 20	2	L	S	NORES	2
B 22	1	H	F	NORES	2
B 25	2	R	F	NORES	2
B 39	9	N	F	NORES	2
B 41	9	H	S	NORES	2
D 98	1	C	F	PORTD	2
E 97	1	K	S	NORES	2
F 92	1	F	F	NORES	2
G 99	0	M	F	NORES	2
G 11	0	M	F	PORTD	2
G 20	9	P	S	NORES	2
H 93	1	F	S	NORES	2
H 97	0	B	F	NORES	2
H 11	7	J	F	PORTD	2
H 13	0	C	S	NORES	2
H 14	2	C	F	NORES	2
H 19	4	C	F	NORES	2
H 26	1	M	F	NORES	2
H 29	0	H	F	NORES	2
H 30	3	H	F	NORES	2
H 31	2	R	S	NORES	2
H 47	9	E	F	PORTD	2
K 91	0	I	F	PORTD	2
K 11	9	N	F	NORES	2
L 91	0	F	F	BLANK	2
L 92	2	F	F	NORES	2
L 97	9	M	F	NORES	2
L 99	2	H	S	NORES	2
L 10	0	H	F	NORES	2
M 96	0	J	F	PORTD	2
M 98	2	C	F	NORES	2
M 17	2	R	F	PORTD	2

ORIGINAL LIST

3

TERM ORDERED

STNO	A	C	M	RESLT	TM	<i>Sex</i> <i>(09M4)</i>
G 94	3	B	F	NORES	5	
G 95	0	B	S	NORES	1	
G 96	3	C	F	NORES	3	→
G 98	2	C	S	NORES	5	
G 99	0	M	F	NORES	2	→
G 10	2	M	F	PORTD	5	→
G 11	0	M	F	PORTD	2	
G 12	2	S	S	NORES	1	→
G 13	1	S	F	NORES	5	
G 17	1	R	F	NORES	5	
G 19	1	T	F	NORES	5	
G 20	9	P	S	NORES	2	
G 21	9	P	F	NORES	3	
H 91	3	F	F	PORTD	6	→
H 92	1	F	F	PORTD	1	
H 93	1	F	S	NORES	2	
H 94	0	F	F	NORES	1	
H 95	0	B	F	PORTD	1	
H 96	1	B	S	NORES	6	→
H 97	0	B	F	NORES	2	→
H 98	9	B	S	NORES	3	
H 99	1	J	F	PORTD	3	→
H 11	7	J	F	PORTD	2	
H 12	7	J	F	NORES	1	→
H 13	0	C	S	NORES	2	→
H 14	2	C	F	NORES	2	→
H 16	3	C	S	NORES	1	
H 19	4	C	F	NORES	2	
H 22	0	M	S	NORES	4	→
H 23	0	M	F	NORES	4	
H 24	1	M	F	PORTD	3	
H 25	0	M	S	NORES	3	
H 26	1	M	F	NORES	2	→
H 27	0	M	S	NORES	3	
H 28	1	S	S	PORTD	1	
H 29	0	H	F	NORES	2	→
H 30	3	H	F	NORES	2	→
H 31	2	R	S	NORES	2	→
H 34	4	T	F	NORES	7	→
H 37	9	G	F	NORES	7	→
H 38	9	G	F	NORES	3	
H 40	9	N	F	PORTD	8	→
H 42	9	P	S	NORES	1	
H 43	9	P	F	NORES	3	
H 44	9	P	F	PORTD	1	
H 47	9	E	F	PORTD	2	
H 48	9	E	S	NORES	7	
J 91	1	F	F	NORES	5	→
J 93	1	M	F	NORES	4	
J 94	2	S	S	BLANK	1	

STNO	A	C	M	RESLT	TM
M 22	7	T	F	NORES	2
M 28	9	N	S	NORES	2
N 95	9	N	F	BLANK	2
O 91	9	N	F	NORES	2
P 94	0	B	F	NORES	2
P 96	0	J	S	NORES	2
P 98	0	C	F	NORES	2
R 91	2	F	F	PORTD	2
R 92	1	F	F	BLANK	2
S 93	1	F	S	NORES	2
S 14	3	R	F	NORES	2
S 18	2	K	F	NORES	2
S 23	2	T	S	PORTD	2
S 29	9	N	F	PORTD	2
T 98	0	M	S	NORES	2
T 15	0	K	F	NORES	2
T 16	9	N	S	NORES	2
T 18	9	N	S	NORES	2
V 91	0	H	F	PORTD	2
W 99	0	J	S	NORES	2
W 14	1	M	S	NORES	2
W 19	0	H	F	PORTD	2
W 32	9	P	S	BLANK	2
Y 95	1	D	F	NORES	2
A 94	0	J	F	NORES	3
A 16	9	P	F	PORTD	3
A 17	9	E	F	NORES	3
B 92	0	F	S	NORES	3
B 13	3	C	F	NORES	3
B 28	7	K	F	BLANK	3
B 36	2	T	S	NORES	3
B 37	9	G	F	NORES	3
C 94	0	F	F	BLANK	3
C 98	3	C	F	PORTD	3
C 11	1	C	F	BLANK	3
C 17	2	M	F	NORES	3
C 20	1	L	S	NORES	3
C 23	0	R	S	NORES	3
C 33	9	P	F	NORES	3
D 93	7	I	S	PORTD	3
D 15	2	T	S	NORES	3
E 93	3	C	S	NORES	3
F 97	3	C	S	NORES	3
F 17	9	N	F	NORES	3
F 20	9	P	S	NORES	3
G 92	1	F	S	NORES	3
G 96	3	C	F	NORES	3
G 21	9	P	F	NORES	3
H 98	9	B	S	NORES	3
H 99	1	J	F	PORTD	3

ORIGINAL LIST

4

TERM ORDERED

STNO	A	C	M	RESLT	TM	Sex (M/F)	STNO	A	C	M	RESLT	TM
J 95	2	S	F	NORES	5		H 24	1	M	F	PORTD	3
J 99	9	N	S	NORES	1		H 25	0	M	S	NORES	3
J 10	9	N	F	PORTD	3		H 27	0	M	S	NORES	3
J 12	9	E	S	NORES	3		H 38	9	G	F	NORES	3
K 91	0	I	F	PORTD	2		H 43	9	P	F	NORES	3
K 92	4	J	F	NORES	3	♀	J 10	9	N	F	PORTD	3
K 93	1	C	S	NORES	5	♀	J 12	9	E	S	NORES	3
K 94	1	M	S	NORES	1		K 92	4	J	F	NORES	3
K 95	2	M	S	NORES	1		K 96	2	L	F	NORES	3
K 96	2	L	F	NORES	3		M 93	2	F	F	NORES	3
K 97	0	L	S	NORES	6		P 95	7	J	F	PORTD	3
K 98	0	H	F	NORES	4		P 19	9	G	F	NORES	3
K 99	9	G	S	NORES	1	♀	R 17	1	K	S	NORES	3
K 11	9	N	F	NORES	2		R 22	9	P	S	NORES	3
K 12	9	E	F	PORTD	6		S 91	2	F	S	NORES	3
L 91	0	F	F	BLANK	2		S 20	7	T	F	PORTD	3
L 92	2	F	F	NORES	2		S 24	0	T	F	NORES	3
L 95	1	C	F	NORES	4		S 27	9	N	F	NORES	3
L 97	9	M	F	NORES	2	♀	S 30	9	N	F	PORTD	3
L 98	0	M	F	NORES	4		T 96	3	M	F	PORTD	3
L 99	2	H	S	NORES	2	♀	T 10	3	R	F	NORES	3
L 10	0	H	F	NORES	2	♀	T 14	0	K	F	PORTD	3
L 11	0	R	S	NORES	4		W 91	2	F	F	PORTD	3
L 12	9	G	F	PORTD	8	♀	W 93	2	F	F	NORES	3
L 15	9	P	F	BLANK	5		W 16	2	M	S	NORES	3
L 16	9	P	S	NORES	5		W 31	9	P	F	NORES	3
M 91	0	F	F	PORTD	5	♀	W 33	9	P	F	NORES	3
M 92	0	F	S	PORTD	5		W 36	9	E	S	NORES	3
M 93	2	F	F	NORES	3		A 92	3	B	F	NORES	4
M 96	0	J	F	PORTD	2	♀	A 11	1	L	F	NORES	4
M 98	2	C	F	NORES	2	♀	A 12	0	R	F	PORTD	4
M 12	2	M	F	NORES	1		B 91	1	F	F	PORTD	4
M 13	0	M	S	NORES	5		C 13	1	M	F	PORTD	4
M 15	2	H	F	PORTD	5	♀	C 15	0	M	S	PORTD	4
M 16	2	R	F	NORES	1		D 16	9	G	F	NORES	4
M 17	2	R	F	PORTD	2		D 18	9	E	F	NORES	4
M 20	2	T	F	NORES	5	♀	E 99	9	G	F	NORES	4
M 21	7	T	S	PORTD	6	♀	H 22	0	M	S	NORES	4
M 22	7	T	F	NORES	2	♀	H 23	0	M	F	NORES	4
M 23	2	T	F	BLANK	6	♀	J 93	1	M	F	NORES	4
M 24	2	T	S	NORES	6		K 98	0	H	F	NORES	4
M 25	0	K	F	BLANK	4		L 95	1	C	F	NORES	4
M 26	9	G	F	NORES	8	♀	L 98	0	M	F	NORES	4
M 28	9	N	S	NORES	2		L 11	0	R	S	NORES	4
M 29	9	E	F	NORES	6	♀	M 25	0	K	F	BLANK	4
M 30	9	E	S	NORES	7		P 15	1	K	F	BLANK	4
M 31	9	E	F	NORES	5	♀	R 10	0	M	S	BLANK	4
N 91	2	L	F	PORTD	1		R 12	0	L	S	NORES	4
N 93	0	H	S	NORES	1		R 15	2	K	S	NORES	4
N 95	9	N	F	BLANK	2		S 22	1	T	F	NORES	4

ORIGINAL LIST

5

TERM ORDERED

STNO	A	C	M	RESLT	TM	Sex (or Male)
O 91	9	N	F	NORES	2	
P 91	0	F	S	NORES	6	
P 92	0	F	F	NORES	1	
P 93	2	B	S	NORES	8	
P 94	0	B	F	NORES	2	
P 95	7	J	F	PORTD	3	
P 96	0	J	S	NORES	2	
P 98	0	C	F	NORES	2	9
P 11	1	M	S	PORTD	1	
P 15	1	K	F	BLANK	4	9
P 16	1	T	S	PORTD	6	9
P 17	2	T	F	NORES	7	9
P 18	9	G	S	NORES	6	9
P 19	9	G	F	NORES	3	
R 91	2	F	F	PORTD	2	9
R 92	1	F	F	BLANK	2	
R 93	0	F	F	NORES	1	
R 94	0	F	S	NORES	1	
R 95	0	F	F	NORES	7	
R 10	0	M	S	BLANK	4	
R 11	1	M	F	NORES	5	
R 12	0	L	S	NORES	4	
R 14	1	R	F	NORES	6	9
R 15	2	K	S	NORES	4	9
R 16	2	K	F	NORES	6	
R 17	1	K	S	NORES	3	9
R 18	9	G	F	NORES	6	9
R 19	9	N	S	NORES	7	
R 20	9	P	F	NORES	1	
R 22	9	P	S	NORES	3	9
R 23	9	E	F	NORES	5	
S 91	2	F	S	NORES	3	
S 92	1	F	F	NORES	7	
S 93	1	F	S	NORES	2	
S 94	0	J	F	BLANK	1	
S 95	1	J	F	NORES	7	9
S 96	1	C	S	NORES	5	9
S 98	0	C	F	NORES	1	
S 11	0	S	S	PORTD	7	
S 12	3	L	F	NORES	6	
S 13	0	H	S	NORES	8	
S 14	3	R	F	NORES	2	
S 15	2	R	S	BLANK	5	
S 16	0	R	F	NORES	5	9
S 17	2	K	S	NORES	8	9
S 18	2	K	F	NORES	2	9
S 20	7	T	F	PORTD	3	9
S 21	2	T	S	PORTD	6	9
S 22	1	T	F	NORES	4	9
S 23	2	T	S	PORTD	2	

STNO	A	C	M	RESLT	TM
W 21	1	K	F	NORES	4
Y 98	2	D	F	NORES	4
A 95	2	C	S	PORTD	5
A 10	7	L	F	PORTD	5
B 10	7	J	F	PORTD	5
B 11	1	J	F	PORTD	5
B 38	9	N	S	NORES	5
B 43	9	E	F	NORES	5
B 44	9	E	S	BLANK	5
C 92	1	F	S	NORES	5
C 21	1	R	F	NORES	5
C 26	2	T	F	NORES	5
F 96	1	C	F	NORES	5
F 98	3	C	F	NORES	5
F 12	0	K	F	NORES	5
G 94	3	B	F	NORES	5
G 98	2	C	S	NORES	5
G 10	2	M	F	PORTD	5
G 13	1	S	F	NORES	5
G 17	1	R	F	NORES	5
G 19	1	T	F	NORES	5
J 91	1	F	F	NORES	5
J 95	2	S	F	NORES	5
K 93	1	C	S	NORES	5
L 15	9	P	F	BLANK	5
L 16	9	P	S	NORES	5
M 91	0	F	F	PORTD	5
M 92	0	F	S	PORTD	5
M 13	0	M	S	NORES	5
M 15	2	H	F	PORTD	5
M 20	2	T	F	NORES	5
M 31	9	E	F	NORES	5
R 11	1	M	F	NORES	5
R 23	9	E	F	NORES	5
S 96	1	C	S	NORES	5
S 15	2	R	S	BLANK	5
S 16	0	R	F	NORES	5
S 25	9	N	F	PORTD	5
T 94	2	C	F	PORTD	5
T 95	0	M	F	NORES	5
T 97	2	M	S	NORES	5
T 99	0	L	S	NORES	5
W 10	0	J	F	NORES	5
W 11	2	C	S	NORES	5
W 12	3	C	F	BLANK	5
W 20	3	R	S	NORES	5
W 25	2	K	S	NORES	5
W 34	9	E	S	NORES	5
W 35	9	E	F	NORES	5
Y 10	0	D	F	NORES	5

ORIGINAL LIST

6

TERM ORDERED

STNO	A	C	M	RESLT	TM	Sex (OS/Make)
S 24	0	T	F	NORES	3	
S 25	9	N	F	PORTD	5	
S 26	9	N	S	NORES	1	♂
S 27	9	N	F	NORES	3	♂
S 29	9	N	F	PORTD	2	
S 30	9	N	F	PORTD	3	♂
S 31	9	P	F	PORTD	1	
T 91	3	F	S	NORES	1	
T 93	1	J	F	PORTD	6	♂
T 94	2	C	F	PORTD	5	♂♂
T 95	0	M	F	NORES	5	♂♂
T 96	3	M	F	PORTD	3	
T 97	2	M	S	NORES	5	
T 98	0	M	S	NORES	2	♂
T 99	0	L	S	NORES	5	
T 10	3	R	F	NORES	3	
T 12	2	R	S	NORES	1	
T 14	0	K	F	PORTD	3	
T 15	0	K	F	NORES	2	♂
T 16	9	N	S	NORES	2	
T 17	9	N	F	NORES	1	
T 18	9	N	S	NORES	2	
T 19	9	E	F	PORTD	1	♂♂
T 20	9	E	F	NORES	8	♂♂
V 91	0	H	F	PORTD	2	
W 91	2	F	F	PORTD	3	
W 92	0	F	S	BLANK	1	
W 93	2	F	F	NORES	3	
W 94	3	B	S	PORTD	1	
W 95	2	B	F	NORES	7	
W 98	2	J	F	NORES	6	
W 99	0	J	S	NORES	2	
W 10	0	J	F	NORES	5	♂
W 11	2	C	S	NORES	5	♂♂
W 12	3	C	F	BLANK	5	♂♂
W 14	1	M	S	NORES	2	
W 15	0	M	F	NORES	1	♂♂
W 16	2	M	S	NORES	3	♂♂
W 17	1	M	F	NORES	1	♂♂
W 19	0	H	F	PORTD	2	
W 20	3	R	S	NORES	5	
W 21	1	K	F	NORES	4	♂♂
W 24	4	K	F	PORTD	1	♂♂♂
W 25	2	K	S	NORES	5	♂♂♂
W 26	0	T	F	NORES	1	♂
W 27	9	G	S	NORES	7	
W 30	9	P	S	NORES	1	
W 31	9	P	F	NORES	3	
W 32	9	P	S	BLANK	2	
W 33	9	P	F	NORES	3	

STNO	A	C	M	RESLT	TM
B 95	0	F	F	NORES	6
B 30	3	T	F	PORTD	6
B 31	1	T	F	NORES	6
C 95	2	F	F	NORES	6
C 14	3	M	F	NORES	6
C 22	2	R	F	BLANK	6
C 29	9	G	F	NORES	6
E 92	1	C	F	NORES	6
E 98	9	G	F	NORES	6
F 14	2	T	F	NORES	6
F 15	1	T	F	NORES	6
F 16	9	G	S	NORES	6
F 19	9	P	F	NORES	6
H 91	3	F	F	PORTD	6
H 96	1	B	S	NORES	6
K 97	0	L	S	NORES	6
K 12	9	E	F	PORTD	6
M 21	7	T	S	PORTD	6
M 23	2	T	F	BLANK	6
M 24	2	T	S	NORES	6
M 29	9	E	F	NORES	6
P 91	0	F	S	NORES	6
P 16	1	T	S	PORTD	6
P 18	9	G	S	NORES	6
R 14	1	R	F	NORES	6
R 16	2	K	F	NORES	6
R 18	9	G	F	NORES	6
S 12	3	L	F	NORES	6
S 21	2	T	S	PORTD	6
T 93	1	J	F	PORTD	6
W 98	2	J	F	NORES	6
Y 11	0	D	F	PORTD	6
A 91	0	F	F	BLANK	7
B 97	2	B	F	PORTD	7
F 93	1	F	S	NORES	7
F 11	1	R	S	NORES	7
F 21	9	P	F	NORES	7
H 34	4	T	F	NORES	7
H 37	9	G	F	NORES	7
H 48	9	E	S	NORES	7
M 30	9	E	S	NORES	7
P 17	2	T	F	NORES	7
R 95	0	F	F	NORES	7
R 19	9	N	S	NORES	7
S 92	1	F	F	NORES	7
S 95	1	J	F	NORES	7
S 11	0	S	S	PORTD	7
W 95	2	B	F	NORES	7
W 27	9	G	S	NORES	7
Y 12	0	D	S	NORES	7

ORIGINAL LIST

7

TERM ORDERED

STNO	A	C	M	RESLT	TM	sex (♂ Male)
W 34	9	E	S	NORES	5	♂
W 35	9	E	F	NORES	5	♂
W 36	9	E	S	NORES	3	
Y 91	0	D	F	NORES	1	
Y 92	0	D	S	NORES	1	
Y 93	1	D	F	NORES	1	
Y 95	1	D	F	NORES	2	
Y 98	2	D	F	NORES	4	♂
Y 10	0	D	F	NORES	5	
Y 11	0	D	F	PORTD	6	
Y 12	0	D	S	NORES	7	
Y 13	0	D	F	PORTD	7	

STNO	A	C	M	RESLT	TM
Y 13	0	D	F	PORTD	7
B 24	9	H	F	NORES	8
B 29	1	K	S	NORES	8
C 27	1	T	S	NORES	8
F 13	7	K	S	NORES	8
H 40	9	N	F	PORTD	8
L 12	9	G	F	PORTD	8
M 26	9	G	F	NORES	8
P 93	2	B	S	NORES	8
S 13	0	H	S	NORES	8
S 17	2	K	S	NORES	8
T 20	9	E	F	NORES	8

ANALYSIS OF THOSE QUESTIONNAIRES NOT COMPLETED

NO RESPONSE AT ALL 226 RETURNED BY P.C. etc. 63 SENT BACK BLANK 23

NO. OF RESPONSES : FIRST MAILING 199 SECOND MAILING 113

NO. OF A LEVELS	NO. OF WITHDRAWAL STUDENTS	COLLEGES	NO. OF WITHDRAWAL STUDENTS	TERMS COMPLETED to nearest term	NO. OF WITHDRAWAL STUDENTS
0	74	B	14	1	64
1	58	C	27	2	60
2	59	D	9	3	54
3	26	E	17	4	24
4	4	F	39	5	48
		G	15	6	32
Alternative Qualifications	12	H	14	7	19
		I	2	8	11
Not known	79	J	18	9	0
		K	17		
		L	10		
		M	36		
		N	21		
		P	21		
		R	20		
		S	7		
		T	25		

ORIGINAL LISTING OF INSTITUTE DATA

Handwritten numbers 1 through 36 on the left margin.

Table with columns: ADMINISTRATION, Q1 QUESTION NUMBER, 2a, QUEST 2b, QUESTN 3a, QUESTN 3b, 3c, 3d, Q4 QUESTION, 5a, QUE 5b, Q6, Q7, QUEST 8a, QUEST 8b. Rows include student IDs (A 93, A 98, A 13, etc.) and their corresponding data points.

Sex
(9
nd)

5
5
5
5
5

ADMINISTRATION				Q1	QUESTION NUMBER				2a	QUEST 2b			QUESTN	3a	QUESTN			3b	3c	3d	Q4	QUESTION		5a	QUE	5b	Q6	Q7	QUEST	9a	QUEST	9b						
STNG	A	C	M	RESLT	TM	SCH	PR	WKS	AND	AGUS	WKS OUT			M	HRS	P	WK	S	HRS	P	WK	DP	FCSRMM	RESID	TYPES	NOM	FY	FE	DC	SC	CO	EM	FUR	MATH				
						YR 1		YR 2		YR 3	Y1	Y2	Y3	Y1	Y2	Y3		Y1	Y2	Y3																		
W 13	1	C	S	COMPL	1	9	99	9	99	9	99	9	9	9	1	9	9	9	1	9	9	9	ZZ	97	ZZZ	9	ZZZ	9	HOS	YS					EV	ZZ	ZZ	NMORE
W 18	0	S	F	COMPL	1	5	95	9	99	9	99	0	9	9	2	1	9	9	9	9	9	9	ZZ	57	REL	1	ZZZ	9	HOD	YS					EU	BN	EU	NMORE
W 22	2	K	F	COMPL	3	2	95	9	99	9	99	9	9	9	1	8	9	9	1	9	9	9	NO	10	CHS	3	ZZZ	9	HOT	YS					HU	AN	AN	NMORE
W 23	1	K	F	COMPL	2	2	10	9	99	9	99	2	9	9	1	5	9	9	1	9	9	9	YS	11	CHS	2	ZZZ	9	HOS	YS					AU	AU	AV	OBESY
W 29	9	N	F	COMPL	1	7	99	9	99	9	99	0	9	9	2	9	9	9	9	9	9	9	ZZ	99	ZZZ	9	ZZZ	9	ZZZ	ZZ					ZZ	ZZ	ZZ	ZZZZZ
Y 94	9	D	S	COMPL	2	0	99	9	99	9	99	0	9	9	1	9	9	9	2	4	9	9	NO	11	REL	2	ZZZ	9	HOS	YS					BU	BN	ZZ	OBESY
Y 96	9	D	S	COMPL	2	7	99	9	99	9	99	0	9	9	1	5	9	9	1	9	9	9	ZZ	97	CLF	2	ZZZ	9	FLT	NO					EU	EN	ZZ	NMORE
Y 97	9	B	F	COMPL	4	2	97	9	99	9	99	0	0	9	1	9	9	9	6	3	9	9	ZZ	97	PLF	4	ZZZ	9	HOS	YS					EU	BN	ZZ	NOTOB
Y 99	9	D	S	COMPL	4	5	98	9	99	9	99	9	9	9	1	9	9	9	4	4	9	9	ZZ	97	PLF	4	ZZZ	9	HOS	YS					EU	EN	EU	NMORE
Y 14	9	D	F	COMPL	8	2	95	2	98	5	95	0	0	0	1	9	9	9	9	9	9	9	ZZ	95	CHS	5	CLF	3	HOS	YS					EU	EN	EU	ZZZZZ

ADMINISTRATION

NO. OF RESPONSES : FIRST MAILING 79 SECOND MAILING 31

NO. OF A LEVELS	NO. OF WITHDRAWAL STUDENTS	COLLEGES	NO. OF WITHDRAWAL STUDENTS	TERMS COMPLETED to nearest term	NO. OF WITHDRAWAL STUDENTS
0	20	B	8	1	16
1	28	C	19	2	16
2	23	D	5	3	26
3	5	E	2	4	13
4	1	F	1	5	11
		G	1	6	16
Alternative Qualifications	6	H	6	7	6
		I	1	8	6
		J	6	9	0
Not known	27	K	10		
		L	3		
		M	10		
		N	10		
		P	7		
		R	7		
		S	6		
		T	8		

MATHEMATICS

LEARNT IN	NO ENTRY	IN THE CONTEXT OF	FOUND USEFUL	FOUND VERY USEFUL	FOUND OF NO USE
School	6	Employment, Teaching, Home and Leisure	6	2	4
		Employment, Teaching	1	0	0
		Employment, Home and Leisure	18	23	3
		Employment	17	12	1
		Teaching, Home and Leisure	2	0	0
		Teaching	4	2	1
		Home and Leisure	7	1	0
Collese	21	Employment, Teaching, Home and Leisure	2	0	18
		Employment, Teaching	0	0	0
		Employment, Home and Leisure	3	2	23
		Employment	6	1	13
		Teaching, Home and Leisure	1	0	1
		Teaching	2	0	4
Employment or Post Collese Classes etc.	70	Home and Leisure	11	0	2
		Employment, Teaching, Home and Leisure	1	1	2
		Employment, Teaching	0	0	0
		Employment, Home and Leisure	6	5	2
		Employment	11	5	1
		Teaching, Home and Leisure	1	0	0
		Teaching	1	2	0
Home and Leisure	1	1	0		

FURTHER MATHEMATICAL KNOWLEDGE

OBTAINED EASILY OBTAINED WITH DIFFICULTY NOT OBTAINED NO MORE NEEDED NO ENTRY

LISTING OF INSTITUTE DATA RE-ORDERED ACCORDING TO TERMS IN COLLEGE

Table with columns: ADMINISTRATION, Q1, QUESTION NUMBER, 2a, QUEST 2b, QUESTN, 3a, QUESTN, 3b, 3c, 3d, Q4, QUESTION, 5a, QUE, 5b, Q6, Q7, QUEST, 8a, QUEST, 8b. Rows include student IDs (e.g., B 99, C 10) and various data points for each term.

ADMINISTRATION				Q1	QUESTION NUMBER			2a	QUEST 2b			QUESTN 3a			QUESTN 3b			3c	3d	Q4	QUESTION 5a			QUE	5b	Q6	Q7	QUEST 8a		QUEST 8b						
2	STNO	A	C	M	RESLT	TM	SCH	PR	WKS	AND	AGUS	WKS OUT			M	HRS	P	WK	S	HRS	P	WK	DP	FCSRMM	RESID	TYPES	HOM	FY	FE	OC	SC	CO	EM	FUR	MATH	
							YR 1	YR 2	YR 3			Y1	Y2	Y3		Y1	Y2	Y3		Y1	Y2	Y3														
P 14	0	R	F	COMPL	3	2	98	9	99	9	99	1	9	9	1	5	9	9	0	9	9	9	YS	57	CHS	3	ZZZ	9	FLT	NO			BU	BN	EV	OBESY
S 19	1	K	F	COMPL	3	2	95	9	99	9	99	0	9	9	1	9	9	9	5	4	9	9	NO	95	CHS	3	ZZZ	9	HOT	YS			BU	AN	ZZ	NMORE
S 32	9	F	F	COMPL	3	2	94	9	99	9	99	5	9	9	1	9	9	9	9	9	9	9	ZZ	11	CLF	3	ZZZ	9	HOD	NO			HU	HU	ZZ	NMORE
T 92	2	J	F	COMPL	3	7	97	9	99	9	99	0	9	9	1	9	9	9	1	9	9	9	ZZ	97	REL	3	ZZZ	9	HOT	YS			BU	BN	BN	OBESY
T 13	2	K	F	COMPL	3	0	99	9	99	9	99	0	9	9	2	9	9	9	2	3	9	9	ZZ	11	CHS	3	ZZZ	9	HOT	YS			BU	ZZ	ZZ	NMORE
T 14	0	K	F	COMPL	3	2	99	9	99	9	99	0	9	9	1	4	9	9	1	9	9	9	YS	12	CHS	3	ZZZ	9	HOS	NO			BV	AN	ZZ	NMORE
W 96	3	B	F	COMPL	3	3	97	9	99	9	99	9	9	9	1	9	9	9	1	9	9	9	ZZ	97	CHS	2	CLF	1	HOD	NO			AV	AN	TV	OBESY
W 22	2	K	F	COMPL	3	2	95	9	99	9	99	9	9	9	1	8	9	9	1	9	9	9	NO	10	CHS	3	ZZZ	9	HOT	YS			HU	AN	AN	NMORE
A 13	1	R	F	COMPL	4	0	99	2	96	0	99	0	0	0	1	9	9	9	1	3	3	9	NO	57	CHS	3	PLF	2	HOT	YS			AU	AN	TV	OBESY
A 14	9	N	S	COMPL	4	2	98	2	97	0	99	9	9	9	1	5	5	0	1	9	9	9	NO	10	CLF	4	ZZZ	9	HOS	YS			EU	BN	ZZ	OBESY
B 17	1	M	S	COMPL	4	2	94	5	10	0	99	0	0	9	1	9	9	9	0	9	9	9	ZZ	57	CHS	2	PLF	2	HOT	YS			EU	EN	ZZ	ZZZZZ
D 99	0	M	S	COMPL	4	2	99	2	99	9	99	0	0	9	1	9	9	9	1	9	9	9	NO	25	CHS	5	ZZZ	9	HOS	YS			BV	BN	BN	NOTOB
E 94	0	C	F	COMPL	4	5	97	9	99	9	99	2	9	9	1	9	9	9	2	3	9	9	NO	97	CHS	4	ZZZ	9	HOS	YS			BV	ZZ	BV	WIDIF
H 36	2	T	S	COMPL	4	5	79	0	99	9	99	0	9	9	1	9	9	9	0	0	0	9	NO	95	CHS	3	PLF	1	FLT	NO			BV	BN	ZZ	NMORE
J 92	4	C	F	COMPL	4	5	98	9	99	9	99	0	9	9	1	9	9	9	1	9	9	9	NO	99	CHS	4	ZZZ	9	HOT	NO			EU	AN	ZZ	NMORE
J 96	2	H	F	COMPL	4	7	11	9	99	9	99	0	9	9	2	7	7	9	1	9	9	9	YS	11	PLF	1	REL	3	HOT	YS			ZU	ZN	EV	OBESY
M 14	0	S	F	COMPL	4	2	96	9	99	9	99	0	0	9	1	9	9	9	1	9	9	9	NO	95	CHS	3	CLF	1	HOT	YS			HU	HN	ZZ	NMORE
T 11	1	R	F	COMPL	4	2	95	2	95	9	99	9	9	9	1	9	9	9	9	3	4	9	YS	97	CHS	3	CLF	1	HOS	YS			EU	EN	EU	WIDIF
V 91	7	J	F	COMPL	4	2	95	9	99	9	99	0	2	9	1	9	9	9	2	9	9	9	ZZ	57	REL	4	ZZZ	9	FLT	NO			BV	BU	ZZ	OBESY
Y 97	9	D	F	COMPL	4	2	97	9	99	9	99	0	0	9	1	9	9	9	6	3	9	9	ZZ	97	PLF	4	ZZZ	9	HOS	YS			EU	BN	ZZ	NOTOB
Y 99	9	D	S	COMPL	4	5	98	9	99	9	99	9	9	9	1	9	9	9	4	4	9	9	ZZ	97	PLF	4	ZZZ	9	HOS	YS			EU	EN	EU	NMORE
B 18	0	S	F	COMPL	5	2	95	5	94	0	99	9	9	9	1	9	9	9	1	9	9	9	ZZ	25	CHS	3	CLF	2	HOD	YS			EV	HU	EU	OBESY
B 34	1	T	F	COMPL	5	5	14	5	97	9	99	9	9	9	1	9	9	9	2	1	1	9	NO	99	CHS	3	PLF	2	FLT	NO			HU	HU	ZZ	NMORE
C 18	0	S	S	COMPL	5	2	95	5	13	9	99	2	2	9	1	3	5	9	2	9	9	9	NO	57	CHS	3	PLF	2	HOS	YS			EU	EN	ZZ	NOTOB
D 17	9	N	S	COMPL	5	2	97	2	98	0	99	2	0	9	1	9	9	9	0	9	9	9	NO	97	CHS	2	CLF	3	HOT	YS			BV	BV	BV	NMORE
H 35	1	T	F	COMPL	5	9	99	9	99	9	99	0	0	9	1	9	9	9	2	2	3	9	YS	57	NOT	1	REL	3	FLT	NO			AN	AN	ZZ	OBESY
L 14	9	P	F	COMPL	5	2	94	5	97	9	99	0	0	9	1	9	9	9	8	1	2	9	ZZ	25	CHS	5	ZZZ	9	HOT	NO			EU	EU	EU	OBESY
M 97	0	C	F	COMPL	5	5	97	9	99	9	99	0	0	9	1	9	9	9	1	9	9	9	ZZ	10	CHS	3	CLF	2	HOS	YS			ZZ	ZZ	ZZ	ZZZZZ
M 11	2	C	S	COMPL	5	5	11	9	99	9	99	9	9	9	2	9	9	9	2	5	5	9	ZZ	11	CHS	3	PLF	2	HOT	NO			BV	ZZ	ZZ	OBESY
M 18	3	K	S	COMPL	5	2	99	5	99	9	99	0	0	9	1	9	9	9	2	9	9	9	NO	11	CHS	3	CLF	2	FLT	NO			EU	EU	ZZ	NMORE
M 19	2	K	F	COMPL	5	2	97	5	10	9	99	2	0	9	1	9	9	9	9	1	2	9	ZZ	11	CHS	5	ZZZ	9	HOS	NO			BU	AN	ZZ	NMORE
N 92	2	H	F	COMPL	5	5	11	0	99	9	99	9	9	9	1	7	7	9	1	9	9	9	ZZ	11	PLF	4	ZZZ	9	FLT	NO			AN	ZZ	ZZ	WIDIF
B 21	1	L	F	COMPL	6	5	97	7	11	9	99	9	9	9	3	9	9	9	9	1	1	9	NO	11	CHS	3	CLF	3	HOS	YS			EV	ZZ	EU	NOTOB
B 33	7	T	F	COMPL	6	2	96	5	10	9	99	0	7	0	1	9	9	9	3	4	4	9	YS	97	REL	6	ZZZ	9	HOT	NO			HV	HU	ZZ	NOTOB
C 99	1	C	F	COMPL	6	5	99	5	99	9	99	0	0	9	1	9	9	9	1	9	9	9	NO	97	CHS	6	ZZZ	9	HOS	NO			BU	HU	ZZ	NMORE
C 32	9	P	F	COMPL	6	2	11	2	95	9	99	0	0	9	1	9	9	9	3	2	2	9	ZZ	11	CLF	5	ZZZ	9	HOD	YS			BV	BN	ZZ	NMORE
D 14	2	T	F	COMPL	6	5	11	5	97	9	99	9	9	9	2	9	9	9	9	9	9	9	NO	12	CHS	3	REL	3	HOS	YS			ZZ	ZZ	ZZ	ZZZZZ
F 10	1	H	F	COMPL	6	7	11	7	11	9	99	5	9	9	1	5	5	9	2	9	9	9	YS	11	CHS	2	PLF	4	FLT	NO			EU	BN	EU	NMORE
F 18	9	N	S	COMPL	6	2	97	5	10	9	99	9	5	9	1	9	9	9	9	1	2	9	NO	97	CHS	3	PLF	3	HOT	YS			BV	BN	ZZ	NMORE
G 15	1	R	F	COMPL	6	9	99	5	95	9	95	0	0	0	1	9	9	9	9	9	9	9	NO	95	CHS	3	CLF	3	HOS	YS			EV	EV	ZZ	NMORE
G 16	9	R	S	COMPL	6	0	99	7	10	9	99	0	2	9	1	9	9	9	5	2	1	9	NO	97	CHS	3	CLF	4	HOS	YS			BU	ZZ	ZZ	NMORE
J 97	1	R	F	COMPL	6	0	99	5	98	9	99	2	2	9	1	9	9	9	2	9	9	9	NO	57	CHS	3	CLF	3	HOS	YS			BV	BN	ZZ	NMORE
L 94	2	C	S	COMPL	6	2	97	5	10	9	99	9	9	9	1	9	9	9	1	9	9	9	NO	10	CHS	3	PLF	3	HOT	YS			AU	AN	ZZ	OBESY
L 13	9	N	F	COMPL	6	5	11	5	97	9	99	9	9	9	3	9	9	9	9	3	4	9	YS	10	CHS	3	CLF	3	HOS	YS			EV	EN	ZZ	NMORE
P 97	0	C	F	COMPL	6	5	10	5	11	9	99	0	0	9	1	9	9	9	2	3	3	9	ZZ	12	CHS	3	CLF	3	HOT	YS			EU	ZZ	ZZ	TKGAL
P 12	1	M	S	COMPL	6	2	10	2	12	9	99	0	0	9	1	9	9	9	1	9	9	9	NO	97	CHS	3	PLF	3	HOT	NO			AN	AN	HV	WIDIF
R 96	7	I	S	COMPL	6	5	58	2	11	9	99	2	0	9	1	3	5	9	6	3	5	9	YS	10	REL	6	ZZZ	9	HOT	NO			HU	TN	ZZ	NMORE
R 13	1	H	F	COMPL	6	5	95	7	95	9	99	0	0	9	1	9	9	9	6	4	3	9	YS	95	FLT	6	ZZZ	9	HOS	NO			BV	HU	BV	OBESY
B 14	0	C	S	COMPL	7	5	95	5	96	0	99	0	0	0	1	9	9	9	0	9	9	9	ZZ	95	PLF	4	REL	3	HOS	YS			BV	BN	ZZ	NMORE
S 32	1	T	S	COMPL	7	5	97	5	10	7	10	9	9	9	1	5	5	5	9	9	9	9	NO	10	CHS	3	PLF	4	HOT	NO			TU	ZZ	HU	WIDIF

ADMINISTRATION				Q1	QUESTION NUMBER				2a	QUEST 2b			QUESTN	3a	QUESTN			Zb	3c	3d	Q4	QUESTION 5a			QUE	5b	Q6	Q7	QUEST	8a	QUEST	8b			
STNO	A	C	M	RESLT	TM	SCH	PR	WKS	AND	AGUS	WKS OUT			M	HRS	P	WK	S	HRS	P	WK	DP	FCSRMM	RESID	TYPES	HOM	FY	FE	OC	SC	CJ	EM	FUR	MATH	
						YR	1	YR	2	YR	3	Y1	Y2	Y3	Y1	Y2	Y3	Y1	Y2	Y3															
H 45	9	P	F	COMPL	7	5	94	5	97	5	97	9	9	9	1	9	9	9	6	5	6	3	ZZ	10	CHS	1	CLF	6	FLT	YS		TU	TU	ZZ	NMORE
J 98	1	T	F	COMPL	7	5	97	2	79	0	99	9	9	9	9	1	9	9	9	4	2	1	ZZ	10	CHS	3	PLF	4	HOB	ZZ		BN	BN	BU	WIDIF
J 11	9	E	F	COMPL	7	2	94	5	94	7	95	9	2	9	1	9	9	9	6	3	2	0	NO	95	REL	7	ZZZ	9	HOT	YS		BV	AU	ZZ	NMORE
R 21	9	P	F	COMPL	7	2	95	5	97	5	97	0	0	0	1	9	9	9	0	0	0	0	NO	97	CHS	4	CLF	3	HOS	YS		BV	EU	ZZ	ZZZZZ
S 27	3	K	F	COMPL	8	2	98	5	11	0	99	0	2	9	2	9	9	9	1	3	3	0	YS	11	CHS	6	PLF	2	HOB	YS		BV	ZZ	ZZ	NOTOB
D 96	2	C	F	COMPL	8	7	98	2	97	5	10	9	9	9	1	9	9	9	5	7	5	0	NO	10	REL	8	ZZZ	9	HOS	YS		TV	TN	ZZ	NOTOB
H 33	3	K	F	COMPL	8	2	95	5	97	7	10	0	0	0	1	9	9	9	1	0	5	5	NO	97	CHS	3	REL	6	HOS	YS		YU	YN	ZZ	WIDIF
F 13	0	H	F	COMPL	8	7	95	7	95	7	98	0	7	5	1	9	9	9	2	2	4	9	YS	57	REL	8	ZZZ	9	HOS	YS		TN	EN	ZZ	ZZZZZ
S 99	2	C	F	COMPL	8	5	97	5	11	5	10	0	0	0	1	9	9	9	1	9	9	9	YS	10	CHS	6	CLF	2	HOS	YS		AV	AN	AU	NMORE
Y 14	9	D	F	COMPL	8	2	95	2	98	5	95	0	0	0	1	9	9	9	9	9	9	9	ZZ	95	CHS	5	CLF	3	HOS	YS		EU	EN	EU	ZZZZZ

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