S T U D E N T A N X I E T Y

A study of the relationship
between "situational anxiety"
and specific periods of stress
during a one-year certificate course
in a college of education (technical)

A thesis submitted for the degree of
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by

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A B S T R A C T

This study is concerned with mature students on a one-year teacher-training course for those who intend to teach in Further or Higher Education, and who, during their course, experience levels of anxiety which militate against successful course completion. The three aspects of the study are:

a the identification of students who will be "at risk";
b the identification of particular times of stress during the course;
c an exploration of means of alleviating debilitating anxieties.

The IPAT Anxiety Scale Questionnaire was selected as an appropriate instrument for identifying students who might experience academic difficulties due to unusually high anxiety levels. Norms were established for a sample of 1850 students, and the cut-off points suggested by the test constructor were verified as identifying "at risk" students.

To identify the times when anxiety peaks occurred, a questionnaire was developed, based upon the work of Cleugh. For the sample studied (n = 175) the stressful periods during this particular course were identified.

A selective review of the counselling literature led to the adoption of a number of counselling strategies for those students who sought help during their time at college.

An "action research" strategy was adopted for the study in order to initiate immediate changes in college procedures and to benefit those students who took part in the study. As is usual with action research, the gains accruing to this approach are offset by the accompanying lack of rigorous experimental control and consequent difficulty in generalising findings to a broader population. However, the results of this study do indicate that for this type of course:

i The IPATASQ can be effectively used to identify some of the students who may experience difficulties during the course.

ii There are specific critical times during the course when some students need personal support.

iii Planned interaction in the form of personal counselling is beneficial to some students.

KEY WORDS

Technical teacher training
Mature students
IPATASQ
Times of stress in teacher-training
Counselling
Anxiety

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GENERAL AIMS AND OBJECTIVES

GENERAL AIM

To study the feasibility of predicting:

a "situational" anxiety and the specific periods of anxiety or stress related to it;

b the type of counselling strategy which will assist in reducing the anxiety.

OBJECTIVES

1.1 To establish a table of "norms" for the Institute of Personality and Ability Testing Anxiety Scale Questionnaire (IPATASQ).

1.2 To provide evidence of test/re-test reliability.

2 To identify:

a critical times of stress during the course;

b those students most likely to be at risk during these times.

3.1 To recommend counselling strategies which are most likely to be effective, and through the use of case studies to attempt to identify the type of counselling which may assist in lowering the level of "situational" anxiety for the type of student previously identified.

3.2 To suggest times during the course when counselling should be available.

CHAPTER 1

1 INTRODUCTION

1.1 A statement of the problem as perceived by the researcher.

1.2 Location of the problem within the general area of student stress/performance.

1.3 Objectives of the study.

1.4 The population studied

1 INTRODUCTION

> We are not aware of any systematic conception of personality, particularly with regard to its development, which does not give the concept of anxiety a role of great, if not central, significance.
>
> (Sarason et al, 1960)(1)

> If anxiety could be controlled by biological or social means, fundamental alterations in the organisation of our civilization would ensue, and the probability of individual happiness would be greatly enhanced ... Anxiety is the most pervasive psychological phenomenon of our time.
>
> (Levitt)(2)

1.1 The area of the study

The investigator has been aware for some time that a short intensive course of study, such as the course being used as the basis for this research, does produce in certain individuals increasing levels of anxiety. This anxiety would also appear to reach peaks at certain times during the course. The type of anxiety which appears to be connected with situations is perhaps best described as "situational" or "free floating" anxiety (Cattell & Scheier),(3) although other researchers have referred to it as anxiety proneness and general level of emotionality: for example, Burt.(4)

Cattell,(5) however, says that

> ... anxiety is a function of the magnitude of all unfulfilled needs (ergs) and the degree of uncertainty that they will be fulfilled. That is, anxiety corresponds to uncertainty of reward or of total need of fulfilment. It is fostered by lack of integration, by an inability to focus upon external fears and by the existence of incompatible needs.

Over a number of years the investigator has observed symptoms in certain students which appeared to be related to anxiety. Students would

suddenly become withdrawn; they would seek advice on matters which they might have considered trivial at other times. Concentration in seminar discussion groups was lost, there was a general falling-off in attendance, and tension between individuals increased. It could be argued that these observations in themselves do not necessarily support the general aims of the study: nevertheless it did seem that there must be reason for these apparent changes in behaviour, and that these may be found to be related to increases in anxiety levels which could be associated with changes in situations within the course or periods of stress.

1.2 Location of the problem

Since the average age of students on the course being studied is 32 years, the course can be described as one designed for mature students. Cleugh,[6] referring to one of his own courses, says

> ... the worries and anxieties of reaching an acceptable standard will be similar to those of young students, and so many of the student stresses will apply with additional anxieties since they have more at stake and are more likely to feel more responsible for their choice than young students sometimes do.

Some of the remarks made by students during the present study would seem to confirm Cleugh's view. Many of the students had left a secure job in industry to undertake the course, and some of the comments were related to this:

> I often wonder whether the decision to train for teaching was a good idea: why did I want to leave my previous job?
>
> (This student is now successfully teaching.)
>
> Who will employ me? Has it all been a waste of time?

In a related but different area, Seth[7] found from the answers to his student questionnaire that there was often a problem of communication associated with anxiety. Typical of his students' comments were:

> I found the first week of the course overwhelming in terms of the vast quantity of differing instructions.

> I didn't know what was expected of me.

These comments were also made by students in the present research, who also expressed concern in two other areas.

> I wondered how I could contribute to group discussion without other students feeling that I was trying to control the group.
>
> The work during the period leading up to the first teaching practice was stressful in terms of the new work in Education (subject I had not studied before), and this was coupled with the fact that I had to visit my teaching practice college as a member of staff, an environment that I had only experienced from the other side (as a student). The thought that I had to change my role so completely made me feel extremely anxious.

These comments from students seemed to confirm earlier impressions that these mature students were perhaps not as able to cope with as many new situations as had seemed to be taken for granted. There was a real sense of insecurity, which did not manifest itself overtly, and indeed was not confined to one particular period of time during the course. Many studies (Rushton 1966, 1969; Entwhistle 1968, 1972; and others[8]) have compared personality factors and academic achievement. Fewer studies have considered the importance of other factors which may influence the level of anxiety of the individual. Malleson[9] investigated the influence of emotional factors on academic achievement. In his study he reminds us that

> ... when sociologists and psychologists present educational statistics they very often forget that they are talking about people. The research becomes more important than the individuals it was designed to help.

Gough[10] investigated the non-intellectual factors which affected selection and evaluation of medical students. His main comment was that personality problems were at least partially responsible for poor academic performance. This conclusion is also reiterated by Barratt[11] in his research with medical students. This study attempts to take into account the relevance of the many approaches to the problem. There would seem to be a need to "predict" or attempt to "predict" the outcome of

various interactions between the individual and the environment in which he finds himself.

1.3 Objectives of the study

The objectives, then, which are formulated on page 1 were derived from the fact that the students with whom this research is concerned appeared to have problems which were associated with two distinct but related areas. Each of the areas seemed to be contributing to the increases in levels of anxiety being experienced. The two areas were identified as being:

a the specific times during the course when students seemed to be more anxious than at other times;

b the individual factors which appeared to be more prominent during the periods of time suggested in (a), and the fact that all students did not experience the same intensity of anxiety.

However, most students do seem to experience some increase in anxiety level during certain times of the course. These factors are more difficult to identify, since they would appear to be the product of the interaction of the hereditary and environmental factors which make each individual unique. Nevertheless there is a need to try to identify areas of commonality between individuals so that suggested solutions to problems can be presented for consideration, and can perhaps be seen to have some relevance and applicability in a wider context.

The study, then, is concerned with (a) attempting to predict, and (b) assessing the validity of the predictions, with reference to those individuals most likely to be at risk. This, it was hoped, would be achieved by using an instrument such as the International Personality and Ability Testing Anxiety Scale Questionnaire (IPATASQ). By the use of a questionnaire adapted from the work of Cleugh[6] to determine the times when anxiety was at peak level, and by the use of "case studies" and counselling strategies, to attempt to lower the level of anxiety of those students considered to be at risk.

1.4 The population studied

The course, which forms the basis for this study, is a short intensive one of 35 weeks' duration. The student spends 11 weeks out of this period of 35 weeks in a College of Further or Higher Education, as a student involved in the Practice of Teaching. Because this period of time has to be arranged to complement the peculiarities of course structure in the institutions mentioned above, the college course is divided into clearly defined units of time (see Appendix 1 for details of the total course structure). The composition of the course is such that it is not until the final term that the student has more than 6 weeks of continuous course commitment within the college. It is this disjointed aspect which appears to cause some students considerable uneasiness or anxiety.

Why is this course considered to be different? Although the length of the course is somewhat similar to a Post-Graduate Certificate in Education course, it does differ in several important ways:

a Few of the students come directly from a full-time academic course of study. Most of them come to a period of academic study after varying amounts of time spent in industry or commerce, having finished their professional training some years before. The anxiety of coping with new ideas and concepts soon manifests itself for these students; they also find themselves in competition with students who have just completed a degree.

b The average age of the students is high (see 1.2). They have family commitments and are hence not as financially independent as most PGCE students.

c Few courses concerned with teacher training have their practice of teaching at the particular times associated with this course, and few have the two periods of teaching practice in the proportion of 4 weeks and 7 weeks. Most PGCE courses have a continuous period of one term. This makes this course more disjointed than other comparable courses.

It is precisely these peculiar or unique combinations of mature student and sectionalised course which appears to give rise to the peaks of

anxiety at particular times that has prompted the present investigation. The study also concerns itself with those factors which, although not unique to this course, nevertheless appear to be pertinent to the investigation. The study is particularly indebted to the work of Cleugh[6] in this area, who lists the following as being of importance in the training of mature students:

> ... fears of inadequacy, physical factors, financial factors, family, etc.

These are dealt with in detail in Chapter 3.

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CHAPTER 2

SITUATIONAL ANXIETY: ITS IDENTIFICATION, MEASUREMENT AND EVALUATION

2.1 Review of literature related to anxiety measurement and "situational anxiety" measurement in particular

2.2 Rationale underlying the selection of the IPATASQ

2.3 Review of the available data related to the IPATASQ

2.4 Design of the research to establish "norms" for the population being studied

2.5 Design of the research to establish reliability of the data

2.6 Analysis of data and results

2.7 Conclusions related to the IPATASQ

2.1 Review of literature related to anxiety measurement

Levitt[2] asserts that when the psychologist says that a person is anxious, the statement may be interpreted in several ways; thus the research of Cattell and Eysenck, of Spielberger and Lazarus, has often been seen as concentrating upon different problems all labelled "anxiety." There would appear to be two main interpretations of this word "anxiety": it may be:

a that the individual is anxious at that moment;
b that the individual is an anxious person.

The first may be described as "acute anxiety", meaning that the anxiety is usually of high intensity and of short duration. The second may be described as "chronic anxiety" or perhaps more aptly as a "high proneness" or "predisposition" to experiencing anxiety. The distinction between these two:

i acute or situational anxiety; and
ii predisposition or anxiety proneness,

has been delineated by Cattell and Scheier[12] 1961, Lazarus[13] 1966, and by Spielberger[5] 1966.

> Situational anxiety is a transitory state, which is ephemeral, occurs in a response to a stimulus and is likely to vary in intensity as a function of the stimulus, and is characterised by a variety of associated psychological reactions. On the other hand, anxiety proneness is a relatively unfluctuating condition which exerts a constant influence on the individual's behaviour.
>
> Levitt[2]

The "anxiety prone" individual can experience peaks of anxiety in various situations which cause an increase in what for him is a normal anxiety level but which, when compared with other individuals, would be described as high. The conditions described by Levitt[2] are usually regarded as personality traits. In line with these comments, Spielberger has pointed out that "anxiety prone" individuals and those high on "anxiety-trait" (A-trait) will experience "A-state" more frequently than those who are low on "A-trait" but they will not neces-

sarily experience "A-state" more intensely! Hence, in any given situation the anxiety-prone individual is more likely to experience anxiety, but the intensity of his feelings will be a function of the nature of the situation as well as of his personal characteristics. The present research will seek to follow and substantiate this direction of reasoning.

The first anxiety inventory, which was developed from another measure, was effectively concerned with looking at pre-disposition towards anxiety, not at an immediate state. Taylor's Manifest Anxiety Scale (MAS) was abstracted from the much longer Minnesota Multiphasic Personality Inventory (MMPI). Its items call for a self-report of a general condition rather than an estimate of the respondent's emotional state at the time of responding. It does, however, purport to distinguish between "normal" groups and samples of psychiatric patients, and the available research evidence supports this view. It is interesting to note that Bendig[14] developed a short form of the MAS for some of his early research. He selected the 20 items which seemed to be most successful in predicting clinical criteria of manifest anxiety. This was followed in 1959 and 1961[24,25,26] by the increasing use of the IPATASQ by Bendig. He looked particularly at the test's validity and reliability in a variety of situations.

However, much of the research related to the observation of the effect of anxiety upon individuals, and particularly of students, has been conducted in the laboratory, and is subject to severe criticism.* It has been suggested by Levitt[2] that in artificially induced situations the subjects may not perceive that the experimental situation is intended to induce anxiety. Alternatively, the treatment may not be stressful to subjects even though they perceive that the experimenter's intent is to stress them, or, alternatively, because they perceive clearly this intent. The effectiveness of laboratory-induced stress should be partly a function of the subject's pre-disposition to anxiety, and this would certainly appear to be the case with a high proportion of students who

---

* For a review of the literature related to the laboratory experimental situation, see Sarason[16]

may be described as having a high pre-disposition to anxiety. An enquiry conducted by Schwab and Iverson[15] appears to confirm this with regard to anxiety-prone subjects, although only 45% of the group as a whole admitted that they had felt threatened by the preliminary comment that "this is an experimental situation designed to induce stressful conditions." The subjects had been divided into low- and high-anxiety groups for this experiment, on the basis of the results obtained from the use of the IPATASQ.

One of the other critical factors in laboratory experimental situations appears to be the numbers involved in each experiment. Even with an initial number of 90 subjects, when these have to be divided into 3 groups representing varying levels of proneness, if the experimenter wishes to observe two or three levels of induced stress intensity, the final groups are small. The three groups, for example, may have to be dichotomised or trichotomised to facilitate the study of the varying levels, and consequently the subsequent groups are reduced to 15 or 10 students, which is often too small for reliable measurement. For these reasons the present study has attempted to use as large a sample as possible, and to maintain a natural course situation, although such an approach does pose considerable problems with respect to research design.

Levitt[2] asserts that it is an acceptable fact that in the experimental situation it is easier to work with a captive group. (The present study is no exception in this respect.) However, the captive group bring with them their own inherent problems, not the least of these being the degree of sophistication of the subject sample. In the situation where observations are being made of reaction to experimental stress situations, the subjects who fall into the "high" and "low" categories are very often the subjects who have been "chosen before", whilst the median subjects may be less sophisticated, having been involved in fewer experimental situations. Perhaps these variables can never be entirely eliminated, even by statistical procedures, when dealing with human subjects: nevertheless the experimenter must be aware of the limitations of his control over the situation.

No research work related to the measurement of anxiety would be complete without reference to the work of Eysenck as well as Cattell. Eysenck[17] outlines his main thesis, which states that factor analysis of a range of variables in itself is not enough: for him, the hypothetico-deductive method, in which factor analysis plays a part but which requires to be integrated with other studies of a more causal nature, is much more important. (Cattell's correlational studies, of course, do not allow any causal statements to be made.) However, during the 1960s, Eysenck, in collaboration with his wife, Sybil, looking at problems associated with divergent concepts of introversion, did use a factor analytic approach (Eysenck and Eysenck 1963). Increasingly it seems that the work of both Cattell and Eysenck seem to differ only in the use of descriptive adjectives. For example, Adcock[4] describes Eysenck's questionnaire factors as centroid, made up of neuroticism (emotional reactivity) and extraversion; whilst Cattell's second-order factor of anxiety is referred to in terms of emotional reactivity and exvia-invia. Eysenck called his first-order factor neuroticism, but he would appear to regard its main constituent as being an emotional sensitivity which makes its possessor more vulnerable to the stresses of living. On the other hand, Cattell is inclined to argue that neuroticism relates to no less than 8 out of the 16 of his 16 PF first-order factors, and also to 2 second-order factors. (Five out of the 8 factors are to be found in the IPATASQ, viz, C, L, O, Q_3, Q_4.[3] (See 2.2.1) Adcock[4] says:

> ... it seems difficult to avoid the conclusion that Eysenck's extraversion as measured by his test is in fact very similar to that of Cattell.

Further, he suggests that "for Cattell's anxiety and Eysenck's neuroticism, read 'emotional reactivity'."

If one accepts the comments made by researchers such as Adcock, then there would seem to be little reason for being unduly concerned about the label on the test being used. In this country, however, whilst there has been much use made of Eysenck's Personality Inventory, very little use has been made of Cattell's IPATASQ. One could argue that the EPI has therefore much to recommend it, but if the point made by Levitt[2] is acceptable, then the EPI is more likely to have been used

on some of the present population being studied than the Cattell measure, and hence there may be a greater awareness of the importance and the implications of the questions being used.

2.2 Reasons for selecting IPATASQ

Can any questionnaire or personality test help to positively identify students who are anxiety-prone in differing situations? Cattell and Scheier,[3] in the handbook for the IPATASQ, declare that:

> ... this scale gives an accurate appraisal of free-floating anxiety level (situational anxiety), supplementing clinical diagnosis, and facilitating all kinds of research or mass screening operations where very little diagnostic or assessment time can be spent with each examinee.

Moreover, they assert that the scale can be used not only for initial diagnosis but also in follow-ups as a "clinical thermometer" for charting progress or change of level. Are these facts substantiated by other researchers? Derrick[18] appears to be one of the few researchers in this country to use the IPATASQ on a student sample which might be described as intellectually similar to the present group being studied. He found that the claims for concurrent validity were substantiated by his research, and that the USA norms and the British norms which he established with his group did not differ in any significant way (that is, the "sten" scores and the raw scores did not differ in any significant way). The means, however, were significantly different (see 2.4).

Why use this particular research instrument? The work of Cattell has always interested the present researcher (although this is hardly a valid reason for choosing a test); additionally, the reliability of the test, as will be seen in 2.3, was impressive. The test, however, did have advantages over other tests:

1 It could be administered easily (but then so can the EPI).
2 It was comparatively unused in this country, so that subjects are unlikely to have preconceptions about its nature - unlike the popularised EPI.

3 Its 5 sub-scales seem to provide additional indications about student personality. These were sub-scales C, O, L, Q_3, Q_4.

The 5 sub-scales are classified by Cattell in the following way:

Sub-scale Q_3 - poor self-sentiment formation (-) versus high self-sentiment (+).
(Uncontrolled, Lax, versus Controlled, Exacting Will-power)
In the IPATASQ, Cattell has designated Q_3 (-) as the high score, so that the student who scores high on this dimension lacks "self-sentiment", or, as Entwhistle[37] describes it, unreliability. That is, the student who scores highly on this dimension is not able to control behaviour in stressful situations. Very often these students are unpredictable in that moods change rapidly with and within situations which are stressful.

Sub-scale C - dissatisfied emotional instability (-) versus emotional stability or ego strength (+)
(Emotional, Immature, Unstable versus Mature, Calm)
Again, in this test the C value is labelled (-), so that the high-scoring student lacks emotional stability. It would seem by these descriptions that the high-scoring student on these first two dimensions can be expected to experience difficulty in dealing with new and stressful situations.

Sub-scale L - relaxed security (-) versus protension (paranoid tendency (+)
(Accepting, Adaptable versus Suspecting, Jealous)
This dimension has been kept the same way round as in the 16 PF.

Sub-scale O - confident adequacy (-) versus guilt proneness (+)
(Confident, Self-secure versus Timid, Insecure)

Sub-scale Q_4 - low ergic tension (-) versus high ergic tension (+)
(Phlegmatic, Composed versus Tense, Excitable)

Plainly, all the high scores give an indication of the degree of inability to cope with the situations which are being examined. Hence, a high score on this test yields a high "sten" score, and the sub-division scores are cumulative in this respect.

Cattell identifies anxiety as a second-order factor, and gives it the Universal Index number 24 (UI 24). The 5 factors described above he calls "first-order" factors. Cattell[19] suggests that this test is to be recommended if the following conditions are satisfied:

> ... if there is no reason to expect "faking" since students are not accepted or rejected on the results (of the test), neither are the results part of their assessment, and the instrument is seen purely as an instrument for selecting and helping those at risk, or as a piece of unrelated (to the course) research.
>
> (page 119)

The IPATASQ was chosen in preference to the 16 PF since it was easier to mark and administer, and the 16 PF takes much longer to complete. More importantly, since it contained 5 out of the 16 first-order factors, all of which are related to the second-order factor of anxiety, with a high test/re-test reliability, the test seemed to be ideal in a situation where time and a quick reliable diagnosis was important.

2.3 Available data on IPATASQ

How reliable is the test being used, in terms of the previous research? Has its validity been established in a variety of situations? Levitt and Persky[20] have this to say:

> Having used the IPATASQ extensively in various research projects, the following summary of data collected seems to have some bearing on the validity of the scale as a measure of anxiety. Reliability - having administered the test to the same group on two separate occasions, the correlation between the two sets of scores was found to be as high as 0.94. However, its construct validity would appear to be more impressive than its criterion validity. Despite this, the researchers reported that their findings led them to the conclusion that the results reflected favourably on the IPAT scale as a measure of anxiety.

Barratt and White[21] worked with medical students, whom they described, if they were anxious, as "subjects who are tense, often afraid, frequently worried, and sweat when embarrassed." These students were iden-

tified and categorised, not by using the results of the 16 PF (which was one of the instruments being used) but by using the results of the IPATASQ to place high-anxious and low-anxious students into groups when comparing the independent (orthogonal) personality predispositions of anxiety and impulsiveness. In their summary they make comment which it is felt is relevant to the present study:

> It is clear from this study that non-intellectual factors relate to performance (in medical schools). For example, all of the present study subject in the high-impulsive/high-anxiety group were lower academic achievers than the members of the other groups, and all sought psychiatric help at some point during the three years that the study was in progress; it was obvious that their poor academic performance was at least partially related to their personality problems. The results of this study suggest that it may be possible to identify some students with potential problems early in their medical school programmes.

More will be said about the non-intellectual factors in Chapter 3. In a strongly related field, Wade and Shertzer,[22] looking at anxiety reduction through vocational counselling, had this to say about the use of the test being examined:

> If one problem of the counselling centre is the detection of students who may want or need counselling, the IPATASQ may be appropriate for such a procedure. It is short enough to be routinely administered as part of an entrance testing programme. While the main objection to this approach is that anxiety levels fluctuate with situational factors, and a measure may be valid for only short periods of time, the instrument may identify those students who do not meet strange or stressful situations well and are likely to seek support during such periods. This raises a question as to the type of anxiety manifested in these scores. It seems quite possible that in this particular setting, the anxiety is situational, arising from lack of direction in educational/vocational matters.

The research highlights one of the problems facing the present researcher. How is it possible to look at the measure without taking cognisance of the causes?

The identification of students who may be susceptible to situational anxiety cannot be separated realistically from the factors which con-

tribute to the anxious situations. Nevertheless, for the sake of clarity, Chapters 2, 3 and 4 are presented separately, whilst bearing in mind that some of the research being quoted will inevitably appear in more than one section. Wade[22] suggests that the test was used because it measures "fluctuations of anxiety over periods of time" and that the reliability coefficients of 0.84-0.91 were very satisfactory, and the construct validity of 0.85-0.90 was also seen to be high. Other supportive evidence can be found in several comments in the Fifth Mental Measurement Year Book.[28] Professor Kelly says:

> This is a highly promising brief scale for assessing a pervasive personality variable. It is likely to be widely used as a research instrument. Clinicians who are willing to give the scale a trial are likely to find it a useful diagnostic device for initial screening purposes.

Shaffer[23] is much more enthusiastic about the test, since he declares that:

> The present questionnaire consists of 40 items which best represent the five scales most heavily loaded in the anxiety factor; the IPATASQ has a sounder conceptual base than any other current instruments of its type.

The test has been little used in this country, but one researcher who has used it seems to have found it useful with a population similar in some respects to the present study. Derrick,[18] in two studies carried out at the University of Bradford, found the concurrent validity of the test as high as 0.71. This result was obtained using 74 students in an interview situation out of a total of 200 undergraduates being studied. Derrick also produced "norms" for a British population, and compared it with the American "norms." Very little practical difference was found.

What has Cattell and his co-workers to say about the IPATASQ? In the handbook which accompanies the test, Cattell and Scheier[3] make this comment:

> This scale gives an accurate appraisal of free-floating (situational) anxiety level supplementing clinical diagnosis, and facilitating all kinds of research or mass screening operations where very little diagnostic or assessment time can be spent with each examinee.

Moreover, they seem to be confident that the scale can be used not only for initial diagnosis but also in follow-up work, as a "clinical thermometer" for charting progress or change of level. Cattell himself further emphasises the fact that the scale is designed to measure anxiety as distinct from psychopathology in general. It should therefore be sensitive not only to variations in normal anxiety but to variations related to the same individual over a period of time. That is, it should be reliable in a re-test situation with the same individual at different times during a course of study such as the present course being investigated. The reliability of the scale has been demonstrated by the research work of Bendig,[24,25,26] as well as by Levitt[20] already referred. to. Barratt and White,[21] working with medical students, found a test/re-test correlation to be as high as 0.73. No research, as far as the researcher is aware, contradicts these findings of a high degree of reliability.

2.4 The establishment of "norms" for population being studied

How are "norms" established for use with a "new" population? The scale consists of 40 items, each of which has 3 possible responses, as opposed to the 2 responses to be found in the EPI. The responses can be said to occur along a most-to-least, or a true-false continuum. The first 20 items are considered to be covert or indirect indices of anxiety (A), whilst the latter 20 items are considered to be overt or manifest symptoms of anxiety (B). Although the total score on both (A) and (B) is generally the score used (the raw score), there has been considerable research into the use of the A and B elements in various combinations. The ratio of the covert to the overt score (that is, score B divided by score A) has been considered as an index of the degree to which individuals of equivalent anxiety level are aware of their anxiety (Levitt).[20] Bendig,[25,26] however, has suggested the use of a difference score of B-A to compare levels of anxiety. Cattell,[3] on the other hand, recommends that the total score be used when using the test as a "clinical thermometer." Derrick,[18] working in Bradford, found that his "norms" differed very little from the American "norms." Derrick, however, was comparing undergraduate students, whereas the present study makes use of the general population "norms."

Results from Bradford

	Mean	SD	
American sample	27.7	10.1	t = 3.41
Bradford sample	30.4	10.0	p < 0.001
Correlation of sten scores Manual/Sample r = 0.97			

Table 2.4.1 RESULTS OF RESEARCH WORK OF DERRICK(27) IN BRADFORD

The present research "norms" were calculated on the data obtained at interview. Students were asked to participate in the test, and it was made clear that the results were not being used for selection. The data for male and female interviewees was separated. Between 1972 and 1975 there were 1,680 interviewees.

2.4.2.1 MALE POPULATION	Mean	SD	
American sample (n = 530)	25.7	11.2	t = 4.00
Wolverhampton sample (n = 1329)	24.06	9.67	p > 0.001
2.4.2.2 FEMALE POPULATION			
American sample (n = 405)	28.6	11.3	t = 6.21
Wolverhampton sample (n = 351)	24.5	9.6	p > 0.001

Table 2.4.2 A COMPARISON OF THE AMERICAN AND WOLVERHAMPTON DATA USING RAW SCORES FROM IPATASQ

Clearly the Wolverhampton sample responds to the IPATASQ in a significantly less anxious way than their American counterparts.

Sten Scores	Raw Scores		Number in sample
	Manual	Sample	
1 Low anxiety	0- 4	0- 5	12
2	5- 9	6-10	74
3	10-14	11-14	128
4	15-20	15-19	236
5	21-25	20-24	283
6	26-31	25-29	223
7	32-38	30-35	200
8	39-44	36-40	95
9	45-51	41-47	61
10 High anxiety	52-80	48-80	17
Raw score Mean	25.7	24.06	1329 total
Raw score SD	11.2	9.67	
Correlation of sten scores derived from Manual/Sample r = 0.91			

Table 2.4.3.1 COMPARISON OF NORMALISED SCORES FOR MALE GENERAL POPULATION USA (TEST MANUAL) AND THE WOLVERHAMPTON SAMPLE MALE POPULATION

Sten Scores	Raw Scores		Number in sample
	Manual	Sample	
1 Low anxiety	0- 6	0- 6	4
2	7-12	7-10	17
3	13-17	11-15	41
4	18-23	16-20	71
5	24-28	21-26	83
6	29-34	27-31	55
7	35-40	32-37	44
8	41-47	38-43	24
9	48-55	44-50	10
10 High anxiety	56-80	51-80	2
Raw score Mean	28.6	24.5	351 total
Raw score SD	11.3	9.6	
Correlation of sten scores derived from Manual/Sample r = 0.87			

Table 2.4.3.2 COMPARISON OF NORMALISED SCORES FOR FEMALE GENERAL POPULATION USA (TEST MANUAL) AND THE WOLVERHAMPTON SAMPLE FEMALE POPULATION

The data in Tables 2.4.1 to 2.4.3 gives rise to two comments. Firstly, the present sample responds in a significantly less anxious way than the American sample; and secondly, when raw scores are converted to sten scores the correlation between the sten scores of the two samples is high. This is because the sten scores cover a range of raw scores which overlap in the samples: the proportion of students at each sten level is nearly the same. The sten scores were calculated using the handbook suggestion that the Mean should be set at sten score 5.5, and the Standard Deviation and sten scores then have a relationship with number in sample and raw score, so that if Table 2.4.3.1 is examined, then 67% of the sample are to be found between sten score 3.5 (-1 SD) and sten score 7.5 (+1 SD). This represents a close approximation to a normal distribution. If Table 2.4.3.2 is examined in the same way, then 66% of the sample are grouped between -1 and +1 SD. The population being investigated would appear to follow a normal distribution.

2.5 Design of research to establish reliability

2.5.1 Pilot investigation

During the course of the pilot investigation the test was completed at interview, and twice more - once in the December just before the Christmas vacation, and again in May just before the Final examination. The tests took place during the normal discussion time of the students. It cannot be overemphasised that at no time was any student compelled to complete the test. To avoid the embarrassment of other students knowing whether anyone had not completed the test, everyone was issued with the test form, and they handed in either a completed form or a blank form, or one partially completed. The researcher was obviously aware of the names of students completing tests, since the results had to be tabulated as results 1, 2 and 3, and compared. The same procedure applied to the main investigation, except that the test was administered three times during the course, and at interview; before first teaching practice; before second teaching practice; and again just before the Final examination. A comparison of the test/re-test results enabled the researcher to assess the reliability of the test (see 2.5).

During the academic year 1972-73 an opportunity presented itself to compare the IPATASQ with the full 16 PF. Derrick,[27] working in UWIST, used a group of male students as part of a research sample. They were given the 16 PF, and this provided the opportunity to compare the results obtained at interview using IPATASQ with the 16 PF.

	Mean of sten scores	SD of sten scores	
IPATASQ n = 96	6.166	1.4914	t = 1.9432 p > 0.05 (1.98) r = 0.70
16 PF n = 92	5.7179	1.6636	

Table 2.5.1.1 A COMPARISON OF THE DATA OBTAINED FROM 16 PF AND THE IPATASQ, USING THE 5 FIRST-ORDER FACTORS COMMON TO BOTH TESTS

The difference was only significant at the 0.05 level, and this was seen as being sufficient grounds for continuing to use the shorter test, together with the time advantage.

The pilot investigation was conducted using the 219 students who eventually commenced the course out of the 526 interviewed. The full data sheets for this group can be found in Appendix 3. Of the 219 who commenced the course, 178 (79%) were good enough to complete all three tests. The tests were compared (a) without taking account of any sex difference, and (b) comparing tests and sex separately.

Time of test	Mean	SD	't' test results
1 Interview (n = 175)	25.62	8.63	test 1 v 2 t = 3.00 p > 0.005
2 December (n = 175)	28.37	10.87	test 1 v 3 t = 2.33 p = 0.005
3 May (n = 175)	29.55	10.01	test 2 v 3 t = 0.7321 p not sig

Table 2.5.1.2 A COMPARISON OF THE MEANS AND STANDARD DEVIATION FOR ALL STUDENTS COMPLETING ALL 3 IPATASQ TESTS DURING THE PILOT INVESTIGATION IRRESPECTIVE OF SEX

The results of the 't' tests seem to suggest that there is an increase in anxiety level between the interview test and those conducted during the course. (One must always bear in mind that many students would regard the interview situation as a stressful occasion.) The level of anxiety appears to be reduced slightly as the course reaches its end: that is when the individual feels that many of the hurdles are safely behind. For example, at this point in the course the student will know that he has successfully coped with the very real hurdle of teaching practice: otherwise he would have been informed of his failure.

Can the same point which is made generally, be applied to the different sexes? Table 2.5.3 analyses the results when a comparison is made between the sexes.

2.5.1.3.1 MALE POPULATION, PILOT INVESTIGATION			
Male population	Mean	SD	't' test
Test 1 (n = 129)	25.62	9.26	test 1 v 2 t = 2.74 p > 0.005
2 (n = 129)	28.23	9.74	test 1 v 3 t = 3.80 p > 0.005
3 (n = 129)	29.50	10.57	test 2 v 3 t = 1.27 p = 0.1
2.5.1.3.2 FEMALE POPULATION, PILOT INVESTIGATION			
Test 1 (n = 49)	25.60	8.84	test 1 v 2 t = 2.29 p = 0.005
2 (n = 49)	29.57	10.86	test 1 v 3 t = 2.85 p > 0.005
3 (n = 49)	30.39	10.33	test 2 v 3 t = 0.44 p not sig

Table 2.5.1.3 AN ANALYSIS OF THE IPATASQ DATA FROM 2.5.2 RELATED TO THE SEXES SEPARATELY

The within-group data calculations confirm the findings of the general data calculations. There is a significant difference of level of stress or anxiety in both male and female students according to the time that the test is given. The situational anxiety felt on the course, as expressed in the IPATASQ scores, has a significant variation during the course. These times, as will be seen in Chapter 3, correspond to the times elicited from the questionnaire.

2.5.2 Field investigation

Did the main or field investigation confirm the results discussed in 2.5.1? There was a difference between the two groups, apart from the fact that they were different year-groups. As a result of the pilot investigation, an additional test was administered during the course, and the position of the tests was slightly varied. During the field investigation an initial population of 235 students was available. It was gratifying to see that at the end of the fourth test, 60% of the original population had completed all 4 tests. Thus, the final population was 145, all of whom had participated fully. It is worth recording that at no time was it thought desirable to ask, persuade or cajole any of the students who had completed 3 tests to complete the last one. There were 168 students who completed the third test, or 71% of the population. The final test was administered at a time when students were attending interviews for jobs, and also were busy revising, and so it was not surprising that, since the tests were given at the end of seminar sessions, the final count was 60%.

The tests, then, were administered at interview (no-one declined to complete a test here, no matter how much the voluntary nature was stressed); it was given immediately before the first teaching practice (end of October); and again before the second period of teaching practice, which was at the end of January; and finally at the same time as during the pilot study, viz, during the last week in May immediately prior to the Final examination. The interview situation is worthy of comment, since over a period of time more than 3000 students have completed the IPATASQ, and only 3 individuals have declined to complete it. Either we have become conditioned to accepting tests as everyday material, or individuals are not prepared to accept at face value comments which may seem to be incongruous in a competitive situation.

2.5.2.1.1 RESULTS FOR THE MALE POPULATION			2.5.2.1.2 RESULTS FOR THE FEMALE POPULATION		
	Mean	SD		Mean	SD
Test 1 (n = 98)	21.04	8.04	Test 1 (n = 47)	22.13	9.09
2 (n = 98)	24.83	10.42	2 (n = 47)	25.72	10.37
3 (n = 98)	25.79	10.22	3 (n = 47)	26.33	10.09
4 (n = 98)	26.03	9.87	4 (n = 47)	30.14	8.58

Table 2.5.2.1 A COMPARISON OF THE MEANS AND STANDARD DEVIATIONS FOR ALL STUDENTS COMPLETING ALL THE IPATASQ TESTS AND RE-TESTS DURING THE FIELD INVESTIGATION

Since it may be argued that the group of students who formed the final basis for the research were atypical, the data for all completed tests was also compared. A 't' test was applied to the Means and SDs to ascertain whether those remaining in the data bank were sufficiently the same to justify the interpolations it was hoped to make.

2.5.2.2.1 RESULTS FOR THE MALE POPULATION			2.5.2.2.2 RESULTS FOR THE FEMALE POPULATION		
	Mean	SD		Mean	SD
Test 1 (n = 175)	22.18	8.86	Test 1 (n = 62)	21.88	9.24
2 (n = 136)	25.14	9.56	2 (n = 58)	28.52	9.95
3 (n = 120)	25.76	9.75	3 (n = 51)	29.70	8.33
4 (n = 98)	26.03	9.87	4 (n = 47)	30.14	8.58

Table 2.5.2.2 THE IPATASQ RESULTS FROM THE FIELD INVESTIGATION, COMPARED FOR STUDENTS COMPLETING TWO OR MORE TESTS

2.6 An analysis of data related to IPATASQ

The general trend both for male and female students can be readily observed in both Table 2.5.2.1 and 2.5.2.2: that the Mean of the group rises, indicating a general rise in situational anxiety level. The male students completing all 4 tests appear to be slightly less anxious

than the whole group at each stage. This is also true of the female group completing all 4 tests: they would seem to be less anxious than the whole group. But is it significant? This is the crucial question. Small differences at the observational level are to be expected when the group size varies. Applying a 't' test to data in both tables gives the following result.

	Male	Female
Test 1	t = 1.05 (p not sig)	t = 0.14 (p not sig)
2	t = 0.24 (p not sig)	t = 1.4 (p = 1.98 sig at 0.025 level
3	t = 0.15 (p not sig)	t = 1.8 (p = 1.98 sig at 0.025 level
4	same group	same group

Table 2.6.1 COMPARING THE DATA IN TABLES 2.5.2.1 and 2.5.2.2, THE SEXES AGAIN BEING COMPARED SEPARATELY

An analysis of data in 2.5.2.3 shows that there is no significant difference between the male level of situational anxiety in the two groups. The female analysis is slightly different in that if tests 2 and 3 are compared, there does exist a difference (p = 0.025). The research group are less anxious than the whole group. The degree of significance has been worthy of note only if it occurred at the 0.005 level or above. On the basis of the comparison it could be argued that the females felt that the test itself, despite reassurances, was being used in assessment and hence was an anxiety-provoking situation itself. The researcher attempted to reduce this to a minimum by showing, and discussing with those individual students who requested it, the results obtained from the previous tests. It may well be that the test revealed too much, as some of the students expressed surprise at the inferences which could be drawn from test data (see discussion, Chapter 5). This could well be something to be avoided as far as possible, and maybe one should curb one's enthusiasm for the predictable nature of such a short test. Guildford[28] makes this very point by saying:

> ... there is a danger that such an instrument indicates too much. The score discriminates neurotics from normals somewhat, which is reasonable, since anxiety cases are also in the general category of neurotic, but it is

> hinted by the author that the score also discriminates psychotics. (The danger lies in the fact that) questions on lack of confidence, nervousness, and depression represent item types that any person who does not feel well for any reason is likely to answer similarly, particularly if he is not well and ready to admit it.

This is a valid point but not an unsurmountable obstacle to test interpretation as a means to helping clients. A further discussion on this point appears in the last chapter.

In Table 2.5.1.2 it was clear that situational anxiety as measured by the IPATASQ increased during the time of the pilot investigation. Can the same results be seen in the field investigation? Is the general trend still there when the times of administering the tests are changed in the light of the questionnaire? Applying a 't' test to the data in Table 2.5.2.1, the following results are obtained.

	Male	Female
Test 1 v 2	$t = 2.87$ ($p > 0.005$)	$t = 2.58$ ($p = 0.005$)
1 v 3	$t = 3.65$ ($p > 0.005$)	$t = 3.11$ ($p > 0.005$)
1 v 4	$t = 3.92$ ($p > 0.005$)	$t = 6.35$ ($p > 0.001$)
2 v 3	$t = 0.65$ (p not sig)	$t = 0.41$ (p not sig)
2 v 4	$t = 0.83$ (p not sig)	$t = 3.25$ ($p > 0.005$)
3 v 4	$t = 0.16$ (p not sig)	$t = 2.86$ ($p > 0.005$)

Table 2.6.2 AN ANALYSIS OF BETWEEN-TEST DATA RELATED TO IPATASQ, DURING THE FIELD INVESTIGATION, FOR STUDENTS COMPLETING ALL 4 TESTS

The results from the above table are interesting in that there is a distinct difference between the male and female groups. As was suspected from Table 2.5.2.1, there is an increase in situational anxiety level between Test 1 and the other three tests for the male group. This difference is quite significant. There is, however, no lowering or hightering of that level in terms of degrees of significance within the course: it appears to reach a peak and remain at that level. The analysis of the female results clearly indicates an increase in anxiety level during

the summer term, even compared with the pre-teaching—practice periods. Why should this difference exist? It has already been observed that the female population as a whole seems to be more anxious than their male counterparts. Additionally, it is the experience of the researcher that the female students demand a higher level of work from themselves: that is, they tend to set higher goals which may or may not be realistic. The outcome of this is to increase the level of situational anxiety perhaps because of the 'Id' pressure, and indeed, an analysis of the female answer sheets reveals that their scores on the 'Q_4' factor in the IPATASQ is higher than those of their male counterparts. Why, then, does teaching practice apparently not produce this same high level? One of the explanations could be that nearly a half of the female group belong to the Secretarial section, and many of them have taught on a part-time basis quite successfully. This seems to support what has been said before, that this group of students would feel the stigma of failure more than those who have not previously been successful in the classroom.

2.7 Conclusions related to IPATASQ

What can be gained from the use of a test such as the IPATASQ with the population described? One must look inevitably at the general and the specific. At a general level there seems to be no doubt that as Cattell[12] has suggested, the test can be used as a "clinical thermometer" indicating not only anxiety-prone individuals, but also times when the situation is likely to have a direct effect upon the anxiety of that individual. Many individuals who felt the need to seek help or guidance during the pilot study, came to the course with a high level of measured anxiety. Some, however, (see Appendix 5) appear to have been made more anxious by elements within the course (eg students 2, 6, 7, 8, 11, 13, 15). Is the type of anxiety being considered, identifiable? The answer would seem to be Yes, in two ways:

a by considering the total and elemental scores on the IPATASQ;
b by looking closely at the students who seek counselling.

The latter will be dealt with in the last two chapters in more detail. The first point requires investigation of the individual score sheets.

2.7.1

The students who sought counselling during the pilot study have been listed in Appendix 5. As mentioned in 2.7, some of the group appear to have become most anxious during the course, namely, 2, 6, 7, 8, 11, 13, 15 - or half the group. One could argue that this was to be expected from the hypothesis, but are we looking for this simplistic-type answer? Are there not other factors which might have some relevance? Levitt[20] has suggested that the ratio of the "covert" to the "overt" score might be considered as an index of the degree to which individuals of equivalent anxiety level are aware of their anxiety. Levitt is asserting that two students with a sten score of 8 could have a different level of awareness in terms of their anxiety as it manifests itself. Bendig[25,26] suggests that a difference score is useful, ie B-A; however, the evidence does not appear to be conclusive, and certainly in the present study it is possible to cite cases where the same level of anxiety, and the same B/A score, produce entirely different B-A results. Levitt,[20] working with student nurses, found that the nurses who left nursing school because of unsatisfactory work had a greater awareness of their anxiety level: that is, the B/A ratio was smaller than for those who continued, although there was no significant difference between the Means of the two groups. Comparing the group of nurses who continued in Levitt's[20] study, with the B/A ratio of the students who sought counselling in the field study:

	B/A ratio	
Test 1 (n = 20)	0.77	B/A ratio Levitt 0.867 (n = 63)
2 (n = 20)	0.834	
3 (n = 20)	0.824	
4 (n = 20)	0.888	

Table 2.7.1 THE B/A RATIO COMPARED, USING THE WORK OF LEVITT AND THE PRESENT FIELD INVESTIGATION NURSE GROUP

There were 63 nurses in Levitt's group, and 20 in the present study. The comparison is interesting, and there would appear to be no significant difference between the groups.

However, when a closer look is taken at the elements to be found within the test (viz, Q_3, Q_4, C, L, O sub-scales) it is surprising how many students who experience increases in "situational" anxiety have high scores on two main dimensions:

C (-) which is described by Cattell[12] as "ego weakness" or emotionally immature: this type of student appears to be vulnerable in group discussions;

O - described as "guilt proneness" or insecure, worrying, easily discouraged: this type of student finds the combination of work pressures and group pressures difficult to cope with.

An examination of the results obtained from the field study suggests that the "A" score (covert) remains constant, especially with students who have sten scores of 7+ (see Appendix 7). Where there is a difference in the "A" score, the level of anxiety of the student has increased, eg, Appendix 4, students 21, 32, 51, 60, etc. As with students who sought counselling, so with the group identified in Appendix 7, the B/A scores show great consistency:

	Test 1	Test 2	Test 3	Test 4
n = 33	33	33	33	33
B/A ratio	0.86	0.95	0.88	0.94

Table 2.7.2 THE B/A RATIO OF STUDENTS ON THE FIELD INVESTIGATION COURSE WHOSE STEN SCORE WAS 7+

The results suggest that the ratio of B/A gives an indication of the degree to which, as Levitt[20] says, the student is aware of the personal anxiety level. In fact, there is a suggestion that those who are aware of their anxiety, ie, they score more highly on the "B" score, are more likely either to do less well than expected, or else they leave the course. Student 6 (Appendix 6) had no score on the "B" dimension in

three tests, and scores of 10, 3 and 9 on the "A" score: this student found it very difficult to complete the course, and was frequently absent, eventually failing the course. Derrick[18] has suggested that students who have a low sten score are also at risk in anxiety-provoking situations, as they appear not to be anxious enough in a competitive situation. However, in the present study, only two students who could be described as low- or normal-anxiety, sought counselling.

2.7.2

If the test is used as a clinical thermometer, then it seems to be reasonable to assume that the students who score at sten score 7+ need to be identified at the interview, and carefully monitored during the course. Those students who couple this fact with high scores on the "C" and "O" sub-scales, should be considered to be doubly at risk. The other factor which needs to be considered is the B/A ratio (see student 1, Appendix 6). During the course of this investigation the researcher has observed that a good indication of level of anxiety in cases where the "overt" score is low, is the doubling of the "covert" score: thus, in the case quoted above, a raw score of 34 and sten score of 6 would be a clearer indication of expected anxiety level on the course than the sten score of 3 indicated.

The above suggestions must be regarded only as indicators. The present researcher would agree with Cattell that the instrument has its greatest value when used as a whole unit. The various elements identified within the test are not designed to provide the detail needed to use them in any way other than as pointers. Chapter 5 will deal with this matter in more detail.

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CHAPTER 3

THE CONSTRUCTION AND USE OF A QUESTIONNAIRE TO IDENTIFY PERIODS OF STRESS

3.1 Review of literature on:

a temporal location of periods of stress during the course

b students at risk due to these periods of stress (situations creating anxiety

3.2 Development of the questionnaire

3.3 Research design related to the questionnaire

3.4 Analysis of this data and results

3.5 Conclusions related to the questionnaire

3.1 Review of literature related to questionnaire

> I often wonder whether the decision to become a teacher was a good idea.
>
> Why did I give notice to my former employer?
>
> Who will now employ me?
>
> Has it all been a waste of time?

These were some of the comments made by mature students attending a one-year full-time course of teacher training for Further Education. The comments indirectly gave rise to the present research. If students who have already made momentous decisions can express their feelings in this sort of way, then there must be several factors which contribute to this state of anxiety: thus ran the thoughts of the researcher "caught up" in the training of these mature students. Cleugh[6] experienced something similar, and afterwards wrote:

> ... the worries and anxieties of reaching an acceptable standard will be similar to those of younger students, and so many of the student stresses will apply with additional anxieties since they have more at stake and are more likely to feel more responsible for their choice than young students sometimes do.

Seth,[4] working with 18-year-old students, found that anxieties arose from a variety of factors, but he was aware from his questionnaire that there was often a problem of communication, especially in the first few weeks of a course. The following comments illustrate the point:

> I found the first week of the course overwhelming in terms of the vast quantity of differing instructions. I didn't know what was expected of me. There were too many pieces of paper all containing information which had to be absorbed quickly and without help. Finding the room where I was supposed to be was not always easy, the wrong room left you feeling inadequate and looking foolish in front of your peers.

On the course being studied, the students had similar but also somewhat different problems. Because the course is organised in such a way that the students spend almost half of their time in Education groups, where the work is covered mainly by seminar discussion, some students who have not met this method before, become anxious, eg

> I wondered how I could contribute to group discussion without other students feeling that I was trying to control the group.

Students who felt that the presentation of seminar papers to their peers was a traumatic experience, commented:

> It's like the blind leading the blind.

or:

> Why don't you (the tutor), as the expert, present all the material to the group?

These comments do not appear to be important at the end of the course, and therefore one must attempt to look, as it were, inside the individual and find out what is really causing the anxiety. Gibson and Pococke,[29] working with married women students, say:

> Their problem is that being what they are, they find themselves as being neither flesh, fowl, nor good red herring.

They are not free to come and go, as is the younger student; they are described as being mature, and yet are as new to this particular situation, and are no better equipped to deal with it, as is the younger student.

Many studies have compared personality factors and academic achievement (Entwhistle 1970; Rushton 1968, 1969, 1972; et al). Fewer studies have been concerned with the other factors which may influence the level of anxiety of the individual. Malleson,[9] however, investigated the influence of emotional factors on academic achievement. In his study he reminds us that:

> ... when sociologists and psychologists present educational statistics, they very often forget that they are talking about people. People are complex creatures involved in complex interactions with the various environments in which they find themselves.

Gough,[10] investigating the non-intellectual factors which affect selection and evaluation of medical students, believes that personality problems are at the very least partially responsible for poor academic

performance. Barrett and White,[11] working with similar students, but looking at impulsiveness and anxiety related to medical students' performance and attitudes, conclude that:

> It is clear from this study that non-intellectual factors relate to performance in medical schools, as has been suggested by Gough, Golden and Simon. For example, all of the present study subjects in the HIHA group were lower academic achievers than the members of the other groups, and all sought psychiatric help at some point during the three years that the study was in progress; it was obvious that their poor academic performance was at least partially related to their personality problems. The results ... suggest that it may be possible to identify some students with potential problems early in their medical school programmes.

Cleugh[6] did attempt to identify both the student who was likely to be anxious, and the causes of anxiety. There does exist strong role-conflict for both married men and women (the present study and that of Cleugh contain many students in this category). Cleugh discusses the wife whose husband is initially in favour of her increasing independence through study and qualification, but who changes his mind as he sees more clearly what is involved; and similarly the man who has his wife's support initially, and then finds increasingly that there is conflict between demands of the family and course work. For many men and women, the knowledge of their partner's stress, and the fear that children are being deprived of attention, can have a very unsettling effect upon the student (male or female), and the vaguer these guilt feelings are, the more difficult it is to come to terms with that which is not easily recognised. In Chapter 2 it was suggested that one of the identifying factors in the IPATASQ was the "O" sub-scale, or "guilt proneness" factor. Cleugh[30] in an earlier work lists various factors which appear to give rise to concern. The mature student feels that he is "rusty", has a poor "memory"; fails to use previous experience sufficiently, has "slowed down" in terms of work rate, etc. These factors combine in different ways to produce stress, particularly at the beginning and end of a course. Many case studies are cited particularly in Cleugh.[30]

3.2 Development of the questionnaire

Both Cleugh[6] and Seth[7] felt that a questionnaire was important in enabling them to identify students and times of stress. The type of questionnaire which seemed most appropriate for the present study was a combination of the work of the aforementioned researchers. Cleugh looked at stress under general headings such as finance, family, fears of inadequacy, physical, responsibilities other than family. Seth, on the other hand, looked at communication, and times during course when stress occurred. From conversations with students the researcher felt that there were two main areas to be considered, viz, the personal factors listed by Cleugh, and a consideration of times as suggested by Seth.

3.3 Research design related to the questionnaire

The original questionnaire was divided into two sections. Section A was concerned to identify the "actual physical times during the course when stress occurs." There were 10 items in this section relating to times during the course when students were likely to experience "situational anxiety." The first draft is to be found in Appendix 8A. It was not found necessary to alter this section during the research. This first draft was constructed with the aid of the students on the course, who were asked at the end of the course when they had felt most anxious. A comment by one of the students is pertinent.

> The work during the period leading up to the first teaching practice period was stressful in terms of the new work in Education (a subject I had not studied before), and this was linked with the fact that I had to visit my teaching practice college, an environment I had only experienced from the other side, as a student. The thought that I had to change my role so quickly made me feel extremely anxious.

The second half of the questionnaire, Section B, owes much to the work of Cleugh.[6] This section contained 34 items in the original draft, and there was space at the end for additional comments for both Section A and B. No names were required on the questionnaire, as this was thought to be less inhibiting. Students were asked to participate

in this experiment, and there was no attempt to match the results from the IPATASQ with the questionnaire. The students were only required to place a tick alongside the item(s) which best described their own feelings. The completion of this questionnaire took place at the end of the course, and corresponded with Test 3 in the pilot investigation, and Test 4 in the field investigation. Time was found during the revision sessions at the end of May in each case, so that the questionnaire was completed and collected under supervision of the researcher.

After the pilot study results had been analysed (see Appendix 8B), Section B of the questionnaire was revised. The number of items in Section B was reduced from 34 to 28. There were two advantages of doing this: firstly, redundant items were omitted; and secondly, the questions were contained on one sheet of paper rather than on two, as the first draft was. The items which were deleted will be discussed in the next section. The layout was also changed between the original and subsequent questionnaires, as can be seen by comparing Appendices 8A, 8B and 9.

3.4 Analysis of questionnaire data

The original questionnaire was completed by 180 students out of 240, a high proportion. However, this group were aware that they were validating the instrument. The lowest response in Section A was 7%, immediately after completion of the second and final period of teaching practice. Almost a third of the students identified the same three stress periods, namely, just before and during first teaching practice; immediately before and during second teaching practice; and immediately prior to the Final examinations. It is interesting to note that 15% of the students, or 36 students, found the first week of the course stressful - and this after a lapse in time of 28 weeks. The anxiety related to Final examinations was present and being experienced, whilst the anxiety related to other periods of time had been sufficiently intense as to be readily recalled. The results of the pilot investigation are tabulated in Table 3.4.1.

THE QUESTIONNAIRE

SECTION A - Tabulated in order of the response

		% replies
1	During first week of course	19
2	Just before first teaching practice	32
3	During first teaching practice	40
4	Last week of the first term	9
5	At the beginning of the second term	14
6	Immediately before second teaching practice	32
7	During second teaching practice	35
8	Immediately after second teaching practice	8
9	At the beginning of the third term	9
10	Immediately prior to the Final examinations	31

SECTION B

Response of	Item numbers	Comments
20% & above	1, 3, 17, 19 22, 31, 32, 33	Financial What job shall I do next? Fear of failure - anxiety Pressure of time Feelings of being assessed Lack of clear direction Lot of work Criticisms of aspects of lectures
15% - 19%	7, 10, 11	Unsureness in new situation Family distractions Family responsibilities
10% - 14%	4, 5, 16	Sorting out confusion Travel strain Wife's stress
5% - 9%	2, 8, 12, 13, 18, 20, 21, 27, 28, 29 30, 34	Dear accommodation How is job going? Away from home Guilt at neglect of upbringing of family Stress in facing new ideas Clashes of personality New role - loss of identity Lack of leisure time Shyness Unused to study Memory Lack of responsibility
0% - 4%	6, 9, 14, 15, 23, 24, 25, 26	Family don't share in course Physical - lonely Unsympathetic friends Pressure of group Work more slowly now Language difficulty No time for social chat

Table 3.4.1 RESULTS FROM THE PILOT INVESTIGATION TABULATED AND GROUPED (see Appendix 8B)

Pilot investigation and validation patterns were similar. Fewer students completed the questionnaire (163) but with regard to Section A the same pattern could be seen. Questions 2, 3, 6, 7 and 10 were again rated highly, whilst in Section B, items 1, 3, 17, 19, 22, 31, 32, 33, all scored 20% or above, as in the original study (see Table 3.4.1). As a result of this, certain items were deleted from the final questionnaire - items 8, 9, 14, 15, 24 and 25. Item 26 was retained although it was not considered important, because several students expressed their feelings that many problems were partially solved in the informal situation which might be described as social chat.

The final questionnaire which was used for the field investigation contained 28 items in Section B. The total number of respondents was 157, and comparing this with the number of students completing all 4 IPATASQ tests, we find that 12 more completed this questionnaire.

Table 3.4.2 - see page 44

The results are tabulated in Appendix 9. As compared with the other two, the final questionnaire results showed a remarkable similarity. Again it was obvious that items 2, 3, 6, 7 and 10 in Section A indicated the times of maximum stress on the course. This could have been predicted, but confirmation is always advisable. Over many years, students in a variety of ways have pointed to these times, either by seeking help with workload, or help with personal problems. So often, what appears to be true at a subjective level is not substantiated by research: however, on this occasion the two appear to correlate very highly.

THE QUESTIONNAIRE		
SECTION A		
Response	Item numbers	Comments
above 30%	2, 3, 6, 7, 10	Just before first teaching practice During first teaching practice Immediately before second teaching practice During second teaching practice Immediately prior to the Final examination
SECTION B		
20% and above	1, 3, 13, 15, 18, 25, 26	Financial What job shall I do next? Fear of failure anxiety Pressure of time Feelings of being assessed Lack of clear direction Lot of work Lack of responsibility
15% - 19%	7, 9, 12, 27	Unsureness in new situation Family responsibilities Wife's stress Criticism of aspects of lectures
10% - 14%	4, 8, 11	Sorting out confusion Family distractions Guilt at neglect of upbringing of family
5% - 9%	5, 7, 10, 14, 16, 19, 20, 23, 24	Travel strain Family do not share in course Away from home Stress in facing new ideas Clashes of personality Pressure of group No time for social chat Unused to study Memory
0% - 4%	2, 17, 21, 22	Dear accommodation New role - loss of identity Lack of leisure time Shyness

Table 3.4.2 RESULTS FROM THE FIELD INVESTIGATION TABULATED AND GROUPED (see Appendix 9)

3.5 Conclusions

The groupings in Section B were not significantly different on all three occasions, neither do they appear to differ from the results obtained by Cleugh.[6] However, it is worth noting that the layout change from Appendix 8A to 8B was important. The groupings observed in Tables 3.4.1 and 3.4.2 are interesting. At the 20%+ response level there appear to be several factors which relate directly to the students' own personal fears or anxiety, viz, fear of failure, and of being assessed. Anxiety related to the family is not rated as high, but perhaps that was because the questionnaire was administered in the college atmosphere and not in the home atmosphere. Indeed, time during the week may also change the results slightly, in that Monday morning, after an anxious week-end at home, may prove to be a time when the scores related to family might be higher. As will be discussed in Chapter 5, perhaps Section B of the questionnaire could have been administered during the course at the same time as the re-tests of the IPATASQ.

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CHAPTER 4

THE COUNSELLING OF STUDENTS

4.1 Review of literature on counselling of students

4.2 Discussion of the findings of Chapters 2 and 3 related to the literature

4.3 Case study material for the pilot study and the field study

4.4 Conclusions

4.1 Review of literature

To what extent has research sought to find ways and means of alleviating anxiety in the many stressful situations which have been identified by numerous research workers? Weinstein,[31] concerned with reducing test anxiety, sought to test the effectiveness of structured group interaction. This strategy was designed as an alternative to systematic desensitization for students designated "extroverts" using the EPI (Eysenck and Eysench 1964). The hypothesis stated that:

> ... extroverts would demonstrate reduced aanxiety when counselled in structured group interaction.

This work was based upona research by Eysenck and Rachman[32] who had suggested that students identified as "introvert" or "extrovert" on the basis of the EPI would need differing treatments in order to reduce test anxiety. For example, the "introvert" group would experience more reduction in test anxiety in the systematic desensitization treatment, whereas the "extrovert" group would benefit from treatment that was verbal in nature, demanded more discussion, and required from the participants group interaction and activity.

In the research reported, the students were encouraged to discuss, and "talk through" their problems. The results indicated that compared to test-anxious students who did not receive this counselling, the structured group interaction procedures were found to be very effective in reducing test-taking anxiety. However, more importantly, it was found that this type of group counselling is "both feasible and promising" (Weinstein).[31] It is possible to deliberately create a series of specific procedures to assist certain types of individuals with a particular problem. Hosford and Varenhorst[33] discuss the importance of "role playing" and "reinforcement" in overcoming fear of speaking before a peer group. The cases quoted concerned two students in an American High School who found themselves unable to express their thoughts and feelings in the group situation. Both students sought the advice of counsellors, who employed a role-playing technique. The clients were encouraged to practise the behaviour which was causing problems, in an atmosphere "free from ridicule or punishment when

errors occurred." It is always important that the counsellor respond in a positive way to any client improvement, since almost inevitably the client is extremely sensitive to the possibility of appearing ridiculous, and is very much aware himself that the performance is faulty. This seems to be a problem where, as in Wolverhampton, students are encouraged to present seminar discussion papers, and to become involved in group discussion. Many defence mechanisms can be observed in these situations, but perhaps the most obvious, and the one which occurs most often, is summarised in the comment quoted earlier:

> I feel that when I am presenting a paper to the group, it is like the blind leading the blind. (Student feeling inadequate)

This is an exaggeration in most cases, since the topics for discussion are worked through with the tutor in seminar preparation sessions. The weaker students are given structured guidelines, and are encouraged to attend several tutorial sessions. One could argue, of course, as many students do, that it is the function of the tutor to present relevant material to the group. Perhaps for students in this situation the concept of systematic desensitization would be useful. This idea or procedure was introduced by Wolpe[34] in 1952: it is a technique which counsellors are using to help clients who experience unpleasant emotional reactions. Basically the procedure consists of describing situations which are increasingly anxiety-producing (an anxiety hierarchy) to a deeply relaxed client, until he is able to visualise the most stressful scenes on this list without experiencing anxiety. The technique is based upon the psychological principle of counter-conditioning: extinction of the unpleasant emotional reaction occurs because the usual anxiety responses are replaced by more pleasant stimuli in a deeply relaxed atmosphere. Since it is difficult to be relaxed and anxious at the same time, the anxiety can be reduced by pairing the eliciting stimuli with deep relaxation.

This treatment is not a panacea for all ills, and indeed, Emery, quoted by Weinstein,[31] says that criteria for selecting desensitization have not yet been fully developed. However, it does seem to have merit in that it purports to deal with learned behaviours within a framework of new learning. The treatment consists of explaining the procedure to

the client, and preparing him for desensitization, and then helping him to carry through the process. Typically the normal period of treatment appears to be 2 sessions per week over 8 weeks. Follow-up work is important so that the student feels that support is still available. This kind of procedure is only possible where an established counselling practice is available, and where access to the counsellor is open. Emery suggests that about 10% of his clients need and respond to this kind of treatment. It is individual, time-consuming and specialised. Behavioural approaches to counselling have had their critics because they so often appear to oversimplify human problems (for example, Jourard 1961; McCully 1964; and Arbuckle 1968).

The question has been posed: Having overcome the various phobias by desensitization, how do you cope with the real-life situation? What about the pervasive problems of clients, problems of existence, of alienation, of despair? So some counsellors label behavioural counselling as a limited collection of techniques confined to accomplishing trivial changes in behaviour. Whether this is justified or not, it would seem to be true that many students do seek counselling about matters which may seem to be trivial to the stable, non-anxious student, but which nevertheless are of vital importance to the individual concerned. Meadows and Oelke[35] reported that students who seek counselling are more likely to be lower in academic standing, and undecided about vocational choice, than those who do not. Spielberger[5] has written several articles and 2 volumes on the effects of manifest anxiety and cognitive variables. Wade and Shertzer[22] were concerned to differentiate between students who sought counselling and those who did not, in terms of degree of measured manifest anxiety. They appear to be one of a small group of researchers who have considered the importance of counselling students who scored highly on the IPATASQ, and in particular, the validity of vocational counselling in relation to anxiety reduction. In the discussion at the end of their article, they comment:

> If one problem of the counselling centre is the detection of students who need or want counselling, the IPATASQ may be appropriate for such a procedure. It is short enough to be routinely administered as part of an entrance-testing programme, etc.

It is interesting to note that although the students who were counselled attended individual counselling sessions, which reduced their level of anxiety, in discussion at the end of the research the authors did not feel that it was appropriate that every student who had a high level of anxiety should be counselled. Rather it was felt that they (the students) should be "made aware" of alternatives associated with educational/vocational matters. The type of anxiety referred to is called "situational anxiety", which they say arises from a lack of direction in educational/vocational matters. These comments are very similar to the comments made by the students in Seth's study,[7] and also the students at Wolverhampton. Wade and Shertzer[22] suggest that more consideration be given to ascertaining the type(s) of counselling strategy(ies) which may be most effective. For example:

> Would counsellor variables such as sex, age, amount of training, type of training, experience, and personality, have a significant function in the amount of anxiety reduction?

If one of the effects of increasing anxiety is under-achievement as well as lack of clear direction, then the work of Gilbreath[36] raises some interesting questions and issues. Working with college male under-achievers, he divided his subjects into 4 high- and 4 low-dependent groups on the basis of the results obtained from the Stern Activities Index (SAI). The students were placed in one of two group situations, leader-structured (appropriate for dependent under-achievers, inappropriate for independent under-achievers), or group-structured (appropriate for independent under-achievers, and inappropriate for dependent under-achievers) group counselling. There was an appropriate control group. The results indicated that the appropriate counselling strategy did improve grades at the time. What was interesting was the result after three months. In the discussion, Gilbreath says:

> The lack of differences between the appropriate, inappropriate, and control groups three months following the experiment, may be due to insufficient number of hours for the group experience to have its full effect. Increasing the number of group counselling sessions might not only produce the changes indicated, but, through reinforcement over a longer period of time, might produce even greater differences between groups, and more permanent improvement on the part of students

> who experience a method of counselling that is congruent with their personality characteristics.

This statement poses at least two questions related to the present study. Should the type of counselling strategy employed attempt to achieve maximum benefit over the shortest possible time, bearing in mind that the students are away from the college for 11 weeks out of 35 weeks? Should the course be so designed as to give opportunity for counselling during the period of 11 weeks? Alternatively, do behavioural counselling methods offer the best solution? Paul,[37] to some extent, appears to be asking somewhat similar questions when he says:

> What kind of group counselling works most effectively with what kind of academic under-achiever?

Paul was constrained to pose this type of question because during his investigation into psychotherapy-outcome research, he felt very strongly that the questions being asked by the investigators were "too general, and the variables being tested, too gross." The question, he felt, was not "Does psychotherapy work?" but rather, "What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances?"

The present researcher was faced with this same problem, together with a time factor which seemed to be intractable. Should one adopt an individual approach, a group-structured approach, or an unstructured approach; or perhaps a combination; or should alternatives be available? Brown,[38] continuing some of the work of Gilbreath, mentioned earlier, was concerned to examine the effects of differing group experiences. Using the Manifest Anxiety Scale (a short version of the original scale which had been developed by Bendig, and which correlates highly with the IPATASQ ($r = 0.7$),[13] Brown[38] divided his high-anxious second-semester freshmen into 3 treatment groups:

a an unstructured group situation;

b a structured group situation;

c a class group, designated to remain in the college skills class.

A low-anxious group of the same number were also divided between the same groups, giving 6 groups in all, subjected to 3 treatments. The

skills class was teacher-centred, and lecture-orientated; the structured groups were counsellor-centred, with the counsellor suggesting topics, directing questions to class members, and leading discussions. The unstructured groups were student-centred, with the counsellor only suggesting topics. Group interaction was encouraged in the unstructured groups, but was not reinforced in the other groups. The results were challenging: the high-anxious students benefited more from the unstructured approach than from the two more structured approaches. On the other hand, the low-anxious students in the more structured groups appeared to profit more than those in the unstructured group. The results of this study suggest that high-anxious under-achieving college students benefit more from an unstructured group experience than do low-anxious students. Brown suggests that the specific implications of his research are twofold:

> (a) Highly anxious students who are under-achieving and are required to undertake a college skills course which is lecture-orientated or leader-structured, should be screened out, and be provided with a different type of experience.
>
> (b) The relatively low-anxious under-achiever is not a good prospect for the kind of unstructured approach described in the study, and he might gain more from a lecture-orientated course, or some other experience.

Although the present study is not concerned with a remedial programme for under-achievers, the study by Brown does pose awkward questions. If a student is anxious, and this predisposition to anxiety is encouraged by the situations in which the student finds himself, then perhaps instead of looking at the type of counselling strategy needed to alleviate anxiety, researchers should be looking at the type of instructional situation into which the student is forced. Perhaps there is a need to look at the causes rather than the cures. Brown,[38] however, does sound a note of caution. He says that the study has limitations primarily due to the small sample size, but it does represent an exploration of the possibility that some group treatment student type combinations facilitate academic achievement and personal growth more than others.

Barratt and White[11] looked at slightly different factors in medical school. A three-year study was undertaken which was concerned with

examining the relationship between several factors. Impulsiveness, anxiety, academic performance, attitudes, and necessity to seek psychiatric help, were combined in a variety of ways. The level of anxiety was measured by means of the IPATASQ, which over a period of the three years of the study, had a test/re-test reliability of 0.88. Students were divided into 4 groups - HIHA (high impulsiveness, high anxiety); HILA; LIHA; LILA. Results were correlated at the end of each of the three years. The results indicate that all of the HIHA students sought psychiatric help or counselling during these three years; only one other student sought such help (a LIHA student). The HIHA students' grades dropped during their second and third years, "perhaps because of internal conflicts." Their self-concept seemed to undergo a change, since they saw themselves as being different from other medical students and from what they wanted to be. In conclusion the researchers say:

> The purpose of this study was to relate impulsiveness and anxiety to medical students' academic performance and attitudes. Even though there were no differences in mean MCAT scores (medical college admission test) among the 4 groups of students with varying degrees of impulsiveness and anxiety, there were differences in academic performance. It is clear from this study that non-intellectual factors relate to performance in medical school. Since all of the present study subjects in the HIHA group were lower academic achievers than the members of the other groups, and all sought psychiatric help, it was obvious that their poor academic performance was at least partially related to their personality problems. The results suggest that it may be possible to identify some students with potential problems early in their medical school programmes.

If this is true for a course which extends over a long period of time, it must surely be important in a course where time is at a premium. It is difficult to separate anxiety from academic performance, since so much of the research already quoted appears to point to this type of relationship. Yet it would be presumptuous to assume that all anxious students <u>per se</u> will perform badly. It seems to the present researcher that the function of counselling is to identify the problem and institute procedures which will reduce anxiety to an acceptable level for the individual, and in this way, one could expect performance to match expectation.

As Newsome et al[45] have said:

> Essentially the counselling process is concerned with change and growth: but it is not the counsellor who seeks to change the client. It is the client who seeks change and development within himself, and the counsellor's role is to aid such change, by allowing the client to clarify goals and feelings to the point where he can confidently assume self-direction.

The University of Keele Counselling Service has been very much concerned with students' problems since its inception, and yet it is interesting to read that most of their work appears to deal with subject choice, academic difficulty, study habits, general and specific vocational information, personal - the last category being described as a global category. This seems to suggest that the things which bother people are the everyday mundane things, that nevertheless can assume such gargantuan proportions as to cause real distress in many human beings. This should remind us that the problems which the counsellor has to deal with are the problems of everyday life (Jourard 1961; Arbuckle 1968). Situational anxiety arises out of situations which to some individuals are commonplace, to be taken in one's stride, but to others are insurmountable obstacles. Before looking at some of the problems encountered during the present research, it is as well to remind ourselves that all helping and human relationships may be "for better or for worse." Carkhuff and Berenson[40] assert that:

> At any time when we intervene in the lives of people we love or people whom we are paid to serve, our effects may be constructive or destructive. It depends in part upon the level of interpersonal skills that we offer.

These words serve to remind us that we influence people without being totally aware of the degree of influence, and so the counsellor must always be self-critical, humble, and develop an awareness that may require more emotional involvement and empathy than he has experienced before.

4.2 Anxiety level and identifiable periods of stress related to the counselling literature

Who sought counselling, why, and under what circumstances? This section is most conveniently divided into two parts: those who were counselled during the pilot investigation; and those who sought counselling during the field investigation. Appendix 5 lists the students by department, sex, and anxiety score. There were 6 female and 9 male students during the pilot investigation.

	Pilot investigation group		Counsellees group		't' test
	Mean	SD	Mean	SD	
Test 1	25.62	8.63	29.20	8.82	$t = 1.49$ $(p > 0.001)$
2	28.37	10.87	43.33	7.22	$t = 5.07$ $(p > 0.001)$
3	29.55	10.01	45.6	5.55	$t = 5.94$ $(p > 0.001)$

Table 4.2.1 A COMPARISON OF THE MEANS AND STANDARD DEVIATIONS OF STUDENT GROUP WHO SOUGHT COUNSELLING, WITH THE WHOLE GROUP, DURING THE PILOT INVESTIGATION

The counsellees were significantly more anxious as the course progressed than the rest of the group, and significantly more anxious than they had been at interview. This is not surprising when one looks at the table in Appendix 5, and also at the case studies in Appendices 11, 12, 13. More anxious students appear in General Studies and Business Studies courses. There are possibly two explanations for this: (a) graduates tend to be more anxious than non-graduates (see the work of Derrick and Wankowski.[46] More than half the students in these two departments are graduates. (b) There is a higher proportion of female students in these two departments. Female students tend to demand more of themselves, and tend to be more anxious, possibly because of high "Id" pressures.

Was this pattern repeated on the field investigation? Appendix 6 lists the students who sought counselling during the field study. There were 20 students in all, of whom one-half were female students. This is a

much higher proportion than on the course as a whole. Table 2.5.2.2 shows that there were 175 male students on the course, and only 62 female students, and of the students completing all the 4 tests, 98 were male, and 47 female. The proportion to be expected, then, was roughly 2 to 1 male to female. Again, 55% of the counsellees came from the two departments mentioned above, viz, General Studies and Business Studies.

	Field investigation group		Counsellees group		't' test
	Mean	SD	Mean	SD	
Test 1	21.39	8.38	27.25	10.68	$t = 2.6$ $(p = 0.005)$
2	25.12	10.4	34.9	11.14	$t = 3.93$ $(p > 0.001)$
3	25.97	10.18	37.7	9.81	$t = 4.87$ $(p > 0.001)$
4	27.36	9.45	37.59	7.07	$t = 4.69$ $(p > 0.001)$

Table 4.2.2 A COMPARISON OF THE MEANS AND STANDARD DEVIATIONS OF THE STUDENT GROUP WHO SOUGHT COUNSELLING, WITH THE WHOLE GROUP, DURING THE FIELD INVESTIGATION

As with the pilot investigation, the counsellees were significantly more anxious than the normal college population. Their anxiety also increased more rapidly as the course progressed. It is interesting to note that towards the end of the course, the Mean test score of the counsellees fell slightly, and the deviation from the Mean also decreased. It would seem that anxiety had reached a peak, or that the counselling sessions were making some contribution towards holding the anxiety at a given level, or both. This is discussed in Chapter 5. The standard deviation seems to indicate that the group as a whole achieved a degree of homogeneity as the course progressed, a greater degree, perhaps, than the general population.

Two individual case studies are worthy of comment, viz, case studies D and E. Case study D was a female engineer (incidentally the one and only female engineer in the history of the college). This student had a low level of anxiety, and fell into a category of students investiga-

ted by Levitt,[8] who, having a low level of anxiety, were also found to be apathetic towards academic work. This student certainly never appreciated that time was limited, and work was rarely in on time. She did not complete the fourth test, since by that time she was attending the course spasmodically. She failed the course, not because she had not the ability to complete it satisfactorily, but because she could not discipline herself to complete assignments. In other words, she was the antithesis of most students who sought counselling in that she was not anxious enough to be motivated towards succeeding. Case study E was a student of apparently normal level of anxiety, but a closer examination of the test results indicate that she came into the category previously mentioned before in connection with Case study B, of a student whose covert, overt scores were widely separated, and, for example, in Test 2, her true score would probably have been better expressed as twice the covert score, or 38, giving a sten score of 7. This type of student is very often concerned with what other students would regard as minor issues: that is, the student is anxious about remarks on essays, which to others seem to be innocuous; with making sure that assignments are correct in the minutest detail; who rarely manages to obtain a global picture of the course requirements, and so needs constant reassurance that what has been done is absolutely right. Some people would describe such a student as a perfectionist, others as a "fuss-pot" or whatever the appropriate colloquialism is. Nevertheless, it is true that this type of student does need as much support as the more overtly anxious student.

To what extent does Chapter 3 throw light upon the problems experienced by the counsellees? Certainly in terms of the times when counselling was necessary, the answers to Section A provide statistical evidence. Questions 2, 6 and 10 of the questionnaire pin-pointed the times accurately, and most of the counsellees were at risk during these times. But what about the questions which were of a more personal nature? Pressure of time, fear of failure, and the next job, were high on the list of causes of increased anxiety. The married men students were obviously anxious about the future, and those who had held responsible posts in industry were afraid of failure. In most cases these aspects were closely related to high scores on the Q_4 factor. Many of the female students were also concerned about the effect the course had on

the family, and many expressed anxiety about family responsibilities. This was very similar to what Cleugh[6] found in his research. The degree to which anxiety was related to lack of clear direction, and other aspects related to course work, reflects the kind of answer outlined by Seth.[4] Very often in the counselling sessions, remarks were made such as:

> If only I had been told that that was what was wanted.
> I am not even sure now what I have to do.
> Could you give more references.
> What happens if the work is late?
> Whom do I ask about X?

Clearly, many of the staff were unaware of, or were so familiar with the course organisation that they could not appreciate, the difficulty experienced by some students in understanding what was required. It is surely a truism that the more familiar we all are with the material which we are attempting to teach, the more likelihood there is of our being unable to appreciate the difficulties of others meeting the material for the first time.

4.3 Case study material

4.3.1 Pilot investigation

How did the group counselling sessions attempt to help (a) to solve these and other problems, (b) the individual in an unfamiliar situation? First of all, how did the group sessions operate, and who were the individuals who availed themselves of this opportunity?

During the pilot investigation there were three groups of 4 students; 3 students preferred individual meetings only. Group A consisted of students drawn from Business Studies, General Studies, and Engineering; Group B from Agriculture, General Studies, Science; whilst Group C consisted of representatives from Business Studies, General Studies, Nursing, and Agriculture. The group members were chosen by the researcher,

and told that they could come when they chose, and as often as they chose. Sometimes all 4 within the group attended at the same time, whilst on other occasions the composition of the group varied. Occasionally members of the group would come on their own, particularly if they wanted vocational guidance, or they had a personal problem. Most of the group sessions were concerned with the situational pressures of work assignments. The group sessions were usually of half-an-hour duration, and took place during the lunch-break, or at 4.30 after the afternoon session. All the group sessions during the pilot investigation were informal, unstructured sessions. A typical example is quoted below. Group B, which contained members from four of the college discipline areas, met just before they were due to go out for their second practice of teaching. The topic for discussion was how to cope with the mounting workload from Education and Special Method sections, as well as getting ready for the final teaching practice period. Student B1 was an Agriculturist, B2 General Studies, B3 Business Studies, B4 a Scientist.

B1 I find I cannot cope with all the work I have to do at the moment. Some sections of the college seem to me to have more work to do than others.

B2 I agree with you: we have much more work to do than others; and I have to teach more lessons than most people on teaching practice.

B1 Yes, I found that this was true from talking to other students after first teaching practice.

B2 What you both say may well be true, but I can't see what help it is to any of us in our present situation.

B1 It would be helpful if all of us had the same amount of work to do.

B2 OK, but let's get on with discussing what we can do.

B4 I agree: I don't feel that I want to waste time discussing the differences between departments, because I still have work to be completed.

Tutor Perhaps we should discuss exactly how much work has to be completed, and the deadlines for each piece of work.

B4 Agreed. I have 3 pieces of work to be completed in 2 weeks.

B1 OK, let's plan what has to be done, and for when.

This conversation was typical of the group sessions which were concerned with work assignments. The group usually took about half-an-hour to get

round to deciding their own method of attack on the particular problem. As can be seen, the tutor's role was a passive one, attempting to guide when necessary in such a way that the problem did not become secondary to individual prejudices or fancied wrongs. As Messinger says, quoted by Levitt,(2)

> The unexpected is always happening, emergencies are constantly arising. The misbehaviour of other individuals, the recurrence of disruptive events - these and other things may strain the capacity of the individual for easy accommodation to the task. His comfort, his gratifications, perhaps even his growth or safety, are threatened.

In what ways did the individual sessions vary from group sessions? One of the visits of Student Case Study B is taken as an example.

Tutor Hello, do come in and sit down. How can I help you?

Mr B My work isn't good enough. Most of what I do doesn't satisfy me.

Tutor an Let's have a look at your progress so far. Education C+, C+ and B; and in Special Method B-, B and C. Do you feel that this is not good enough for you?

Mr B Well, yes and no. The marks are fair, and it is a good average, but shall I continue to do as well with this next piece of work? You see, I don't seem to be able to concentrate as well as I used to, sometimes I spend hours and there is little to show for it. I get so anxious about what I am doing, and I feel that I am not spending enough time with my wife and children: they are doing all they can to help me, but I get so tense and irritable.

Tutor Do you find that you can plan what you have to do?

Mr B Yes, that doesn't seem to be any problem. I don't seem to be able to get on with it as quickly as I ought to. My mind seems to go blank at times, and I can't get on with my work.

The conversation continued in this vein usually for half-an-hour or so, as this student attempted to come to terms with a "self" which he did not recognise. As can be seen from Appendix 11, this was only one of a series of conversations which took place not only with the tutor but also with other members of staff. The conversations also took place in the student's own home, with his wife and family. It proved impossible for him to come to terms with his increasing anxiety whilst on the course. All the help that could be mustered proved inadequate; the support of his family was not enough. Perhaps no-one will ever know

how the family suffered during this time. What was the problem? Basically a high score on "Q_3" indicated a lack of self-sentiment, an inability to come to terms in a personal way with the variety of problems which seemed to present themselves: this, together with high scores in Tests 2 and 3 on "C", "O" and "Q_4" sub-scales, indicated an emotional immaturity, an individual easily frustrated, who suffered from strong "Id" pressure.

4.3.2 Field investigation

The group discussions and the individual tutorials during the pilot study period provided useful insight into the problems and approaches adopted by students in trying to solve the factors which gave rise to increased situational anxiety. What happened during the period of the field investigation. Were the problems of previous work repeated, and were the measures taken, any more effective?

There were 20 students concerned with counselling during this time (Appendix 6). Case Studies D and E were taken from this period. Again, group sessions were organised by the tutor, since this had been found to work quite satisfactorily in the time available. The students were again divided into four groups of 5 students. The Case Study students also were included in the group sessions.

Group A		Group B		Group C	
Student A1	BSP (M)	Student B1	NT (F)	Student C1	Eng (F)
A2	GS (F)	B2	GS (F)	C2	GS (M)
A3	Eng (M)	B3	Eng (M)	C3	BSP (M)
A4	Ag (F)	B4	BSP (M)	C4	Sc (F)
A5	NT (M)	B5	Sc (F)	C5	GS (F)

Group D

Student D1	Sc (M)
D2	BSS (F)
D3	GS (M)
D4	GS (F)
D5	BSP (F)

As during the pilot investigation, group sessions were entirely voluntary, and the members of the group came as a whole group, or as part of the

group, or, indeed, they came on an individual basis. Case Study D was in Group C; Case Study E was in Group D; and Case Study F was in Group D also. Perhaps this was not a good idea, but since the groups were formed before first teaching practice on the basis of the students who had come to the researcher and asked for counselling help, it was not possible at that time to know a great deal about these two students. As the Appendix shows, Student E was not an anxious student: in fact she had a low sten score at interview; whilst Student F was described at interview as being of a normal level of anxiety. This does demonstrate the difficulty of detecting at interview students who are likely to want counselling, but who apparently have a low level of anxiety. This point will be discussed in the following chapter.

4.3.3 Field investigation counselling strategies

How, then, did the counselling sessions attempt to alleviate the situational anxiety encountered by students during the field investigation? Firstly, a look at Appendix 9 may throw some light upon the factors which were discussed. The times when anxiety was at its highest appear to have been clearly defined in Section A of the questionnaire. Section B pin-pointed some of the individual factors contributing to increases in anxiety. These seemed to be grouped around two areas, namely, the home (questions B1, 3, 8, 9, 12 and 28); and the college and course (questions 7, 13, 15, 18, 25, 26 and 28) (see Tables 3.4.1 and 3.4.2). An interaction could be expected, then, between the individual, the home and the course. The times when the interactions caused most anxiety appear to be those identified in Section A. Was this borne out in the counselling?

During the pilot study most of the group sessions were concerned with problems associated with work, and this was certainly true of most of the sessions during the field study, when again the personal problems were discussed in the individual sessions. Consequently the group sessions tended to be concerned with the college and the course, whilst the individual sessions centred around the family and home. Cleugh[6] identified those factors which seemed to upset the wife/husband relationship:

> ... a willing acceptance of the sacrifices necessary initially, and then a dawning awareness that more is demanded than was anticipated.

As Newsome[39] has suggested, the cloistered atmosphere associated with a residential course in higher education, creates emotional problems which are of such an intimate nature very often that they cannot be discussed with the family, and rarely with the counsellor. The mature student has to adjust to other students, to a new environment, and to living in close proximity with a polymorphous society. It is difficult for the married man or woman to ignore members of the opposite sex whom they may find attractive, and subsequently, visits home may be undertaken accompanied by real or imagined feelings of guilt. Thus, students who sought counselling related to work, very often had additional concerns or anxieties related to the family. A typical example of this was Student 6, Appendix 16. Not away from home for the first time (but during his previous study he had been single), he found it only too easy to settle into a pattern of behaviour as a student, which he had been used to before. Consequently his work suffered, as did his home relationships. In these situations, defence mechanisms play a part, and so the pressure of work was great (but he was the best qualified student in his department); his family was having difficulty in adjusting (and so was he); there was little support at college from the tutorial staff, and perhaps too much support in other directions for his procrastination regarding course work. Counselling revolved around getting material for assignment completion, and scheduling workload initially, but eventually it became evident that personal problems were at the root of the trouble.

How does one deal with this situation? It is very difficult, because in a closed community the counsellor is so often aware of what is going on, and what is the cause of the anxiety, without being able to use the information. The student must feel that help is being offered freely and without "strings." The type of problem very often faced is outlined by Newsome.[39] Here, an extreme case of what can happen has been quoted. The single male student with a girl-friend at home, goes home every week-end, and finds himself unable to make contact within the course he is undertaking. Gradually he finds himself attracted to other members of the opposite sex on the course, and finally, when the rela-

tionship with his girl-friend at home is ended, he has to face hysterical scenes at the university or college, and histrionic attempts at suicide. With married men and women students this can also happen, with sometimes disastrous results for both parties. Sometimes the counsellor has to listen and stand by, watching the breakdown of previous well-established relationships. Sometimes, fortunately, counselling sessions help the individual to come to terms with a rapidly-changing situation, and help the individual to see it as a transitory phase. Group sessions rarely appear to be useful in solving this kind of problem unless two or three individuals are experiencing the same thing at the same time; even then, who would be brave enough, or anxious enough, to present such a personal experience to a group?

Nelson-Jones and Strong[42] together with Mowrer, have suggested that:

> If a group leader is prepared to risk negative self-disclosure, not only will he be modelling a desired behaviour for group members, but he will also be creating the conditions of trust and psychological safety necessary for similar disclosure from them.

It would seem then that if self-disclosure is important, it would be best if it came from the group leader first. However, research quoted by Nelson-Jones[42] has shown that subjects anticipated that disclosing negative personal characteristics would be more risky than disclosing positive ones. Nevertheless many students do seem to reach a level of anxiety where they are compelled to speak, even if they place themselves at risk by the disclosure. Consequently the behaviour of others does cause anxiety of sufficient level for a member of a group to raise issues which, although of a personal nature, affect other members. One of the questions discussed refers to the "inconsiderate other" student.

> The student in the next room to me, for example, is driving me mad - do you know he plays his record-player full volume after midnight? I don't think it ought to be allowed. And you can't get to know the lecturers, can you? I mean, most of them are so remote, I'm sure they couldn't care less about me.

This usually provokes heated discussion within the group, since there is the dilemma of the degree of interference by authority. Staff very

often feel that it is a problem for the Student Council;* whilst many students feel that the Student Council consists of people who are themselves inconsiderate. Affinity within the group does not always lead to a solution to problems: frequently it is the disagreement between members which gives rise to an increased understanding of the others' viewpoint and problem. Since life is a compromise so very often, the individuals within the group have to come to terms with a viewpoint of a problem which is different to their own.

Group sessions were mainly concerned with feelings of insecurity. As can be seen from Appendix 17 (a typical group counselling discussion), many students felt that failure was a reality, and this was reinforced by feelings of being constantly assessed, of lack of clear direction, of unsureness in a new situation. Add to this the areas associated with the family, and the students who attended group sessions, came with a feeling of loss of identity, a failure to appreciate the impact of the course upon their self-concept. Many found it difficult to appreciate that each interaction, no matter how trivial it might seem, changed them all in some small degree, so that the individual at the end of a seminar session, at the end of a counselling session, at the end of the course, was different to a greater or lesser degree to the individual who had embarked upon the interaction.

Argyle[41] discusses the dimension of poise/social anxiety. A questionnaire developed by Bjerstedt, 1966, suggested that the main loadings were on such items as "not liking to be watched at work" (feelings of being assessed); being troubled with shyness; finding it difficult to speak in public, and feeling self-conscious (fear of failure anxiety); not being able to conduct seminar discussions. A questionnaire developed by Willoughby as far back as 1932, for various kinds of social anxiety, has been used by Wolpe[34] as a basis for behaviour therapy with patients with this form of anxiety. The comments then made by

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* "Student Council" here refers to a body of students elected each year, at the beginning of the course, by the students themselves. It usually consists of President, Vice-president, Secretary, etc, and is designed to look after student affairs, functions, social events. It elects representatives to the governing body, academic board, as well as several working parties within the college.

students on the present course do not appear to differ significantly from comments made by students in different situations over a long period of time. This appears to substantiate the present research. However, as far as the present researcher can discover, some investigations appear to have concentrated upon the evaluation of the "situational anxiety" factors (Cattell, Bendig, Levitt, Eysenck), whilst other research work has been concerned with the counselling of students who are experiencing the phenomena (Wolpe, Hosford, Newsome, Carkhoff). There would still appear to be a need, then, to attempt to combine the two areas.

4.4 Summary and conclusions

Most of the students who sought counselling appeared to have experienced increasing levels of "situational anxiety." This anxiety seems to be related to the two clear areas investigated by the questionnaire (Chapter 3), viz, critical periods of time during the course; and the personal areas covered by Section B of the questionnaire. These areas can be divided into two: those concerned with the course; and those which relate more directly to responsibilities of the student outside the course structure. The counselling sessions again seemed to confirm the findings of Chapters 2 and 3, since the areas of discussion and concern were those mentioned above. In general, then, it would appear to be possible to identify at an early stage those students who are likely to be at risk, and to identify the areas likely to cause most concern. The counselling procedures for the various types of student identified have been well tested in numerous diverse situations by many researchers.

Much of the research quoted has been summarised by Carkhugg,[40] Weinstein[31] and Harper.[43] However, it is as well to note some of the comments made by Nelson-Jones[44] in this connection.

Effective counsellor training requires effective counsellor-trainers. The counsellor-trainer must be a skilled practitioner as well as a competent academic. How much more so, then, must the counsellor "on

the job" be a skilled practitioner, and have a need, as Nelson-Jones (44) so rightly points out, of administrative support, at both institutional and departmental levels. The counsellor, ideally, must also have received some training in the management and social environment of counselling.

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CHAPTER 5

SUMMARY AND CONCLUSIONS

5.1 Re-statement of the findings of Chapters 2, 3 and 4

5.2 Critical evaluation of the methodology of the study

5.3 Recommendations and suggestions for further research

5.1 Re-statement of the findings of Chapters 2, 3 and 4

5.1.1 Re-statement of the findings related to IPATASQ

At the beginning of the summary and conclusions to such a controversial area of research, it is as well to remind ourselves once more of the dangers inherent in this field. Levitt[8] says:

> Among the possible shortcomings of research on anxiety are the widespread use of artificial data-collection situations and artificial stressing techniques, limited research populations, experiment anxiety, experiment sophistication and evaluation apprehension among subjects, and anxiety in the experimenter. The extent to which these factors, either individually or collectively, have affected studies of anxiety is unknown.

The results of the present research related to the IPATASQ seem to be in accord with the findings of Cattell,[3] Bendig[24] and Levitt[2] in particular. They are somewhat similar to the findings of Derrick[18] with university undergraduates at Bradford. The "norms" established for the current population were based upon the American general population "norms", whereas Derrick used the university population of America as "norms." Both the Wolverhampton group and the Bradford group appear to be slightly less anxious than their American counterparts. That some students appeared anxious during the course is substantiated by remarks made on the questionnaire, and during counselling sessions. Eysenck (1963) has described anxiety as emotional sensitivity, and it may be that some of the students who are described as anxiety-prone or having a pre-disposition to anxiety, are also very sensitive. It may account for the fact that students who see remarks on other students' essays as being different to the remarks on their own essays, and so become anxious, are over-sensitive. The anxiety arises out of a typical situation where students compare notes.

The test/re-test reliability of the IPATASQ seems to be confirmed by present research findings (Chapter 2). Thus support appears to be given to the findings of Levitt and Persky,[20] Cattell[3] and Bendig,[25] in that it would seem to provide:

> ... a useful clinical thermometer to measure the anxiety levels of the individual not only at different times but in differing situations.

It is necessary to reiterate that the present researcher feels that the B/A factor can also give very useful additional information, as well as the total raw score, and sten score. This is particularly true when the overt (B) score is much lower than the covert (A) score. In these cases it would seem from experience that a doubling of the covert score might give a much truer picture of the expected level of anxiety during the course (see Appendix 7).

5.1.2 Re-statement of findings related to the questionnaire

But what is anxiety, and what really causes it? The question has been asked on many occasions, and a variety of answers have been advanced. Weatherhead,[45] a well-known churchman, has this to say:

> Anxiety is the feeling that arises when the welfare of the body, mind or soul is threatened by conflicting factors, conscious, unconscious, or both; producing a situation which cannot be solved by appropriate action because of unconscious factors to which we have no direct access.

This would appear to be a comprehensive summary of the factors, expressed or inferred, when discussing anxiety with counsellees. Most students who have felt anxious during this present study would agree that conflict exists, and it is all the more difficult to deal with since it appears to be related to more than one factor at a time. As Chapter 3 suggests, the type of course, and the times during the course when anxiety seems to be at a peak, are clearly definable. What is difficult to ascertain is the degree of each factor contributing to the anxiety of the individual at any one point in time. Some of the factors which appear to interact have been isolated; namely, those connected with the family, and future career prospects. In fact they are very similar to the factors isolated by Cleugh.[6] The fact that some of the female students became more anxious during the summer term, when other students' anxiety seemed to have reached a peak or to have

been lowered, could be related to increasing home pressures. As one student put it:

> ... during the course you have something to do in a limited time, and as the work nears completion so you become increasingly aware of the other tasks, neglected for so long, which await your return to normal family life.

And then the children tend to want to stay up longer during the lighter evenings; it is a time when the family normally go out more together, and the pressures increase as the examination approaches. The questionnaire was not designed to elicit this kind of intimate detail, nor indeed to discriminate between married or unmarried females; nevertheless, from remarks made, there would appear to be some truth in the assertion that home pressures tend to increase towards the end of the course for this kind of student.

From an analysis of the comments made by students, it would seem that there is also a "concept of self" factor which relates to both male and female students. This seems to be best described by reference to two remarks often made:

> I feel that I cannot come up to my own and others' expectations of me.
>
> Because I am a mature person, then my teaching should reflect this maturity, and hence should be better than it appears to me to be.

They have an expectation of themselves which may be inconsistent with others' expectations of them; certainly in the field of teaching practice, many feel that they should have achieved the same degree of competence achieved in a previous field or occupation, without acknowledging that that previous level of competence was the result of years of relevant experience. The anxiety related to this is situational, real, and very difficult to deal with, since it would appear to be a phenomenon which will only be resolved in the light of subsequent experience.

5.1.3 Re-statement of the interrelationship of findings of Chapters 2 and 3

It was noted in both the pilot and field investigations that the female students were more anxious, as measured by IPATASQ, than their male counterparts. Some discussion on this fact (2.6) suggested that female students, despite many reassurances, felt that the IPATASQ was being used as some kind of assessment, and this appeared to be confirmed when students who asked about the results, were given full accounts of the diagnosis and prognosis from the test data. Guildford[28] quite rightly issues a warning about assuming too much from answers given to the type of question asked in the IPATASQ. Here an apparent interaction takes place, and the answers to one set of questions is reflected in answers to another set of questions. Cattell[3] himself has suggested that the test be used as an indicator. Nevertheless the present researcher feels that in discussion with students the test does appear to indicate certain tendencies which are reflected in behaviour patterns, and seem to fit closely into the "labels" given to the 5 sub-scales (C, O, L, Q_3, Q_4) in the test, the same 5 sub-scales which have been used by Cattell and his associates in diverse experimental situations using the 16 PF. The predictable nature of the test appears to be reinforced when considering the B/A ratio (Appendix 4). Both Bendig[24] and Levitt[20] have suggested that this ratio gives an indication of pre-disposition towards anxiety. The covert (A) score, hidden anxiety, appears to remain fairly constant, and this is particularly true of students with sten scores of 7+ (Appendix 7). It would seem reasonable therefore to use this as an indicator of level of pre-disposition towards anxiety where the difference between the B and A scores is large. (See Student 1, Appendix 4, where an initial covert score of 17, when doubled to 34, would give a sten score of 6, a much more realistic appraisal of level of expected anxiety in this student's case.) Cattell, Bendig and Levitt have all suggested that the closer the covert and overt scores are, the more likely it is that the individual will be stable, since the hidden and manifest anxiety scores closely approximate to a ratio of 1, and this is true even when the combined scores indicate a high sten score, and hence a high anxiety level. It is the researcher's experience that these students, even though anxious, are usually highly motivated.

The research work of Cattell, Bendig and Levitt has suggested that as the overt/covert ratio approximates to 1, the more likely the student is to be aware of those factors which contribute towards an increase in situational anxiety; and hence is in a better position to analyse and deal with these factors either individually or with the help of a counsellor. The drive which arises from an increase in anxiety level is then directed towards fulfilling the task or self-actualisation programmes, and leads to a highly motivated student. The level of arousal perhaps then more nearly approximates to peak performance (Yerkes-Dodson Law) and not to a lowering of performance because the level of anxiety has increased the level of arousal beyond the optimum point. The anxiety in this case then appears to act as a drive or form of energiser.

An example of this can be seen by referring to Appendix 7 and Student 93. On the four tests the B/A ratio was 1.1, 1.0, 1.05, 1.21, and although the anxiety level of this student would be described as high by Cattell, nevertheless this student, although anxious, was stable and highly motivated, as measured by performance.

The IPATASQ results and the questionnaire results appear to be complementary. The times in Section A when anxiety was predicted to be reaching a peak, were confirmed by test results (see Tables 2.5). Certainly these were the times when students seemed to attend counselling sessions most frequently, or just came to the tutor's room for a "chat." The areas which contributed to increases in measured anxiety levels were abstracted from Section B of the questionnaire. These seem to be very similar to the areas isolated by Cleugh.[6] The complex relationships which exist between home and college factors would be difficult to separate out (perhaps impossible, since they would be different for each individual student). That they exist has been recognised by many researchers. Lomax[46] says that:

> Few of us are in the fortunate position of being able to concentrate on a single problem, and the same is true of students. Many of the problem areas are interrelated; for example, religion, morals, and politics are often closely associated in a "personal values" factor, whereas physical and mental health, social activities, personal relationships, sex and marriage are

> linked together in a "personal relationship" factor. These are the stressful situations where the students sometimes find difficulty in securing help.

Continuing comment on this issue, Lomax reminds us that if the purpose of research into teacher education is to improve our programmes of teacher preparation, then it seems that the efficiency of these programmes may be improved by further study of student anxiety, and ways and means by which it may be alleviated. McLeish[47] suggests that we still have a very limited understanding of the pressures exerted by college environments. The present researcher would concur, and would pose the very serious question, "Do we begin to look for the cures or causes of this malaise?" Is counselling expansion in the colleges of higher education a direct result of not being able to diagnose the causes of anxiety in college environments? The present research, has only, it would seem, examined the "tip of the iceberg" in a particular course and situation, but the problem is much more widespread, as is made clear by the numerous research articles and books on this subject, viz, Wade and Shertzer,[22] Ryle,[48] Wankowski,[49] Krumboltz,[31] Paul[37] and many others.

The type of counselling strategy adopted seems to depend upon the type of student, the age of the student, and the time available for counselling. Behaviour modification, and Roger's client-centred approach, both require an adequate counselling "back-up" service, and also time within the course structure. Both Newsome[39] and Nelson-Jones[44] emphasise the importance not only of training for counsellors, but the necessity of providing adequate administrative and other help as support to the practising counsellor.

The figures related to student wastage both at university and college level have remained depressingly constant, and the research has stressed the need for student health centres to meet individual needs, as well as training programmes for counsellors. The problems facing those individuals who attempt to meet these diverse needs of students are numerous and difficult: they are outlined by Ryle[48] (particularly in Chapters 5 and 14). The problems associated with the needs of students on a short, intensive, disjointed course, such as the one being investigated, are further aggravated by the time factor, of

availability of both student and counsellor. This is perhaps particularly true of students living at home and travelling daily, who may have journey arrangements with colleagues. The question posed in 4.1, which is related to the results of work by Gilbreath,[36] suggests that the type of counselling strategy will have to take into account ways in which maximum benefit can be derived in the shortest possible time. The types of problem encountered appear to indicate that the most effective types of counselling are individual and unstructured group counselling strategies. Appendices 10-17 indicate the problems faced by both individuals and groups, and the various ways of attempting to deal with the problems. Both behaviour modification and desensitization programmes would seem to be appropriate strategies for the students being studied, but these techniques need to be employed in a situation where the student is able to visit the counsellor during the teaching practice periods, when so many students are a considerable distance from the college. The present course structure does not readily lend itself to systematic counselling, which lasts for more than 6 weeks continuously, except during the summer term, when the indications are that anxiety is either lower or has been stabilised. The unstructured group approach appears to be sufficient for most of the problems related to course work. The few students who require specialised treatment beyond the individual sessions, should be referred to specialised agencies outside the college in the present situation, as happened with Student Case Study B (Appendix 11).

5.2 Critical evaluation of the methodology of the study

The IPATASQ was administered in accordance with the instructions in the handbook (Cattell).[6] All the interviewees are asked to fill in this anxiety scale, referred to on the answers sheet booklet as a Self-Analysis Form, and from this data the "norms" for the present population were determined. The researcher was not always able to be present to administer the test to interviewees, and so an instruction sheet was used (Appendix 24) to obviate as far as possible any discrepancies between different administrators of the test. Ideally, despite these precautions, the researcher should have administered all tests, since even

changes in intonation and stress when reading out the instruction sheet may affect test performance. It is possible that some tutors inadvertently created a more stressful situation than others. The times during the course when the test was given was determined by the answers to the questionnaire (Chapter 3). However, the questionnaire was perhaps not as explicit as it could have been: for example, question 2 in Section A could have been reworded to read: "during the week immediately prior to the first teaching practice." Then, exactly what differing interpretations do students place upon questions such as "... immediately before second teaching practice"? Are they thinking of the day before, or the week before? How good is the memory after 30 weeks?

There was insufficient time to administer a IPATASQ test between the end of first teaching practice and the end of the first term: if there had been, would there have been a slight decrease in level of anxiety compared with Test 2? The results of both the pilot and field investigations suggest peaks of anxiety at the times indicated by the questionnaire (Chapter 3), but no troughs are obvious between these times, since no results are available. If anxiety is related to situations, and varies over a period of time and with different individuals, then one might expect some variation to be evident in the between-time periods. The test/re-test reliability for the three and four test studies appear to be in line with related research, but there appears to be no research evidence that this continues to be true for more than four test administrations in one year.

Referring to Section B of the questionnaire, there does appear to be a relationship with Section A, although this was not examined in detail. One question does arise, and that is, whether the students who had completed all three or four tests (pilot and field investigations) should have been asked to put their name on the questionnaire so that a comparison could have been made. In the light of subsequent experience, the researcher would suggest that this should be done, as it would give some indication of the possible relationship between answers to Section B and test scores, and also sub-scale scores (C, O, L, Q_3, Q_4). This would have allowed the researcher to have investigated any relationship which might exist between level of anxiety, times when peaks are reached, and the areas causing stress. The questionnaire in total could only be

given at the end of the course, but the questions in Section B could have been given at the same time as the repeat tests. A relationship between college or home factors, or both, might have been established with level of anxiety and peak times of anxiety. Perhaps the information could have been analysed in such a way as to produce cluster analysis on this data from Section B. Referring to Tables 3.4.1 and 3.4.2, it would seem that the broad categories which emerged would be related to (a) college work and (b) home anxieties. Within these broad categories, had smaller clusters emerged, additional useful data would have been provided to be used with the IPATASQ results.

Would this additional information have influenced the counselling strategies? There is little doubt that any additional information has to be taken into account when attempting to devise appropriate counselling strategies. In this situation perhaps a type of behavioural group therapy advocated by Harper[43] might have proved to be effective. Harper deplores the paucity of writing about research in this area; although Lazarus and Fensterheim[43] both report upon its successful application in group psychotherapy for treating problems of assertion. Harper feels that full use of desensitization as behaviour therapy in groups should be investigated, since he feels strongly that use should be made of the full interactional group process. Cartwright,[50] in summing up research on techniques of achieving changes in people, has developed 8 principles that provide a good summary of goals to be considered in working with groups. Of these, the points which follow are deemed to be worthy of particular note:

> 1 If the group is to be used effectively as a medium of change, those people who are to be changed and those who are to exert influence for change, must have a strong sense of belonging to the same group.

Hence selection of students for each group section 4 (pilot and field investigations) must be undertaken with great care. Counsellors are very often those who have experienced anxiety themselves, and so have an empathy with clients.

> 2 Efforts to change individuals or sub-parts of a group which, if successful, would have the result of making them deviate from the "norms" of the group, will encounter strong resistance.

This is particularly true where an individual belongs to more than one group within a course - which is true of all students being investigated.

> 3 Information relating to the need for change, plans for change, and consequences of change, must be shared by all relevant people in the group.

Group identity must be preserved as far as possible. Again, Carkhuff[40] reminds us that any type of intervention in the lives of individuals may be constructive or destructive; everything seems to depend upon the level of interpersonal skills that we have to offer. This means that the counsellor may have to be matched more carefully with the individual being counselled, although the student's preference should always be respected.

Finally, consideration could have been given to the use of the IPATASQ with a control group, between the periods of repetition chosen. Perhaps control groups of high-anxiety students who did not receive counselling, and low-anxiety students who did receive counselling, could have added to the findings. The present researcher prefers this to be considered as an aspect of further research, since the present study was concerned with providing the opportunity to reduce situational anxiety. This, it must be admitted, has led to a somewhat "bastard" design, with a combination of field investigation and action research techniques. However, the argument to be used would be that having identified students whose anxiety level increased during the course, these students were given the opportunity of availing themselves of counselling facilities or not as they chose. Counselling is not something which is offered to one control group, and withheld from another control group. Implicit within the practice must be trust, availability, acceptance (or rejection by the counsellee but not by the counsellor).

The fact that some anxious students received counselling may have affected the results of the IPATASQ, particularly Test 3 during the pilot investigation, and Test 4 during the field investigation. This is considered a small price to pay for helping even one student. The research, it is hoped, will have a practical outcome in that other staff can be alerted to the possibility that students in their sections may be in need of help.

The questionnaire could be reworded to make it less ambiguous both in Section A and B, and the questions in Section B could have been completed at other times than the time chosen, during the course. The possibility of isolating clusters of factors cannot be ignored, and, it is felt, would have made some contribution to the research.

The counselling strategies could have been more varied, and there is an unequivocal need for time to be set aside for counselling of students.

5.3 Recommendations and suggestions for further research

During the pre-pilot period the researcher did briefly investigate the differences between levels of anxiety of students in different disciplines. The results are included in Appendix 22 for the benefit of any future researcher. Since the numbers of students in each discipline could vary considerably from year to year, and the numbers of students in each discipline could vary from 20 to 60+, it was felt at the time that this was an area for future research rather than immediate investigation. However, the researcher would suggest two areas which are related and may prove worthy of research: firstly, the area aforementioned; and secondly, a comparison of the anxiety levels of students accepted, compared with those who are rejected, together with the reasons for non-acceptance, as mentioned in Chapter 2. For researchers interested, data available can be found in Appendix 23.

Adcock[4] has suggested that there are areas of similarity between the work of Eysenck and Cattell in terms of emotional reactivity. It could be that the unstable introvert of Eysenck could be paired with the anxious student of Cattell; or perhaps a more complex relationship may be observed, in that the student who becomes anxious during the course could also move along Eysenck's introversion/extroversion continuum towards introversion, and along his other continuum towards neuroticism.

A closer investigation of the B/A ratio may prove fruitful: the B-A score seems to the researcher to be less fruitful. The reasons for this are based upon observation, and the idea that the closer the B/A ratio is to unity, the more likely it is that the student will be aware of his own anxiety and its causes, and the more stable he is likely to be.

Could it be that the level of anxiety recorded at interview will be the level of anxiety at the end of the student's first year of teaching? This is an extremely interesting field of study. One would suppose that if the situation changes, and anxiety is decreased, the levels should be comparable. If, however, the student finds himself again in stressful situations, then the level of anxiety could well continue its upward trend. The factors responsible would be difficult to isolate, and indeed be difficult to group into any coherent factor grouping. The student could alternatively be presented with a different questionnaire which would attempt to identify those areas which he now finds cause him anxiety, including perhaps some of the items from Section B of the questionnaire.

Other questions which deserve investigation and some kind of an answer might be:

1 Does the anxious student come from a background of anxiety, either in the home, or within the primary groups to which he belongs?

2 Is anxiety a hereditary factor, or the result of a process of conditioning, or the result of an interaction of the two?

3 Is anxiety peculiar to any one class? Can it be associated with social mobility?

4 Is it peculiar to a particular level or type of education?

Counselling strategies, particularly those related to group therapies, need more investigation. The suggestions of Wade and Shertzer[22] would make an admirable starting-point. There seems to be a need to consider counsellor variables such as age, sex, amount of training, type of training, experience, and personality variables in the reduction of anxiety both with individuals and groups. The present researcher feels very strongly that the counsellor should be profession-

ally trained, and work outside the course structure of the student being counselled. He (counsellor) should always be given time and adequate back-up support services. The mental health professional regards anxiety as a painful, debilitating, even catastrophic, condition that cries for alleviation. Some defences against anxiety, like compulsivity and counter-behaviour, seem to be constructive as long as they do not get out of hand. It is perhaps plausible that much human striving is in one way or another a consequence of anxiety. Although hedonism and social progress may be regarded as antithetical, we may conjecture that the advance of human society over the ages is, at least in part, a consequence of the human organism's capacity to experience anxiety, and to either overcome it or learn to live with it.

Finally, the researcher would like to be associated with the last paragraph of Levitt,[2] in his book, The Psychology of Anxiety:

> Anxiety is a Janus-headed creature that can impel man to self-improvement, achievement, and competence, or can distort and impoverish his existence and that of his fellows. The distinction appears to be a sheer matter of degree, of intensity, as it is with many other phenomena of human life. The urgent need is to acquire the knowledge to utilise anxiety constructively, to be its master and not its slave.

Kierkegaard, the 19th-century philosopher, said:

> But within all this they see an anxiety ... They read the signs as tokens of a desire to better one's lot and imply that without anxiety there would be no impetus to learning or improvement. Knowledge in this connection is the transformation of anxiety into fear, the identification of what is "wrong." But anxiety is the mother of the drive to know.

ABSOLVI MEAM ANIMAM

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COURSE DIAGRAM - CERTIFICATE IN EDUCATION (PRE-SERVICE)

	LEVEL 1 (max 108 hr) 18 hr/wk student contact	First teaching practice	LEVEL 2 (max 152 hr) 19 hr/wk student contact	Second teaching practice	LEVEL 3 (max 78 hr) 13 hr/wk student contact
Teaching Studies	10 hr/wk INTRODUCTION TO TEACHING STUDIES		11 hr/wk DEVELOPMENT OF TEACHING STUDIES		7½ hr/wk for 6 weeks a EXTENSION OF TEACHING STUDIES b INDIVIDUAL STUDIES
Education Studies	5⅓ hr/wk INTRODUCTION TO EDUCATION STUDIES		5⅓ hr/wk DEVELOPMENT OF EDUCATION STUDIES		5⅓ hr/wk for 6 weeks FURTHER DEVELOPMENT OF EDUCATION STUDIES
Associated Studies	a RELATED STUDIES OPTIONS 1⅓ hr/wk for 5 weeks b SUPPLEMENTARY ENGLISH 1⅓ hr/wk for 5 weeks		*a RELATED STUDIES OPTIONS 1⅓ hr/wk for 5 weeks b SUPPLEMENTARY ENGLISH 1⅓ hr/wk *c BASIC STATISTICS 1⅓ hr/wk for 3 weeks		
	6 weeks	4 weeks	8 weeks	7 weeks	9 weeks

NOTE *(1) RELATED STUDIES OPTIONS will operate during weeks 1-5 of Level 2.
BASIC STATISTICS will operate during weeks 6-8 of Level 2.

(2) The final 3 weeks of the course will be given to private study and final assessment.

(3) Christmas vacation usually occurs 3 weeks after the end of first teaching practice.

APPENDIX 2

DATA RELATED TO THE IPATASQ SCORES OF STUDENTS AT INTERVIEW WHICH FORMED THE BASIS OF TABLES 2.4.2.1 and 2.4.2.2

Raw score	Male	Female
1	0	0
2	0	0
3	3	0
4	2	1
5	7	0
6	9	3
7	11	2
8	15	5
9	15	7
10	24	3
11	23	4
12	35	6
13	32	11
14	38	10
15	60	10
16	41	9
17	41	14
18	37	22
19	57	8
20	52	18
21	55	12
22	61	16
23	58	11
24	56	11
25	49	16
26	52	17
27	43	10
28	43	13
29	36	12
30	39	10
31	43	10

Raw score	Male	Female
32	32	6
33	34	7
34	27	9
35	25	4
36	19	6
37	21	12
38	20	4
39	20	9
40	15	5
41	20	3
42	8	3
43	9	0
44	9	3
45	9	1
46	2	3
47	4	1
48	3	1
49	8	1
50	2	0
51	1	0
52	0	0
53	0	0
54	1	0
55	0	1
56	1	1
57	0	0
58	1	0
59	0	0
60	0	0
61	0	0
62	0	0

	Male	Female
Mean	24.06	24.50
SD	9.67	9.60
N	1329	351

APPENDIX 3

p 1

DATA RELATED TO IPATASQ SCORES DURING PILOT INVESTIGATION

(only students who completed all tests included) (Session 1973-74)

Subject discipline	Student	Test 1		Test 2		Test 3	
			sten score		sten score		sten score
A	1	34	7	39	8	32	7
E	2	18	4	27	6	28	6
BSP	3	21	5	21	5	27	6
E	4	15	4	20	4	16	4
E	5	23	5	30	6	24	5
E	6	21	5	25	5	24	5
A	7	20	4	18	4	22	5
A	8	32	7	27	6	29	6
A	9	25	5	7	2	9	2
BSS	10	20	4	28	6	34	6
A	11	13	3	11	3	13	3
E	12	20	4	38	7	42	8
GS	13	37	7	34	7	36	7
GS	14	33	7	33	7	33	7
BSS	15	39	7	46	8	45	8
E	16	41	8	45	9	42	8
BSS	17	19	4	23	4	22	4
GS	18	23	5	29	6	30	6
A	19	17	4	19	4	19	4
A	20	19	4	20	4	19	4
BSP	21	14	3	18	4	24	4
A	22	27	5	46	8	40	8
GS	23	24	5	25	5	24	5
NT	24	12	3	14	3	13	3
E	25	30	6	29	6	34	7
S/M	26	40	8	54	10	45	9
BSS	27	42	8	46	8	51	9
A	28	37	7	28	5	18	4
NT	29	39	7	36	7	39	7
BSP	30	23	5	25	5	25	5
E	31	22	5	44	8	46	9
GS	32	31	6	24	5	31	6
NT	33	26	5	32	6	30	6
S/M	34	22	5	27	6	28	6
GS	35	29	6	30	6	33	6
BSS	36	9	2	16	3	14	3
E	37	25	5	23	5	25	5
E	38	32	7	43	8	40	8
A	39	40	8	41	8	37	7
E	40	32	7	37	7	33	7
E	41	36	7	39	8	32	7
BSP	42	14	3	20	4	21	4

continued

Subject discipline	Student	Test 1		Test 2		Test 3	
			sten score		sten score		sten score
BSS	43	26	5	29	6	29	6
S/M	44	15	3	17	3	19	4
BSP	45	33	7	37	7	37	7
GS	46	39	8	50	9	49	9
BSS	47	24	5	24	5	26	5
BSS	48	30	6	32	6	33	6
NT	49	21	5	18	4	13	3
BSS	50	23	4	24	5	22	4
GS	51	26	6	25	5	27	6
E	52	12	3	12	3	12	3
E	53	15	4	16	4	12	3
E	54	28	6	42	8	43	8
E	55	20	4	22	5	26	6
E	56	18	4	29	6	31	6
BSS	57	20	4	36	7	41	8
E	58	22	5	29	6	22	5
E	59	32	7	37	7	41	8
NT	60	12	3	17	3	11	3
BSP	61	7	2	12	3	13	3
E	62	22	5	26	6	29	6
BSP	63	31	6	40	8	42	8
BSP	64	13	3	19	4	16	4
S/M	65	36	7	39	8	44	8
E	66	36	7	29	6	27	6
GS	67	26	6	40	8	42	8
GS	68	35	5	26	5	25	5
BSS	69	14	3	27	6	17	4
A	70	33	7	32	7	35	7
E	71	21	5	17	4	22	5
BSP	72	28	5	26	5	27	5
A	73	24	6	37	7	28	6
BSP	74	14	3	40	8	42	8
E	75	23	5	26	6	22	5
A	76	16	4	16	4	15	4
BSS	77	17	3	20	4	24	5
E	78	23	5				
NT	79	21	5	28	6	24	5
S/M	80	26	6	35	7	37	7
BSS	81	20	4	28	5	31	6
GS	82	39	8	47	9	43	9
BSS	83	21	4	18	4	20	4
BSS	84	19	4	26	5	30	6
NT	85	17	4	20	4	19	4
GS	86	22	5	41	8	44	8
GS	87	37	7	44	8	41	8
A	88	37	7	38	7	39	7
NT	89	37	7	34	6	33	7

continued

Subject discipline	Student	Test 1		Test 2		Test 3	
			sten score		sten score		sten score
GS	90	35	7	32	7	33	7
NT	91	20	4	46	8	41	8
GS	92	28	6	20	4	24	5
NT	93	17	3	8	2	6	2
S/M	94	28	6	32	7	20	4
A	95	31	6	38	7	47	
S/M	96	30	6	31	6	25	5
E	97	17	4	21	5	23	7
A	98	37	7	42	8	39	8
GS	99	36	7	13	3	26	5
E	100	34	7	43	8	46	9
GS	101	38	7	40	8	45	9
A	102	30	6	40	7	41	8
GS	103	25	5	27	6	39	8
BSS	104	41	8	48	9	50	9
GS	105	29	6	17	4	23	5
E	106	13	3	34	7	26	6
E	107	38	8	46	9	45	9
E	108	37	7	40	8	43	8
S/M	109	17	4	18	4	17	4
S/M	110	28	6	26	5	30	6
E	111	34	7	35	7	32	7
BSP	112	13	3	19	4	24	5
E	113	24	5	30	6	28	6
E	114	33	7	36	7	27	7
BSS	115	26	5	30	6	34	6
NT	116	17	4	31	6	35	7
NT	117	24	5	27	6	26	6
A	118	18	4	14	4	15	4
BSS	119	31	6	32	6	41	8
E	120	35	7	42	8	44	8
S/M	121	26	6	18	4	29	6
S/M	122	17	3	16	3	23	4
S/M	123	22	5	23	5	27	6
E	124	30	6	19	4	19	4
GS	125	12	3	22	5	25	5
GS	126	18	4	24	5	23	4
GS	127	22	5	31	6	41	8
E	128	15	4	16	4	16	4
E	129	20	4	29	6	27	6
S/M	130	32	7	32	7	37	7
E	131	14	3	11	3	11	3
BSS	132	39	7	40	7	38	7
GS	133	33	7	40	8	42	8
NT	134	16	4	17	4	20	4
S/M	135	28	6	34	7	36	7
BSS	136	30	6	36	7	34	7

continued

Subject discipline	Student	Test 1		Test 2		Test 3	
			sten score		sten score		sten score
GS	137	22	5	25	5	24	5
BSS	138	20	4	27	5	23	4
E	139	8	2	18	4	16	4
E	140	25	5	43	8	43	8
GS	141	28	5	29	6	30	6
S/M	142	32	7	50	9	51	9
E	143	21	5	32	7	36	7
E	144	21	5	18	4	20	4
E	145	22	5	25	5	26	5
GS	146	33	7	32	7	34	7
NT	147	29	6	20	4	18	4
A	148	15	4	30	6	39	8
E	149	22	5	21	5	16	4
E	150	26	6	30	6	26	6
GS	151	25	5	29	6	28	6
GS	152	19	4	26	5	24	5
A	153	17	3	22	5	26	5
GS	154	48	9	52	10	49	9
S/M	155	20	4	23	4	26	5
NT	156	13	3	15	4	19	4
GS	157	15	4	41	8	36	7
E	158	21	5	24	5	26	6
BSP	159	5	2	10	3	12	3
NT	160	44	8	54	9	51	9
S/M	161	39	7	38	7	38	7
NT	162	24	5	27	5	28	5
E	163	25	5	35	7	47	9
A	164	40	8	35	7	45	9
NT	165	25	5	15	3	24	5
S/M	166	31	7	37	7	32	7
A	167	23	5	29	6	27	6
BSS	168	34	6	15	4	24	5
GS	169	45	8	60	10	61	10
A	170	6	2	11	3	12	3
A	171	27	5	28	5	27	5
NT	172	24	5	26	5	26	5
S/M	173	24	5	21	5	22	5
A	174	22	5	37	7	41	8
S/M	175	28	6	28	6	29	6
BSP	176	19	4	16	4	13	3
E	177	34	7	30	6	36	7
NT	178	23	5	21	5	23	5

Subject discipline key: A = Agriculture
E = Engineering
S/M = Science and Maths
NT = Nurse Tutor
BSP = Business Studies Professional
BSS = Business Studies Secretarial

APPENDIX 4

p 1

DATA RELATED TO IPATASQ SCORES DURING THE FIELD INVESTIGATION (Session 1974-75)

SDi	Stu	Test 1			Test 2			Test 3			Test 4		
		Raw score	Sten score	B/A	Raw score	Sten score	B/A	Raw score	Sten score	B/A	Raw score	Sten score	B/A
BSP	1	17	3	0/17	41	8	20/21	42	8	20/22	36	7	18/18
E	2	19	4	8/11	24	5	12/12	20	4	9/11	14	3	7/7
GS	3	42	8	19/23	41	8	19/22	44	8	19/25	42	8	20/22
GS	4	12	3	5/7	20	4	9/11	24	5	11/13	26	6	12/14
E	5	30	6	13/17	35	7	15/20	35	7	16/19	33	7	16/17
A	6	24	5	12/12	37	7	15/22	33	6	15/18	31	6	14/17
NT	7	32	6	12/20	36	7	12/24	38	7	14/24	38	7	16/22
GS	8	49	9	25/24	45	9	23/22	44	8	22/22	46	9	24/22
BSS	9	33	6	17/16	31	6	10/21	31	6	12/19	30	6	14/16
E	10	15	4	4/11	23	5	10/13	23	5	10/13	20	4	9/11
E	11	19	4	10/9	22	5	11/11	22	5	10/12	24	5	11/13
E	12	22	5	8/14	15	4	3/12	20	4	8/12	19	4	8/11
E	13	18	4	9/9	20	4	8/12	20	4	11/9	27	6	9/18
NT	14	18	4	7/11	22	4	7/15	32	6	12/20	30	6	12/18
A	15	31	6	13/18	29	6	11/18	22	5	8/14	27	6	12/15
E	16	30	6	13/17	27	6	11/16	30	6	14/16	30	6	12/18
BSP	17	12	3	5/7	19	4	9/10	21	5	10/11	23	5	11/12
S/M	18	31	6	17/14	39	7	20/19	29	6	12/17	33	6	14/19
E	19	29	6	12/17	33	7	20/13	30	6	18/12	32	7	19/13
GS	20	37	7	18/19	38	7	18/20	38	7	17/21	37	7	17/20
GS	21	23	4	11/12	29	6	9/20	31	6	11/20	42	8	18/24
S/M	22	13	3	4/9	21	4	7/14	18	4	9/9	17	3	8/9
BSP	23	25	5	12/13	27	6	12/15	26	6	10/16	27	6	12/15
NT	24	8	2	3/5	15	3	11/4	16	3	7/9	13	3	6/7
S/M	25	18	4	5/13	34	6	14/20	32	6	15/17	26	5	12/14
GS	26	21	5	8/13	22	5	7/15	22	5	9/13	25	5	9/16
BSP	27	12	3	4/8	13	3	3/10	14	3	5/9	12	3	5/7
A	28	24	5	8/16	25	5	10/15	28	6	12/16	30	6	13/17
S/M	29	21	5	11/10	22	5	9/13	24	5	11/13	22	5	12/10
A	30	20	4	13/17	31	6	13/18	34	7	15/19	32	6	15/17
BSP	31	38	7	17/21	42	8	19/23	47	9	21/26	41	8	18/23
GS	32	21	4	9/12	43	8	18/25	39	7	17/22	37	7	17/20
S/M	33	20	4	9/11	25	5	14/11	44	8	19/25	36	7	20/16
E	34	17	4	12/5	26	6	13/13	34	7	20/14	28	6	18/10
BSP	35	15	4	6/9	14	3	6/8	18	4	8/10	18	4	9/9
NT	36	36	7	15/21	25	5	15/10	28	5	15/13	32	7	18/14
BSP	37	35	7	16/19	27	6	12/15	32	7	15/17	30	6	14/16
BSP	38	25	5	14/11	36	7	17/19	24	5	7/17	29	6	17/12
E	39	28	6	11/17	39	8	17/22	26	6	8/18	31	6	13/18
BSS	40	31	6	12/19	35	7	15/20	38	7	18/20	35	7	18/17
E	41	20	4	9/11	23	5	10/13	15	4	9/6	22	5	10/12
NT	42	23	4	12/11	24	5	15/9	26	5	14/12	26	5	15/11
A	43	7	2	4/3	14	3	7/7	26	6	12/14	27	6	14/13
A	44	22	5	9/13	26	6	11/15	28	6	12/16	34	7	15/19

continued

SDi	Stu	Test 1			Test 2			Test 3			Test 4		
		Raw score	Sten score	B/A	Raw score	Sten score	B/A	Raw score	Sten score	B/A	Raw score	Sten score	B/A
E	45	13	3	5/8	17	4	7/10	15	4	6/9	14	3	6/8
A	46	25	5	10/15	21	5	9/12	17	4	9/8	22	5	10/12
E	47	21	5	9/12	13	3	5/8	19	4	8/11	14	3	5/9
E	48	14	3	7/7	18	4	8/10	24	5	8/16	26	6	10/16
S/M	49	40	7	19/21	46	8	23/23	40	7	20/20	43	8	20/23
S/M	50	22	5	8/14	17	4	4/13	19	4	6/13	20	4	7/13
E	51	19	4	7/12	22	5	9/13	32	6	13/19	33	7	15/18
GS	52	28	6	16/12	29	6	16/13	25	5	10/15	25	5	12/13
BSS	53	16	3	4/12	32	6	14/18	25	5	12/13	24	5	8/16
S/M	54	14	3	5/9	17	4	7/10	20	4	8/12	19	4	10/9
BSS	55	25	5	14/11	15	3	7/8	30	6	16/14	34	6	16/18
S/M	56	17	3	12/5	30	6	19/11	28	5	15/13	25	5	14/11
NT	57	11	3	4/7	11	3	1/10	19	4	8/11	17	4	6/11
E	58	22	5	8/14	22	5	8/14	26	6	13/13	23	5	10/13
E	59	18	4	7/11	25	5	8/17	19	4	6/13	26	6	11/15
GS	60	18	4	11/7	40	7	23/17	42	8	24/18	37	7	21/16
S/M	61	24	5	13/11	14	3	7/7	11	3	5/6	18	4	10/8
GS	62	26	6	12/14	24	5	12/12	24	5	10/14	22	5	10/12
BSP	63	28	5	12/16	31	6	14/17	34	6	16/18	37	7	19/18
GS	64	25	5	11/14	32	6	12/20	27	5	13/14	34	6	18/16
BSP	65	16	4	6/10	25	5	14/11	22	5	10/12	19	4	8/11
E	66	17	4	5/12	24	5	11/13	20	4	9/11	21	5	10/11
NT	67	20	4	5/15	28	5	9/19	32	7	13/19	29	6	12/17
NT	68	8	2	2/6	18	4	6/12	19	4	8/11	15	3	6/9
S/M	69	22	4	10/12	18	4	7/11	17	4	5/12	19	4	7/12
GS	70	18	4	5/13	31	6	16/15	34	6	15/19	28	5	16/12
S/M	71	25	5	12/13	24	5	10/14	35	7	18/17	29	6	15/14
E	72	29	6	15/14	38	7	18/20	41	8	20/21	43	8	20/23
BSS	73	6	1	0/6	24	5	5/19	29	6	11/18	21	4	8/13
E	74	14	3	4/10	7	2	0/7	17	4	6/11	13	3	4/9
E	75	17	4	4/13	14	3	6/8	17	4	7/10	22	5	9/13
BSP	76	6	2	1/5	13	3	6/7	11	3	3/8	14	3	5/9
E	77	21	5	5/16	25	5	11/14	26	6	12/14	23	5	9/14
NT	78	34	7	21/13	42	8	20/22	44	8	20/24	41	8	20/21
E	79	10	3	4/6	25	5	8/17	23	5	8/15	27	6	12/15
NT	80	13	3	6/7	24	5	9/15	25	5	10/15	20	4	9/11
GS	81	22	5	13/9	15	4	6/9	13	3	7/6	18	4	10/8
NT	82	37	7	16/21	42	8	18/24	41	8	16/25	36	7	16/20
BSS	83	10	2	3/7	11	2	4/7	17	3	7/10	16	3	6/10
E	84	17	4	5/12	14	3	6/8	20	4	7/13	22	5	9/13
A	85	25	5	13/12	29	6	18/11	31	6	18/13	28	6	17/11
S/M	86	17	3	8/9	26	5	11/15	31	6	14/17	25	5	12/13
A	87	22	5	9/13	28	6	11/17	25	5	11/14	27	5	13/14
S/M	88	20	4	11/9	21	5	13/8	18	4	10/8	20	4	12/8
E	89	14	3	5/9	14	3	2/12	21	5	7/14	18	4	7/11
E	90	15	4	9/6	32	7	20/12	26	6	14/12	30	6	16/14
E	91	23	5	11/12	34	7	18/16	37	7	20/17	38	7	21/17

SDi	Stu	Test 1			Test 2			Test 3			Test 4		
		Raw score	Sten score	B/A	Raw score	Sten score	B/A	Raw score	Sten score	B/A	Raw score	Sten score	B/A
NT	92	36	7	19/17	48	9	28/20	41	8	24/17	44	8	24/20
E	93	44	8	23/21	38	7	19/19	39	8	20/19	42	8	23/19
GS	94	27	6	11/16	20	4	5/15	19	4	3/16	22	5	8/14
GS	95	17	3	4/13	22	4	7/15	26	5	9/17	28	5	9/19
NT	96	37	7	16/21	38	7	17/21	43	8	19/24	41	8	17/24
GS	97	14	3	3/11	21	4	5/16	22	4	6/16	22	4	8/14
E	98	15	4	8/7	19	4	11/8	17	4	10/7	19	4	10/9
A	99	16	4	9/7	21	5	10/11	30	6	13/17	23	5	11/12
BSP	100	24	5	9/15	16	4	5/11	19	4	8/11	21	5	9/12
GS	101	30	6	16/14	45	8	26/19	37	7	18/19	40	7	19/21
E	102	6	2	1/5	8	2	5/3	8	2	4/4	8	2	3/5
S/M	103	20	4	8/12	24	5	11/13	28	5	14/14	26	5	12/14
GS	104	28	6	14/14	42	8	26/16	42	8	22/20	37	7	17/20
GS	105	28	6	13/15	40	8	21/19	38	7	20/18	36	7	20/16
GS	106	13	3	4/9	14	3	1/13	14	3	5/9	18	4	6/12
NT	107	23	4	12/11	29	6	16/13	27	5	14/13	31	6	17/14
BSP	108	18	4	8/10	25	5	9/16	26	5	9/17	22	4	8/14
BSS	109	15	3	7/8	13	3	5/8	18	4	8/10	15	3	6/9
GS	110	38	7	19/19	47	9	22/25	42	8	18/24	43	8	18/25
BSP	111	29	7	16/19	39	8	18/21	37	7	17/20	36	7	17/19
BSP	112	32	6	18/14	39	7	23/16	45	8	24/21	38	7	23/15
NT	113	23	5	12/11	30	6	15/15	38	7	21/17	31	6	16/15
GS	114	15	4	8/7	20	4	7/13	17	4	9/5	21	5	11/10
E	115	5	2	2/3	18	4	6/12	10	3	4/6	12	3	5/7
E	116	7	2	2/5	6	2	1/5	7	2	3/4	11	3	5/6
GS	117	21	5	11/10	31	6	13/18	22	5	10/12	29	6	13/16
BSP	118	23	5	10/13	20	4	8/12	26	6	10/16	23	5	10/13
NT	119	20	5	6/14	20	4	9/11	24	5	10/14	30	6	14/16
NT	120	38	8	14/24	45	9	18/27	46	9	19/27	43	8	19/24
E	121	8	2	3/5	16	4	5/11	14	3	6/8	13	3	5/8
BSP	122	20	4	8/12	23	5	11/12	12	3	4/8	19	4	7/12
S/M	123	15	4	5/10	22	5	8/14	20	4	7/13	17	4	7/10
A	124	32	7	18/14	38	7	22/16	34	7	18/16	35	7	19/16
A	125	24	5	16/8	24	5	12/12	27	6	14/13	26	6	14/12
S/M	126	24	5	9/15	30	6	15/15	26	6	11/15	27	6	12/15
GS	127	24	5	13/11	27	6	13/14	26	6	13/13	32	7	18/14
S/M	128	20	4	4/16	17	4	6/11	14	3	5/9	17	4	8/9
E	129	14	3	4/10	20	4	8/12	18	4	7/11	21	5	10/11
E	130	16	4	4/12	17	4	7/10	22	5	11/11	19	4	8/11
BSS	131	17	3	6/11	31	8	15/16	27	5	11/16	32	6	14/18
BSS	132	14	3	8/6	25	5	14/11	20	4	7/13	20	4	9/11
E	133	33	7	11/22	42	8	19/23	39	8	18/21	36	7	16/20
A	134	38	7	16/22	30	6	12/18	35	7	16/19	41	8	17/24
NT	135	27	5	17/10	28	5	19/9	30	6	16/14	33	6	19/15
GS	136	37	7	13/24	42	8	19/23	41	8	16/25	44	8	20/24
S/M	137	49	9	20/29	54	10	25/29	55	10	26/29	52	10	23/29

continued

APPENDIX 4

p 4

SDi	Stu	Test 1			Test 2			Test 3			Test 4		
		Raw score	Sten score	B/A	Raw score	Sten score	B/A	Raw score	Sten score	B/A	Raw score	Sten score	B/A
NT	138	20	4	11/9	22	4	11/11	25	5	14/11	24	5	11/13
GS	139	12	3	4/8	29	6	15/14	41	8	22/19	35	7	17/18
S/M	140	33	7	15/18	38	7	18/20	35	7	16/19	42	8	19/23
BSS	141	14	3	6/8	24	5	9/15	31	6	14/17	27	5	10/17
S/M	142	21	4	8/13	37	7	19/18	39	7	20/19	34	6	14/20

KEY

SDi = Subject discipline = A = Agriculture
E = Engineering
S/M = Sciencs and Maths
NT = Nurse Tutor
BSP = Business Studies Professional
BSS = Business Studies Secretarial

Stu = Student (number)

APPENDIX 4A

p 1

A COMPARISON OF B/A AND B-A SCORES

(FIELD INVESTIGATION, Session 1974-75)

Student	Test 1		Test 2		Test 3		Test 4	
	B/A	B-A	B/A	B-A	B/A	B-A	B/A	B-A
1	1/17	-16	20/21	- 1	20/22	- 2	18/18	0
2	8/11	- 3	12/12	0	9/11	- 2	7/7	0
3	19/23	- 4	19/22	- 3	19/25	- 6	20/22	- 2
4	5/7	- 2	9/11	- 2	11/13	- 2	12/14	- 2
5	13/17	- 4	15/20	- 5	16/19	- 3	16/17	- 1
6	12/12	0	15/22	- 7	15/18	- 3	14/17	- 3
7 F	12/20	- 8	12/24	-12	14/24	-10	16/22	- 6
8	25/24	+ 1	23/22	+ 1	22/22	0	24/22	+ 2
9 F	17/16	+ 1	10/21	-11	12/19	- 7	14/16	- 2
10	4/11	- 7	10/13	- 3	10/13	- 3	9/11	- 2
11	10/9	+ 1	11/11	0	10/12	- 2	11/13	- 2
12	8/14	- 6	3/12	- 9	8/12	- 4	8/11	- 3
13	9/9	0	8/12	- 4	11/9	+ 2	9/18	- 9
14 F	7/11	- 4	7/15	- 8	12/20	- 8	12/18	- 6
15	13/18	- 5	11/18	- 7	8/14	- 6	12/15	- 3
16	13/17	- 4	11/16	- 5	14/16	- 2	12/18	- 6
17	5/7	- 2	9/10	- 1	10/11	- 1	11/12	- 1
18 F	17/14	+ 3	20/19	+ 1	12/17	- 5	14/19	- 5
19	12/17	- 5	20/13	+ 7	18/12	+ 6	19/13	+ 6
20 F	18/19	- 1	18/20	- 2	17/21	- 4	17/20	- 3
21 F	11/12	- 1	9/20	-11	11/20	- 9	18/24	- 6
22 F	4/9	- 5	7/14	- 7	9/9	0	8/9	- 1
23	12/13	- 1	12/15	- 3	10/16	- 6	12/15	- 3
24 F	3/5	- 2	11/4	+ 7	7/9	- 2	4/7	- 3
25 F	5/13	- 8	14/20	- 6	15/17	- 2	12/14	- 2
26	8/13	- 5	7/15	- 8	9/13	- 4	9/16	- 7
27	4/8	- 4	3/10	- 7	5/9	- 4	5/7	- 2
28	8/16	- 8	10/15	- 5	12/16	- 4	13/17	- 4
29	11/10	+ 1	9/13	- 4	11/13	- 2	12/10	+ 2
30	13/17	- 4	13/18	- 5	15/19	- 4	15/17	- 2
31	17/21	- 4	19/23	- 4	21/26	- 5	18/23	- 5
32 F	9/12	- 3	18/25	- 7	17/22	- 5	17/20	- 3
33	9/11	- 2	14/11	+ 3	19/25	- 6	20/16	+ 4
34	12/5	+ 7	13/13	0	20/14	+ 6	18/10	+ 8
35	6/9	- 3	6/8	- 2	8/10	- 2	9/9	0
36 F	15/21	- 6	15/10	- 5	15/13	+ 2	18/14	+ 4
37	16/19	- 3	12/15	- 3	15/17	- 2	14/16	- 2
38	14/11	+ 3	17/19	- 2	7/17	-10	17/12	+ 5
39	11/17	- 6	17/22	- 5	8/18	-10	13/18	- 5
40 F	12/19	- 7	15/20	- 5	18/20	- 2	18/17	+ 1
41	9/11	- 2	10/13	- 3	9/6	+ 3	10/12	- 2
42 F	12/11	+ 1	15/9	+ 6	14/12	+ 2	15/11	+ 4
43	4/3	+ 1	7/7	0	12/14	- 2	14/13	+ 1
44	9/13	- 4	11/15	- 4	12/16	- 4	15/19	- 3
45	5/8	- 3	7/10	- 3	6/9	- 3	6/8	- 2

CONTINUED

Student	Test 1		Test 2		Test 3		Test 4	
	B/A	B-A	B/A	B-A	B/A	B-a	B/A	B-A
46	10/15	- 5	9/12	- 3	9/8	+ 1	10/12	- 2
47	9/12	- 3	5/8	- 3	8/11	- 3	5/9	- 4
48	7/7	0	8/10	- 2	8/16	- 8	10/16	- 6
49 F	19/21	- 2	23/23	0	20/20	0	20/23	- 3
50	8/14	- 6	4/13	- 9	6/13	- 7	7/13	- 6
51	7/12	- 5	9/13	- 4	13/19	- 6	15/18	- 3
52	16/12	+ 4	16/13	+ 3	10/15	- 5	12/13	- 1
53 F	4/12	- 8	14/18	- 4	12/13	- 1	8/16	- 8
54	5/9	- 4	7/10	- 3	8/12	- 4	10/9	+ 1
55 F	14/11	+ 3	7/8	- 1	16/14	+ 2	16/18	- 2
56 F	12/5	+ 7	19/11	+ 8	15/13	+ 2	14/11	+ 3
57	4/7	- 3	1/10	- 9	8/11	- 3	6/11	- 5
58	8/14	- 6	8/14	- 6	13/13	0	10/13	- 3
59	7/11	- 4	8/17	- 9	6/13	- 7	11/15	- 4
60 F	11/7	+ 4	23/17	+ 4	24/18	+ 6	21/16	+ 5
61	13/11	+ 2	7/7	0	5/6	- 1	10/8	+ 2
62	12/14	- 2	12/12	0	10/14	- 4	10/12	- 2
63 F	12/16	- 4	14/17	- 3	16/18	- 2	19/18	+ 1
64 F	11/14	- 3	12/20	- 8	13/14	- 1	18/16	+ 2
65	6/10	- 4	14/11	+ 3	10/12	- 2	8/11	- 3
66	5/12	- 7	11/13	- 2	9/11	- 2	10/11	- 1
67	5/15	-10	9/19	-10	13/19	- 6	12/17	- 5
68 F	2/6	- 4	6/12	- 6	8/11	- 3	6/9	- 3
69	10/12	- 2	7/11	- 4	5/12	- 7	7/12	- 5
70 F	5/13	- 8	16/15	+ 1	15/19	- 4	16/12	+ 4
71	15/14	+ 1	18/20	- 2	20/21	- 1	20/23	- 3
72 F	12/13	- 1	10/14	- 4	18/17	+ 1	15/14	+ 1
73 F	0/6	- 6	5/19	-14	11/18	- 7	8/13	- 5
74	4/10	- 6	0/7	- 7	6/11	- 5	4/9	- 5
75	4/13	- 9	6/8	- 2	7/10	- 3	9/13	- 4
76	1/5	- 4	6/7	- 1	3/8	- 5	5/9	- 4
77	5/16	-11	11/14	- 3	12/14	- 2	9/14	- 5
78 F	21/13	+ 8	20/22	- 2	20/24	- 4	20/21	- 1
79	4/6	- 2	8/17	- 9	8/15	- 7	12/15	- 3
80	6/7	- 1	9/15	- 6	10/15	- 5	9/11	- 2
81	13/9	+ 4	6/9	- 3	7/6	+ 1	10/8	+ 2
82	16/21	- 5	18/24	- 6	16/25	- 9	16/20	- 4
83 F	3/7	- 4	4/7	- 3	7/10	- 3	6/10	- 4
84	5/12	- 7	6/8	- 2	7/13	- 6	9/13	- 4
85	13/12	+ 1	18/11	+ 7	18/13	+ 5	17/11	+ 6
86 F	8/9	- 1	11/15	- 4	14/17	- 3	12/13x	- 1
87 F	9/13	- 4	11/17	- 4	11/14	- 3	13/14	- 1
88	11/9	+ 2	13/8	+ 5	10/8	+ 2	12/8	+ 4
89	5/9	- 4	2/12	-10	7/14	- 7	7/11	- 4
90	9/6	+ 3	20/12	+ 8	14/12	+ 2	16/14	+ 2
91	11/12	- 1	18/16	+ 2	20/17	+ 3	21/17	+ 4
92	19/17	+ 2	28/20	+ 8	24/17	+ 7	24/20	+ 4
93	23/21	+ 2	19/19	0	20/19	+ 1	23/19	+ 4
94	11/16	- 5	5/15	-10	3/16	-13	8/14	- 6
95 F	4/13	- 9	7/15	- 8	9/17	- 8	9/19	-10

CONTINUED

Student	Test 1		Test 2		Test 3		Test 4	
	B/A	B-A	B/A	B-A	B/A	B-A	B/A	B-A
96 F	16/21	- 5	17/21	- 4	19/24	- 5	17/24	- 7
97 F	3/11	- 8	5/16	-11	6/16	-10	8/14	- 6
98	8/7	+ 1	11/8	+ 3	10/7	+ 3	10/9	+ 1
99	9/7	+ 2	10/11	- 1	13/17	- 4	11/12	- 1
100	9/15	- 6	5/11	- 6	8/11	- 3	9/12	- 3
101 F	16/14	+ 2	26/19	+ 7	18/19	- 1	19/21	- 2
102	1/5	- 4	5/3	+ 2	4/4	0	3/5	- 2
103 F	8/12	- 4	11/13	- 2	14/14	0	12/14	- 2
104	14/14	0	26/16	+10	22/20	+ 2	17/20	- 3
105	13/15	- 2	21/19	+ 2	20/18	+ 2	20/16	+ 4
106 F	4/9	- 5	1/13	-12	5/9	- 4	6/12	- 6
107 F	12/11	+ 1	16/13	+ 3	14/13	+ 1	17/14	+ 3
108 F	8/10	- 2	9/16	- 7	9/17	- 8	8/14	- 6
109 F	7/8	- 1	5/8	- 3	8/10	- 2	6/9	- 3
110	19/19	0	22/25	- 3	18/24	- 6	18/25	- 7
111	16/19	- 3	18/21	- 3	17/20	- 3	17/19	- 2
112 F	18/14	+ 4	23/16	+ 7	24/21	+ 3	23/15	+ 8
113	12/11	+ 1	15/15	0	21/17	+ 4	16/15	+ 1
114	8/7	+ 1	9/8	+ 1	7/13	- 6	11/10	+ 1
115	2/3	- 1	6/12	- 6	4/6	- 2	5/7	- 2
116	2/5	- 3	1/5	- 4	3/4	- 1	5/6	- 1
117	11/10	+ 1	13/18	- 5	10/12	- 2	13/16	- 3
118	10/13	- 3	8/12	- 4	10/16	- 2	10/13	- 3
119	6/14	- 8	9/11	- 2	10/14	- 4	14/16	- 2
120	14/24	-10	18/27	- 9	19/27	- 8	19/24	- 5
121	3/5	- 2	5/11	- 6	6/8	- 2	5/8	- 3
122	8/12	- 4	11/12	- 1	4/8	- 4	7/12	- 5
123	5/10	- 5	8/14	- 6	7/13	- 6	7/10	- 3
124	18/14	+ 4	22/16	+ 6	18/16	+ 2	19/16	+ 3
125	16/8	+ 8	12/12	0	14/13	+ 1	14/12	+ 2
126	9/15	- 6	15/15	0	11/15	- 4	12/15	- 3
127	13/11	+ 2	13/14	- 1	13/13	0	18/14	+ 4
128	4/16	-12	6/11	- 5	5/9	- 4	8/9	- 1
129	4/10	- 6	8/12	- 4	7/11	- 4	10/11	- 1
130	4/12	- 8	7/10	- 3	11/11	0	8/11	- 3
131 F	6/11	- 5	15/16	- 1	11/16	- 5	14/18	- 4
132 F	8/6	+ 2	14/11	+ 3	7/13	- 6	9/11	- 2
133	11/22	-11	19/23	- 4	18/21	- 3	16/20	- 4
134 F	16/22	- 6	12/18	- 6	16/19	- 3	17/24	- 7
135 F	17/10	+ 7	19/9	+10	16/14	+ 2	19/15	+ 4
136 F	13/24	-11	19/23	- 4	16/25	- 9	20/24	- 4
137	20/29	- 9	25/29	- 4	26/29	- 3	23/29	- 6
138 F	11/9	+ 2	11/11	0	14/11	+ 3	11/13	- 2
139	4/8	- 4	15/14	+ 1	22/19	+ 3	17/18	- 1
140	15/18	- 3	18/20	- 2	16/19	- 3	19/23	- 4
141 F	6/8	- 2	9/15	- 6	14/17	- 3	10/17	- 7
142 F	8/13	- 5	19/18	+ 1	20/19	+ 1	14/20	- 6

APPENDIX 5

LIST OF STUDENTS SEEKING COUNSELLING
DURING THE PILOT INVESTIGATION

	Subject discipline	Sex	Test 1		Test 2		Test 3	
			Raw score	Sten score	Raw score	Sten score	Raw score	Sten score
(1)	BSS	F	39	7	46	8	45	8
(2)	A	F	27	5	46	8	40	8
(3)	GS	F	39	8	50	9	49	9
(4)	E	M	28	6	42	8	43	8
(5)	BSP	M	31	6	40	8	42	8
(6)	BSP	M	14	3	40	8	42	8
(7)	GS	M	22	5	41	8	44	8
(8)	NT	F	20	4	46	8	41	8
(9)	A	M	31	6	38	7	47	9
(10)	BSS	F	41	8	48	9	50	9
(11)	GS	M	22	5	31	6	41	8
(12)	S/M	M	32	7	50	9	51	9
(13)	E	M	25	5	35	7	47	9
(14)	GS	F	45	8	60	10	61	10
(15)	A	M	22	5	37	7	41	8

KEY

A = Agriculture
E = Engineering
S/M = Science and Maths
NT = Nurse Tutor
BSP = Business Studies Professional
BSS = Business Studies Secretarial
GS = General Studies

APPENDIX 6

STUDENTS SEEKING COUNSELLING DURING THE FIELD INVESTIGATION

	Group & Sex	SDi	Test 1			Test 2			Test 3			Test 4		
			Scores		B/A	Scores		B/A	Scores		B/A	Scores		B/A
			Raw	Sten		Raw	Sten		Raw	Sten		Raw	Sten	
(1)	A M	BSP	17	3	1/17	41	8	20/21	42	8	20/22	36	7	18/18
(2)	B F	NT	32	6	12/20	36	7	12/24	38	7	14/24	38	7	16/22
(3)	A F	GS	23	4	11/12	29	6	9/20	31	6	11/20	42	8	18/24
(4)	D M	S/M	20	4	9/11	25	5	14/11	44	8	19/25	36	7	20/16
(5)	C M	BSP	38	7	17/21	42	8	19/23	47	9	21/26	41	8	18/23
(6)	C F	E	10	2	1/10	3	1	1/3	9	2	1/9			
(7)	B F	GS	18	4	11/7	40	7	23/17	42	8	24/18	37	7	21/16
(8)	A M	E	29	6	15/14	38	7	18/20	41	8	20/21	43	8	20/23
(9)	D F	BSS	6	1	1/6	24	5	5/19	29	6	11/18	21	4	8/13
(10)	B M	E	23	5	11/12	34	7	18/16	37	7	20/17	38	7	21/17
(11)	D M	GS	28	6	13/15	40	8	21/19	38	7	20/18	36	7	20/16
(12)	C M	GS	38	7	19/19	47	9	22/25	42	8	18/24	43	8	18/25
(13)	B M	BSP	23	5	10/13	20	4	8/12	26	6	10/16	23	5	10/13
(14)	A F	A	38	7	16/22	30	6	12/18	35	7	16/19	41	8	17/24
(15)	C F	GS	37	7	13/24	42	8	19/23	41	8	16/25	44	8	20/24
(16)	B M	S/M	49	9	20/29	54	10	25/29	55	10	26/29	52	10	23/29
(17)	C F	S/M	21	4	8/13	37	7	19/18	39	7	20/19	34	6	14/20
(18)	D F	GS	25	5	11/14	32	6	12/20	27	5	13/14	34	6	18/16
(19)	D F	BSP	32	6	18/14	39	7	23/16	45	7	24/21	38	7	23/15
(20)	A M	NT	38	8	14/24	45	9	18/27	46	9	19/27	43	8	19/24

KEY

SDi = Subject discipline = A = Agriculture
E = Engineering
S/M = Science and Maths
NT = Nurse Tutor
GS = General Studies
BSP = Business Studies Professional
BSS = Business Studies Secretarial

B = Overt score

A = Covert score

APPENDIX 7

FIELD INVESTIGATION, STUDENTS WITH STEN SCORE 7+

	Test 1		Test 2		Test 3		Test 4	
Student	B/A	B-A	B/A	B-A	B/A	B-A	B/A	B-A
1	0.059	-16	0.95	- 1	0.91	- 2	1.00	0
3	0.83	- 4	0.863	- 3	0.76	- 6	0.91	- 2
5	0.765	- 4	0.75	- 5	0.84	- 3	0.94	- 1
7	0.60	- 8	0.5	-12	0.58	-10	0.73	- 6
8	1.04	+ 1	1.04	+ 1	1.00	0	1.09	- 2
20	0.94	- 1	0.90	- 2	0.81	- 4	0.85	- 3
31	0.81	- 4	0.83	- 4	0.81	- 5	0.78	- 5
32	0.75	- 3	0.72	- 7	0.77	- 5	0.85	- 3
33	0.81	- 2	1.27	+ 3	0.76	- 6	1.25	+ 4
40	0.63	- 7	0.75	- 5	0.90	- 2	1.05	+ 1
49	0.90	- 2	1.00	0	1.00	0	0.87	- 3
60	1.57	+ 4	1.35	+ 4	1.33	+ 6	1.31	+ 5
71	1.07	+ 1	0.90	- 2	0.95	- 1	0.87	- 3
73	0.16	- 6	0.26	-14	0.61	- 7	0.61	- 5
78	1.61	+ 8	0.91	- 2	0.83	- 4	0.95	- 1
82	0.76	- 5	0.75	- 6	0.64	- 9	0.80	- 4
91	0.91	- 1	1.125	+ 2	1.18	+ 3	1.23	+ 4
92	1.12	+ 2	1.4	+ 8	1.41	+ 7	1.2	+ 4
93	1.1	+ 2	1.0	0	1.05	+ 1	1.21	+ 4
96	0.76	- 5	0.81	- 4	0.79	- 5	0.71	- 7
101	1.14	+ 2	1.37	+ 7	0.95	- 1	0.90	- 2
104	1.00	0	1.62	+10	1.10	+ 2	0.85	- 3
105	0.87	- 2	1.1	+ 2	1.1	+ 2	1.25	+ 4
110	1.00	0	0.88	- 3	0.75	- 6	0.72	- 7
111	0.84	- 3	0.86	- 3	0.85	- 3	0.89	- 2
112	1.29	+ 4	1.43	+ 7	1.14	+ 3	1.53	+ 8
120	0.58	-10	0.67	- 9	0.70	- 8	0.79	- 5
124	1.29	+ 4	1.375	+ 6	1.125	+ 2	1.19	+ 3
133	0.5	-11	0.83	- 4	0.86	- 3	0.80	- 4
134	0.73	- 6	0.67	- 6	0.84	- 3	0.71	-77
136	0.54	-11	0.83	- 4	0.64	- 9	0.83	- 4
137	0.69	- 9	0.86	- 4	0.89	- 3	0.79	- 6
140	0.83	- 3	0.90	- 2	0.84	- 3	0.83	- 4

APPENDIX 8A

p 1

ORIGINAL QUESTIONNAIRE

Any intensive course will create stress situations. Our course would seem to contain stress situations of two distinct, but related kinds, namely:-

(a) the actual physical times during the course when stress occurs, eg before first TP;

(b) other factors, such as financial factors, which seem to add to the factors described in (a).

You are asked to participate in an attempt to identify these areas by placing a tick alongside the appropriate statement(s) listed below.

No NAMES are required

(a) The times of stress listed under category (a)

1 During the first week of the course ___
2 Just before first teaching practice ___
3 During first TP ___
4 Last week of the first term ___
5 At the beginning of the second term ___
6 Immediately before second TP ___
7 During second TP ___
8 Immediately after second TP ___
9 At the beginning of the third term ___
10 Immediately prior to the final examinations ___

The following list of statements seem to cover the main areas of stress related to (b) above. Please tick the appropriate statement(s).

1 Financial	___	2 Dear accommodation	___
3 What job shall I do next?	___	4 Sorting out confusion	___
5 Travel strain	___	6 Family don't share in course	___
7 Unsureness in new situation	___	8 How is job going?	___
9 Physical	___	10 Family distractions	___
11 Family responsibilities	___	12 Away from home	___
13 Guilt at neglect or up-bringing of family	___	14 Lonely	___
15 Unsympathetic friends etc	___	16 Wife's stress	___

17	Fear of failure, anxiety	___	18	Stress in facing new ideas	___
19	Pressure of time	___	20	Clashes of personality	___
21	New role - loss of identity	___	22	Feelings of being assessed	___
23	Pressure of group	___	24	Work more slowly now	___
25	Language difficulty	___	26	No time for social chat	___
27	Lack of leisure	___	28	Shyness	___
29	Unused to study	___	30	Memory	___
31	Lack of clear direction	___	32	Lot of work	___
33	Criticism of aspects of lectures	___	34	Lack of responsibility	___

Please add any other times for part (a).

Please add any other items which could have been included in part (b).

Thank you for your help.

R CLARKE

ANALYSIS OF THE PILOT INVESTIGATION QUESTIONNAIRE

Any intensive course will create stress situations. Our course would seem to contain stress situations of two distinct, but related kinds, namely:

i the actual physical times during the course when stress occurs, eg before first T P.

ii other factors, such as financial factors, which seem to add to the factors described in (i).

You are asked to participate in an attempt to identify these areas by placing a tick alongside the appropriate statement(s) listed below.

No NAMES are required.

SECTION A The times of stress listed under category (i) % replies

1	During the first week of the course	19
2	Just before first teaching practice	32
3	During first TP	40
4	Last week of the first term	9
5	At the beginning of the second term	14
6	Immediately before second TP	32
7	During second TP	35
8	Immediately after second TP	8
9	At the beginning of the third term	9
10	Immediately prior to the final examinations	31

SECTION B The following list of statements seems to cover the main areas of stress related to (ii) above. Please tick the appropriate statement(s).

1	Financial	25
2	Dear accommodation	5
3	What job shall I do next?	22
4	Sorting out confusion	13
5	Travel strain	13
6	Family don't share in course	4
7	Unsureness in new situation	16
8	How is job going?	7
9	Physical	2
10	Family distractions	16
11	Family responsibilities	17
12	Away from home	9
13	Guilt at neglect or upbringing of family	9
14	Lonely	4
15	Unsympathetic friends, etc	2
16	Wife's stress	11
17	Fear of failure, anxiety	25

		% replies
18	Stress in facing new ideas	6
19	Pressure of time	28
20	Clashes of personality	6
21	New role - loss of identity	6
22	Feelings of being assessed	20
23	Pressure of group	1
24	Work more slowly now	1
25	Language difficulty	2
26	No time for social chat	1
27	Lack of leisure	5
28	Shyness	8
29	Unused to study	8
30	Memory	9
31	Lack of clear direction	26
32	Lot of work	20
33	Criticism of aspects of lectures	22
34	Lack of responsibility	5

ANALYSIS OF THE FIELD INVESTIGATION QUESTIONNAIRE

Any intensive course will create stress situations. Our course would seem to contain stress situations of two distinct, but related kinds, namely:-

(a) the actual physical times during the course when stress occurs, eg before first teaching practice;

(b) other factors, such as financial factors, which seem to add to the factors described in (a).

You are asked to participate in an attempt to identify these areas by placing a tick alongside the appropriate statement(s) listed below.

No names are required.

	The times of stress listed as category (a)	% replies
1	During the first week of the course	16
2	Just before first teaching practice	35
3	During first teaching practice	42
4	Last week of the first term	10
5	At the beginning of the second term	9
6	Immediately before second teaching practice	37
7	During second teaching practice	40
8	Immediately after second teaching practice	7
9	At the beginning of the third term	8
10	Immediately prior to the final examination	32

The following list of statements have been found to cover the main areas of stress related to (b) above. Please tick the appropriate statement(s).

1	Financial	27
2	Dear accommodation	3
3	What job shall I do next?	26
4	Sorting out confusion	10
5	Travel strain	9
6	Family do not share in course	7
7	Unsureness in new situation	19
8	Family distractions	13
9	Family responsibilities	17
10	Away from home	8
11	Guilt at neglect of upbringing of family .	12
12	Wife's stress	15
13	Fear of failure anxiety	30
14	Stress in facing new ideas	7
15	Pressure of time	22
16	Clashes of personality	8
17	New role - loss of identity	4
18	Feelings of being assessed	24

		% replies
19	Pressure of group	5
20	No time for social chat	7
21	Lack of leisure	2
22	Shyness	1
23	Unused to study	6
24	Memory	9
25	Lack of clear direction	23
26	Lot of work	20
27	Criticisms of aspects of lectures	18
28	Lack of responsibility	22

Total respondents 157

APPENDIX 10

p 1

CASE STUDY OF STUDENT A

Female Nurse Tutor

Test 1 43 (8)
Test 2 21 (4)

	Q_3	C	L	O	Q_4
Test 1	13 (10)	5 (7)	4 (7)	9 (5)	12 (8)
Test 2	10 (8)	4 (6)	2 (4)	3 (2)	2 (2)

This was an extremely intelligent student with emotional problems before the course began. She was dedicated to her job and to the course; indeed she was the type of person who is dedicated to whatever she undertakes to do. A closer look at the Q_3, C and Q_4 factors provides a clue to the attitude of this student. In both tests she scored highly on a dimension labelled lack of self-sentiment, or lack of self-control, or as Entwhistle describes it, Unreliability. In other words, she was particularly unpredictable in her behaviour. A high C factor suggests a tendency towards emotional immaturity; and the Q_4 factor, which seems to suggest that this student vacillates between two extremes, suggests Excitability or Relaxed.

The following letter from her is reproduced in full, with her permission.

Pattern of Anxiety

I very nearly was not accepted for WTTC. At my interview I was asked about my health: with unnecessary honesty I mentioned my cystic thyroid, which was not causing any symptoms, and which was supervised by a consultant physician. I had worked for 15 months with no sick time at all, and this period had covered the break-up of a 10-year marriage and the subsequent divorce.

I was told weeks later by the college that they wanted my doctor's assurance about my health, and this was given readily; the college said they wanted a second opinion, and I persuaded my consultant to send me to a surgeon; my physician wrote to say I was symptomless, just lumpy. The college still didn't accept me. I had a partial thyroidectomy. I sent another name for reference.

I had been working in a hospital which had bad relationships with the press, and many other problems. My immediate boss was well known to be an extremely difficult man, and I believe he hated his dependence on me. I knew he would give me no help when he wrote my reference.

If I was not accepted by WTTC I could see no alternative to doing the 2-year course at London. This would have meant doing elementary work at a boring pace, and also keeping my house at Tonbridge, and also continuing to work through the late-teen problems with my 18+-year-old foster-son. WTTC was an escape.

Eventually the college accepted me.

In September I couldn't get over my joy of being here. My tutor was highly intelligent, the library was superb, we were to be allowed to study philosophy, so perhaps I could make sense of my life and the mental hospital to which I was committed. I loved being part of groups, loved having work to do, though I became anxious that so many people didn't say much. I tried to restrict the amount I said but (as usual) had little success. I then felt that it was I who was ruining everyone else's study. My first anxiety was being so uninhibited in the class.

The first TP I approached with confidence. The work I'd had marked was good. TP was sobering as I felt myself totally unnecessary and so entirely in the role of a guest. I threw myself into my philosophy essay, reading and thinking intensely, but with no-one to talk about it with. I felt I had made some important discoveries, and was captivated with the scholarly life. Of course I had not nearly enough words to express the breadth of the study, and so I made it extremely beautiful with postcards. I realised that it was eccentric also.

On returning to college I felt uninhibited and vivacious, and this, with the increased social warmth of the college, led me to think out a new pattern of behaviour which could express with integrity both my warm concern for others and my respect for their marriages! I began to develop friendships with some formal people.

During the holidays I spent 5 days in my parents' home in a small Cornish village. I ended up having a wordy battle with my father, and being expelled. My parents believed I had finally gone mad.

I believe I grew up a lot at that point. The escapes from the family into the security of work and marriage had not really made me see that as an adult you have to be tough enough to cope with the world. But now I was escaping from the family into insecurity - without a job, and living in an environment where I was without rights of tenure.

I came back to college to find my philosophy essay marked "satisfactory." This symbolised my realisation that what was extraordinarily beautiful and true for me was not necessarily what the world wanted - I must separate between what satisfied me

and what the world had a right to demand and evaluate on its standards. I also felt some resentment that this had not been explained to me before - then realised that it often had been explained by many different people, but I refused to accept it.

I then entered a phase of extremely complex human relationships. At least 6 people shared their experience of disturbance in living with me, and I felt I was on an advanced course in pastoral ethics where we had gone beyond rules. I am not sure that any official college counsellor could have taken over from me, but it would have been nice for me to have had a few totally confidential chats on general principles.

I continued to be worried by my behaviour in the group, and wished someone in authority would tell me to shut up - I could not control the expression of creative ideas, and I am sure my intellect moved up another notch at that time. In a sense this increased my sense of isolation. I was incredibly relieved at being allowed to wash-up glasses in the bar, and therefore pass as normal. Consciously I can see how ludicrous this is: there are many more intelligent people than I in the college, but I think they represent my father to me, and I cannot speak freely. I think I would have been greatly helped by belonging to a discussion group of the most vocal and abstract-thinking members of the college and feeling myself develop confidence in reciprocity in thinking, rather than dominance/submission.

I enjoyed all the other work pretty well, especially Special Method assignments, which were (a) clearly defined, (b) allowed some latitude, (c) praised for originality. I longed for TP so that I could merge into my background more.

Since December my project had been an incredible joy - I was completely fascinated by my concept, and I met some wonderful people while I pursued it. I needed patience and persistance, but at almost each point I was rewarded. I passed through a phase of believing that my ideas might have passed the sound-barrier of other people's comprehension, and of doubting my own judgement about its value. I faced the possibility of it being evaluated as satisfactory.

At the Tech I felt like new wine in old bottles - creative ideas welled up, and I was appalled at the complexity of the expectations I was trying to meet. I could not settle for moderately good (by my standards) - I was striving for brilliantly good - the very best that could be created. This involved a lot of frustrating work on my environment, and considerable irritation with my lecturers, and sharp self-criticism when the result at times was ignominious failure to achieve the brilliantly good! I was greatly helped by the other students from WTTC who were at Bilston: they were kind and friendly.

I escaped to Leicester, physically exhausted and unable to counsel another person. At first I thought Leicester was going to be all right: it had all the outward signs of a lively school, except for the curious silence of half the staff and the trivial jocularity of the rest. I discovered the biggest stress of all - lack of intellectual freedom. It was the leader's job to think and decide, and it was the followers' job to follow the leader as accurately as possible. The pressures to conform and love the leader were very strong. I was given very little warning before being given a class, then I was handed someone else's handout, full of vague sage platitudes, no references, and no giving the other side's point of view. With these went repeated injunctions to be tolerant and acceptant. The students began to comment on the amount of discussion they did with me - though in theory discussions were common - they were astonished to hear me offer an idea, then point out all the flaws in it. I had a good excuse to show off to my maximum! I was highly but pleasurably anxious about the outside assessor.

I returned to college with great joy, but after a few days' rest I realised that I might have emerged with less scathe than others. My attitude to authority then became fierce, especially when I realised that it was the least defended, most vulnerable people, who tried hardest to cope, and either adjusted to the strongest pressure, or became ill. My own distress at this disturbed others, and to my confusion everyone began talking of their stress - I couldn't work out if I had caused them to do this by some of manipulation, or if it was just that I had entered the threatening and uncertain world in which most people live all the time.

My anxiety ended within hours of the end of term, my holiday relationships were deeper and more mature than I have ever known, I was reconciled to my parents, I got a job. I don't feel anxious at all.

As can be seen, this student is extremely complex: one might almost say that she was archetypal. There is evidence of projection, of introspection, of uncertainty, of defence mechanism, and of a degree of empathy not always apparent. The gratitude of the researcher has been expressed on several occasions: very few research workers are provided with such an incentive to pursue research in which they are interested.

APPENDIX 11

p 1

CASE STUDY OF STUDENT B (Pilot investigation course)

Male Engineer Age 35

IPATASQ scores: 25 (5) 11/14
35 (7) 13/22
47 (9) 19/28

A mature married man student with a broad engineering background which included service in HM Forces. As can be seen from the test scores, this student came with an apparently normal level of anxiety. However, as the results show, there was an increasing difference between the overt and covert scores. This student began to need support before first teaching practice, although he was quite capable of coping with course work and the teaching. At least 4 members of staff spent a considerable amount of time reassuring him about his work.

The present researcher held counselling sessions, both in college and at his home with his wife present. The sessions varied in length of time from half-an-hour to 2 hours. He was undoubtedly anxiety-prone. High scores on C, O and Q_4 factors would suggest that he was emotionally immature, insecure, and tense and frustrated arising from strong "Id" pressures. Constantly he was assured that his grades were above average, but it was the next piece of work which caused the problems, not those already completed satisfactorily: previous success did not appear to give the positive reinforcement needed. Despite support from family and staff, and without financial worry, the anxiety increased until just before the final examination the limit was reached. He nearly succeeded in not completing the course, or in fact living to receive his certificate. However, he did survive, despite our efforts, it would seem.

At no time did the college feel that it could deal with this situation alone. Outside help was sought through his GP, the hospital services, and the Samaritans; but to little avail. Like Student A, his anxiety appears to have diminished on completion of the course, since a letter after the first 12 months of teaching ends on a very hopeful note. He says in conclusion:

> I am always indebted for assistance and advice in helping me over what was undoubtedly the most difficult period of my life. On reflection, my insignificant knowledge in the field of psychoanalysis prevents me from understanding what went wrong. The course played a trivial part in this. Truly, teaching is a wonderful, fruitful profession. I hope to get back for the BEd course.

So this man is now happily teaching, and wants to continue with his studies. Shall we take him on another course? There will be a lot of discussion about that decision. Was the counselling effort a

complete failure? Perhaps not, since at the end of a year he can still speak about a worthwhile job. What lessons can be learnt from this case study? Firstly, as in other fields, effort does not always guarantee success; secondly, perhaps from his trauma something can be passed to others involved in the same "heartache"; and thirdly, no-one should be written-off until they themselves are convinced that the task is too great or the job not suitable.

APPENDIX 12

CASE STUDY OF STUDENT C (Pilot investigation course)

Male Business Studies Professional Age 30

IPATASQ scores: 14 (3) 6/8
40 (8) 16/24
42 (8) 17/25

A well-qualified student slightly below the average age of the group. At interview his level of anxiety was considered to be low. The two tests taken during the course showed an unusual increase in anxiety which was not immediately explainable in terms of the interview result. The differences between the overt and covert scores increased, suggesting that there were hidden non-recognisable factors creating this feeling of anxiety.

The researcher had several individual counselling sessions with this student, who, like Student B, needed constant reassurance that his work was satisfactory. His overall performance on the course was at Credit level, and so one can only assume that there was a great deal of "Id" pressure: this is borne out when looking at the Q_4 scores in each of the tests. This pressure caused him many anxious hours, both in terms of his course work and also on his teaching practice. It was only possible to support this student by constant referral to fact: this is your work, here is the mark allotted to it, you can see that there is no cause for concern. However, that piece of work had been completed, and was satisfactory, but the next piece of work had still to be done, and was now the focus for anxiety.

This type of case, although fairly typical, is difficult to deal with in isolation, or in individual group sessions, since these students are convinced that their problem is not shared by others. In a group situation they often come to terms with the factors which are causing anxiety, as they participate in discussion with others in the group.

APPENDIX 13

CASE STUDY OF STUDENT D (Field investigation course)

Female Engineer Age 32

IPATASQ scores: 10 (2)
3 (1)
9 (2) (only 3 tests completed)

This student was the only female engineer to be accepted on the course. She was well qualified, and had relevant experience in engineering, and particularly in the Drawing Office situation. However, on the course she seemed to be unable to come to terms with the time limits of work completion. This was rather strange, since this was a student who had completed her previous study on a part-time basis, and must have been well aware of the necessity of submitting course work on time. She completed only 3 of the tests, being absent from college for the fourth test: in fact, she did not return in any meaningful way to the college during the last term. The test scores indicate that she had a low level of anxiety, and indeed her general behaviour suggested that she did not regard time as being important. Many researchers in this field would suggest that she was not anxious enough.

She did, however, appear to be very concerned about her progress on several occasions. The general tenor of her concern seemed to revolve around her isolation within the department to which she belonged. This was also true on teaching practice, where she found herself a lone female amongst a crowd of male staff, and in the classroom among male students. The several counselling sessions were concerned with the problem of course work, particularly the Education work. There were 2 occasions where the sessions were devoted to discussion about personal problems related to looking after her mother.

The general feeling about this student was that she had the appropriate qualification and experience, but because of a low level of anxiety she never seemed to appreciate the urgency of the course: totally unable to cope with a predominantly male preserve; too apathetic to have the necessary "fight" to survive.

APPENDIX 14

CASE STUDY OF STUDENT E (Field investigation course)

Female Business Studies Secretarial Age 34

IPATASQ scores: 6 (1)
24 (5)
29 (6)
21 (4)

A quiet, timid type of student who had a low level of anxiety at interview. A closer look at the 4 test scores is interesting. The A scores on each test were 6, 19, 18 and 13, again indicating that the covert score is relevant where there is a large discrepancy between the overt and covert scores.

This student became increasingly anxious during the first 6 weeks of the course. She was very anxious about the teaching practice period, since she had had no previous teaching experience. Much support was needed during the first term to keep this student on the course. The problems were not only associated with course work: there was an eleven-year-old son who was feeling dejected, and who was causing feelings of guilt. A high score on the O factor was predictable.

The second period of teaching practice was not as anxiety-provoking since the student was able to teach near her home, and so her son did not pose such a problem. During the summer term this student was anxious, and made several visits to the researcher for discussion about problems. Her main grumble was that there was a lack of tutorial support within the college, and that there were inadequate counselling facilities. This student's covert scores suggest that anxiety really increased from a sten level of 2 to a peak of 7 during the teaching practice period. Some of this anxiety can be related to the pressures of course work, to a feeling of lack of communication (no tutorial support); but these pressures were increased by a feeling of guilt towards dependants who had had to be left at home.

Students in this category are usually very highly motivated, wanting to get the most from the course, often hampered by the fact that they are acutely conscious of the sacrifices which have been made on their behalf by their family. These students need someone that they can consult and talk to at any odd moment in time, because the guilt feelings appear to trigger-off states of depression and feelings of inadequacy.

CASE STUDY OF STUDENT F (Field investigation course)

Female General Studies Age 22

IPATASQ scores: 25 (5) 11/14
32 (6) 12/20
27 (5) 13/14
34 (6) 18/16

A young female graduate who had a personal problem which made coping with teaching practice very difficult. It is a problem if you are obese, but if you find yourself to be a compulsive eater as well when stressful situations arise, then the dilemma is almost unsolvable. A look at the test scores shows that the level of anxiety was not particularly high, yet the change from higher covert to a higher overt component is interesting. At interview this student was relaxed and her sten score was normal. The difference between the overt and covert scores was not marked.

During the first 6 weeks of the course, participation in group discussion was good, and she seemed to be a typical graduate training for work in a General Studies department, having a lively interest in people. Anxiety increased before teaching practice, but it still was not high, and only subsequent discussion alerted the researcher to a situation which now seems to be significant. The covert score increased to 20, which if doubled would give a sten score of 8, indicating a high degree of anxiety.

Several discussions elicited the information that the weight problem had given rise to a personality problem which was likely to increase in the classroom situation with some groups of students. This student was deliberately placed in a college where there would be a great deal of staff support, and hence the potential danger was to a large extent averted, as can be seen by examining the third test score. What then happened during the summer term?

Several individual counselling sessions revealed that the respite during teaching practice had only been temporary. The student had to face getting a job in a college which might not offer the tutorial support of the teaching practice college. This anxiety in turn affected her course work, which began to arrive late: this in turn triggered-off eating-bouts, which in turn aggravated the obesity. There is no point in saying "You will have to eat less." This is already known. The problem still remains, however. How do you get the student not only to discuss the problem, but to work out a solution to something which is already recognised and acknowledged? The answer, in part, was to discuss how to deal with the work problem, and then to give as much support as possible to job applications. A job was eventually found, and work was completed, but the anxiety did not become lower until after this student had completed the

course and settled down in her new environment. She still feels the need to visit the college fairly frequently to talk in an informal way to anyone she feels she can trust.

The answer to the problems of this student probably lies outside the scope of the general counsellor, and is perhaps more in the field of medicine. An investigation of the activity of the thyroid gland, or treatment by a psychiatrist, so that the obesity can be reduced, might be appropriate. All the college could hope to do was to give the necessary support for completion of the course, the confidence from which one would hope would encourage the student to seek help and advice from more professionally-qualified individuals.

PEN-PORTRAITS OF SOME OF THE STUDENTS WHO SOUGHT COUNSELLING

1 NURSE TUTOR, male, age 36

Came from a very anxious home background. Took 3 "A"-levels after qualifying as a nurse. Voluble group member. He was anxious to prove that he was as good as the others. Expressed anxiety during the first week of the course because of the overwhelming amount of instruction/handout material. Anxious before first teaching practice because of non-availability of instructional material for study. Week after second teaching practice he felt was an anti-climax - a lot of work to do and yet he felt there was nothing definite to work on. Anxious about the examination at the end of the summer term - not because of the job situation, since he had a job, but he needed to do very well personally.

2 AGRICULTURE, female, age 25

Quiet individual, anxious during first 6 weeks of course before first teaching practice because of pressure of work. Anxious between end of first teaching practice and beginning of second teaching practice - pressure of work, and insufficient tutorial help. Feedback from assignments not quick enough, and hence this was anxiety-provoking.

3 ENGINEER, male, age 32

Beginning of course, lack of tutorial support, non-availability of material for study. Anxious before first teaching practice; in January, and immediately before second teaching practice, because of pressure of Education and Special Method work as well as preparation for second teaching practice. Anxiety last 2 weeks of teaching practice: had to be seen by external assessor. Last week of term, pressure off. "Have I failed TP?" Spring term workload heavy; summer term load light, yet examination anxiety builds up to no job. "Have I passed? Will the examination be a success?"

4 GENERAL STUDIES, female, age 26 - PhD

Anxious after first teaching practice; little tutorial help, no counselling facility; mother ill in hospital: necessity to get home as often as possible. Anxious type of person, anxious home background. Anxiety built up during Christmas holiday, January, and before second teaching practice: in fact, so anxious that she missed second teaching practice altogether, but completed it during the autumn term of the next academic year. Unusual case of the single well-educated girl very attached to mother (only parent).

5 SCIENCE, female, age 24 - first degree, York

Timid student, anxious throughout course. During first 6 weeks mainly concerned about teaching practice. Anxious after teaching practice, not having enjoyed work in college: thought there should be opportunity to try working in secondary school. Anxious between teaching practice periods about her course work, in case she failed. Felt that there should be facility to study the secondary field. Anxious in the summer term because of in-service students who were noisy, and disturbed her concentration in the evenings; anxious about time of completion of work.

6 AGRICULTURE, male, age 32 - MSc

Seemed to be an anxious student from the beginning. Very anxious during first term because of pressure of work, and trouble at home. His wife and family felt that it was a difficult time to adjust, and there was little support at college, he felt. Not sufficient opportunity to work on own; not enough material available. Anxious about second teaching practice, which did not go as well as expected; anxious about completion of work, in Education and Special Method. Anxious about the examination results and about getting a job, to allay fears at home. This was a student who would be anxious under normal circumstances.

The pen portraits serve to remind us that the level of academic ability is not a guarantee that an individual will cope with any academic course. Work is very often given as the reason for anxiety,

but it does not often operate alone. Generally there are other factors which contribute to the anxiety, and the unravelling of these hidden factors is often the most difficult part of the counselling process. So often they are not recognised as factors, or else their existence is denied. Whatever the reasons, no situation which gives rise to anxiety provoking, can be described as a simple situation.

APPENDIX 17

p 1

GROUP COUNSELLING SESSION, DURING THE FIELD INVESTIGATION COURSE, concerned with factors related to:

feelings of failure on course;

feelings of being assessed;

unsureness in a new situation;

lack of clear direction

GROUP A - students in Appendix 6:

Student 1	BSP	(M)
3	GS	(F)
8	E	(M)
14	A	(F)
20	NT	(F)

As can be seen, the group members were drawn from 5 out of the 6 Special Method areas in the college. There were 3 male and 2 female students. Only the Agriculture and the Nurse Tutor students began the course with a sten score of 7+ (8 in each case); the rest of the group had scores in the middle range of 4, 5, 6. One counselling session is recorded here as an example of the type of group session which took place during the field investigation. This session began at 4.30 pm and continued until 5.15 pm.

A (F) Do you mind if we come in and talk?

Tutor Not at all. How many are there?

A (F) Five of us.

Tutor Come in and sit down.

Silence for a few minutes after group had seated themselves in tutor's own room.

E (M) We're concerned about all this assessment. I've just returned from first teaching practice, and I had 3 visits, and I know people who had only one.

BSP (M) That's true. I had 2 visits as well, and my tutor didn't appear to be at all satisfied.

A (F) I had 2 visits, and my tutor really gave me a rough time. I thought you lot were supposed to be helpful!

NT (M) Well, I only had one visit, and the class were really marvellous. The tutor was very pleased, but I had a piece of written work returned at the same time which got a lousy D and I'd spent hours on it.

E (M) That's it. I wouldn't care if I only knew what they wanted (easy to lapse into "them" and "us" syndrome). My personal tutor says do this, and then I get a visit from another idiot - (turns to tutor) - sorry, forgot you were here. Anyhow you know how I feel - and he wanted something different. In industry you were told what to do, and you got on with it. Here you're given so much d---- freedom, you don't know what they expect you to do.

BSP (M) I feel like that - can't make my own decisions - tutor suggests you do this - but nothing definite: it's like being in a bog and clutching at a straw at times. If they're assessing us, why don't they say so, and then we should know where we were.

Tutor I guess you have already worked out why some of you had more visits than others. It has to do with your timetables each week, and who is available for visiting. Seems to me that that was the excuse to introduce the real problem of assessment and fear of failure. You know that first teaching practice is an introduction, and the visits are designed to point out where improvements can take place, etc.

A (F) Well, you might do that, and feel that that is what should be done, but I know tutors who mark you down because you don't use enough questions, or you miss someone out that you know is really shy. I got to know my class really well, and then my tutor makes a stupid comment like, "Distribute questioning more evenly." Doesn't he realise that you can only ask so many questions in 50 minutes, and that you have to cover so much of the topic - and I had a class of 38.*

(* Fairly normal situation in a college of agriculture.)

This type of discussion continued for some time until the group finally agreed that there was one real point at issue. They all felt insecure on their first teaching practice, and some of the remarks made by tutors did not seem to them to be very helpful. Then when they had returned they found work waiting for them which had been marked during this time, and had been returned to them: some of the marks were lower than antici-

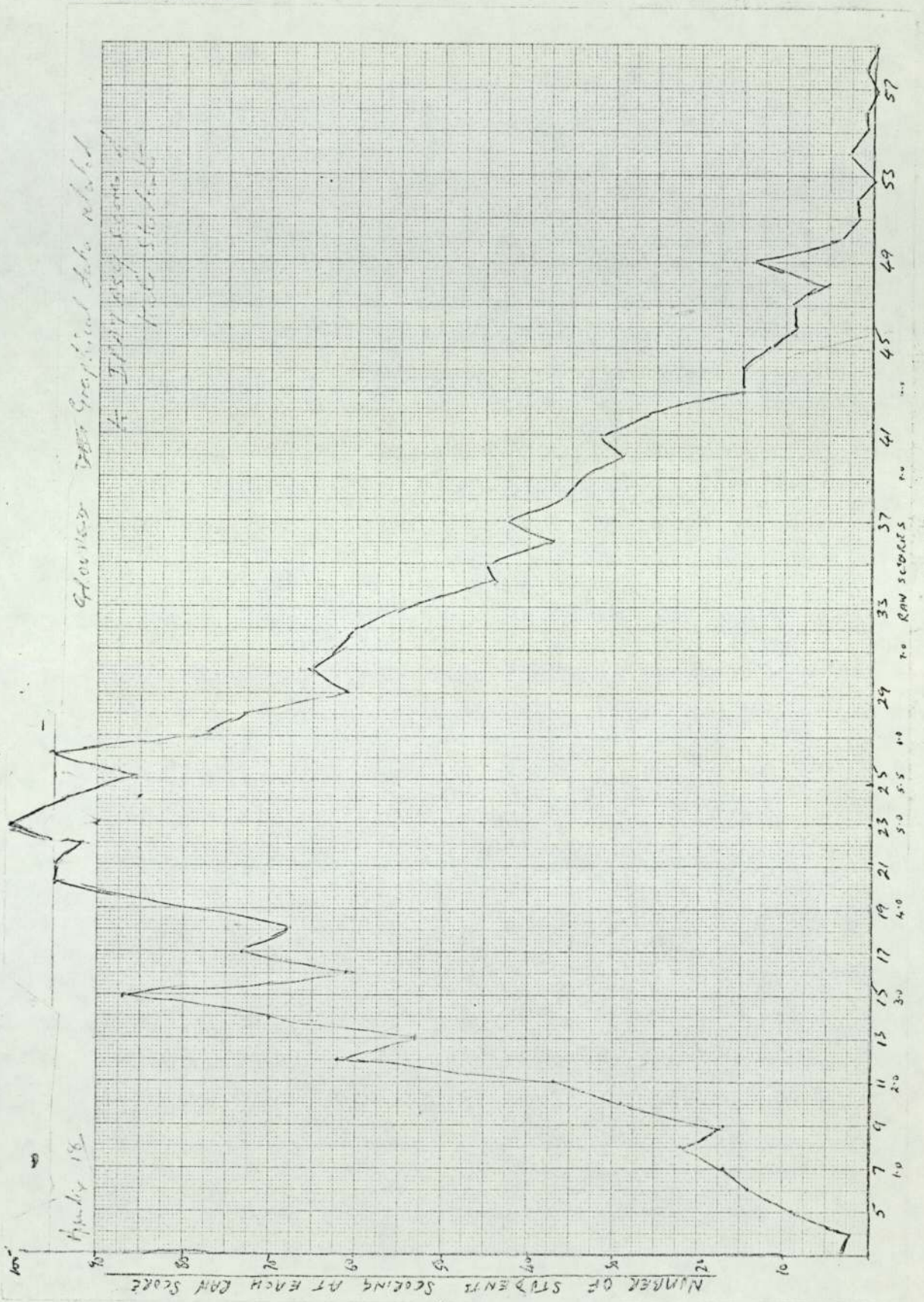
pated, considering the hard work involved. But then, students' goals can be unrealistic in the early stages of a course, until a pattern of assessment and tutorial help emerges which may be slightly different to the assessment procedures encountered on previous courses. Eventually the group would "talk through" the situation in order to find some ground of commonality, or some reference point which would alleviate the anxiety. A perspective is sometimes difficult to achieve when you are emotionally involved.

Menninger discusses coping-mechanisms in his research, mentioning specifically:

> Talking out, discussing one's problem with a sympathetic listener, or even just excessive verbalisation.

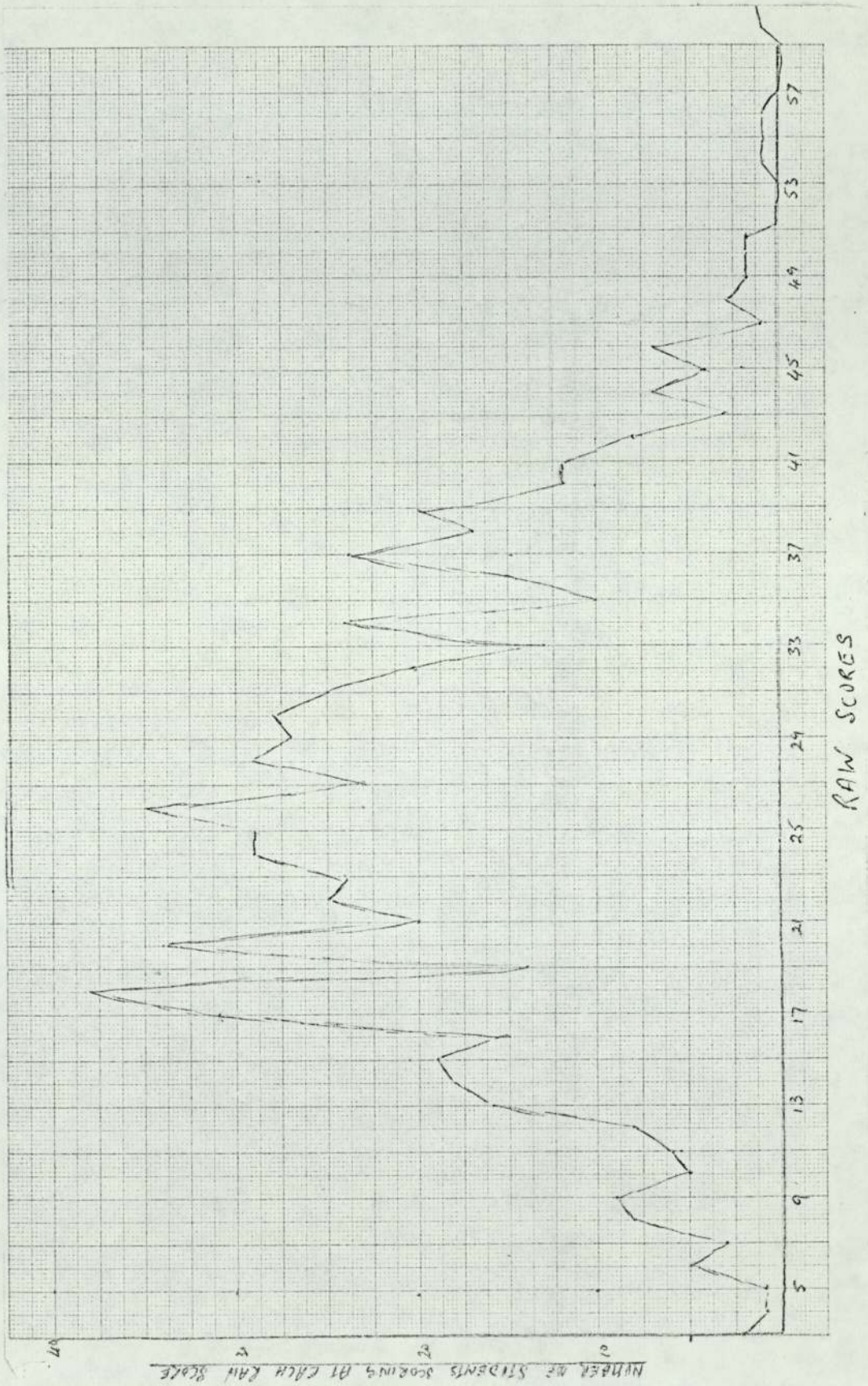
GRAPHICAL DATA RELATED TO IPATASQ SCORES OF MALE STUDENTS

APPENDIX 18



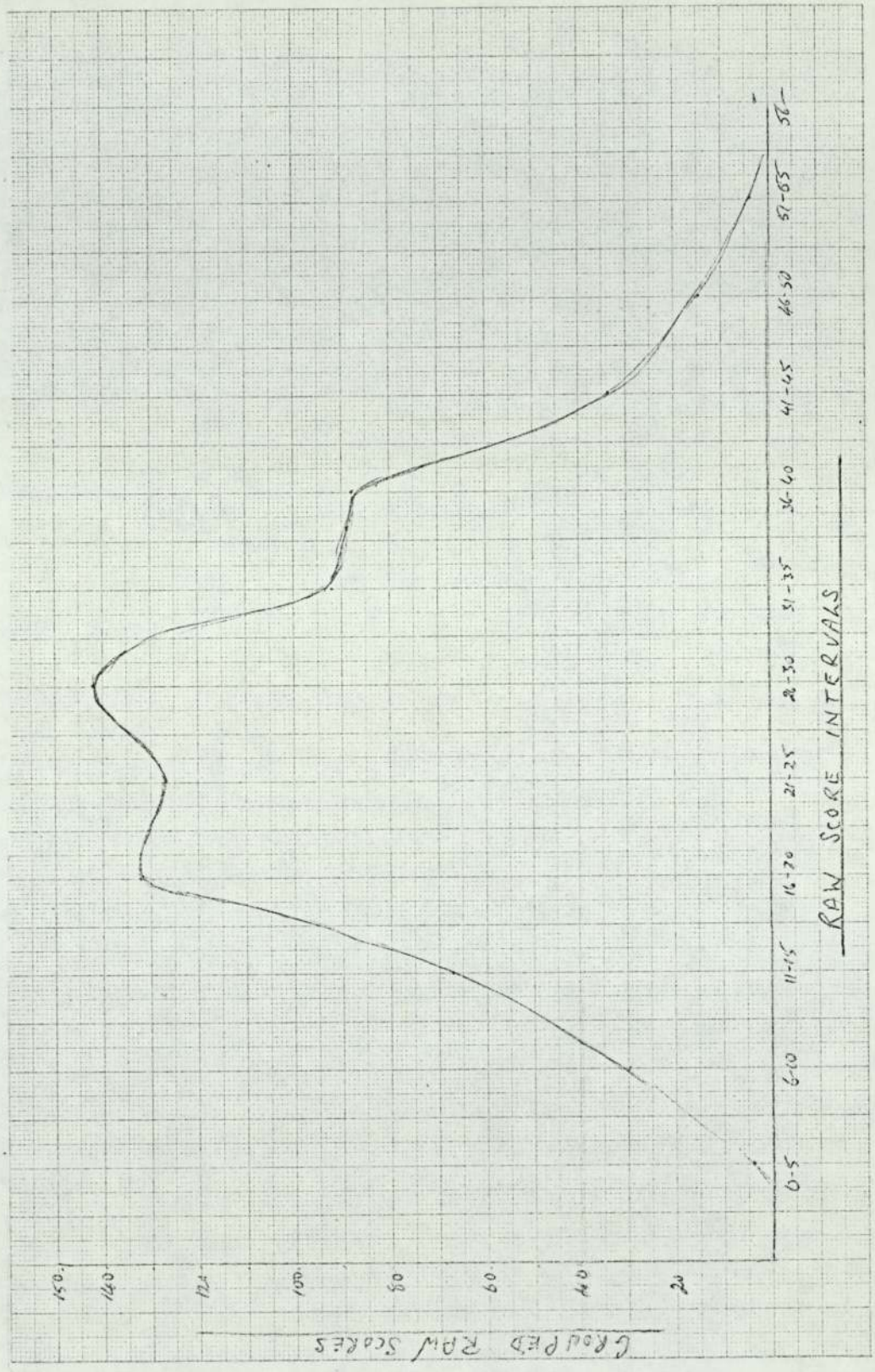
GRAPHICAL DATA RELATED TO IPATASQ SCORES
OF FEMALE STUDENTS

APPENDIX 19



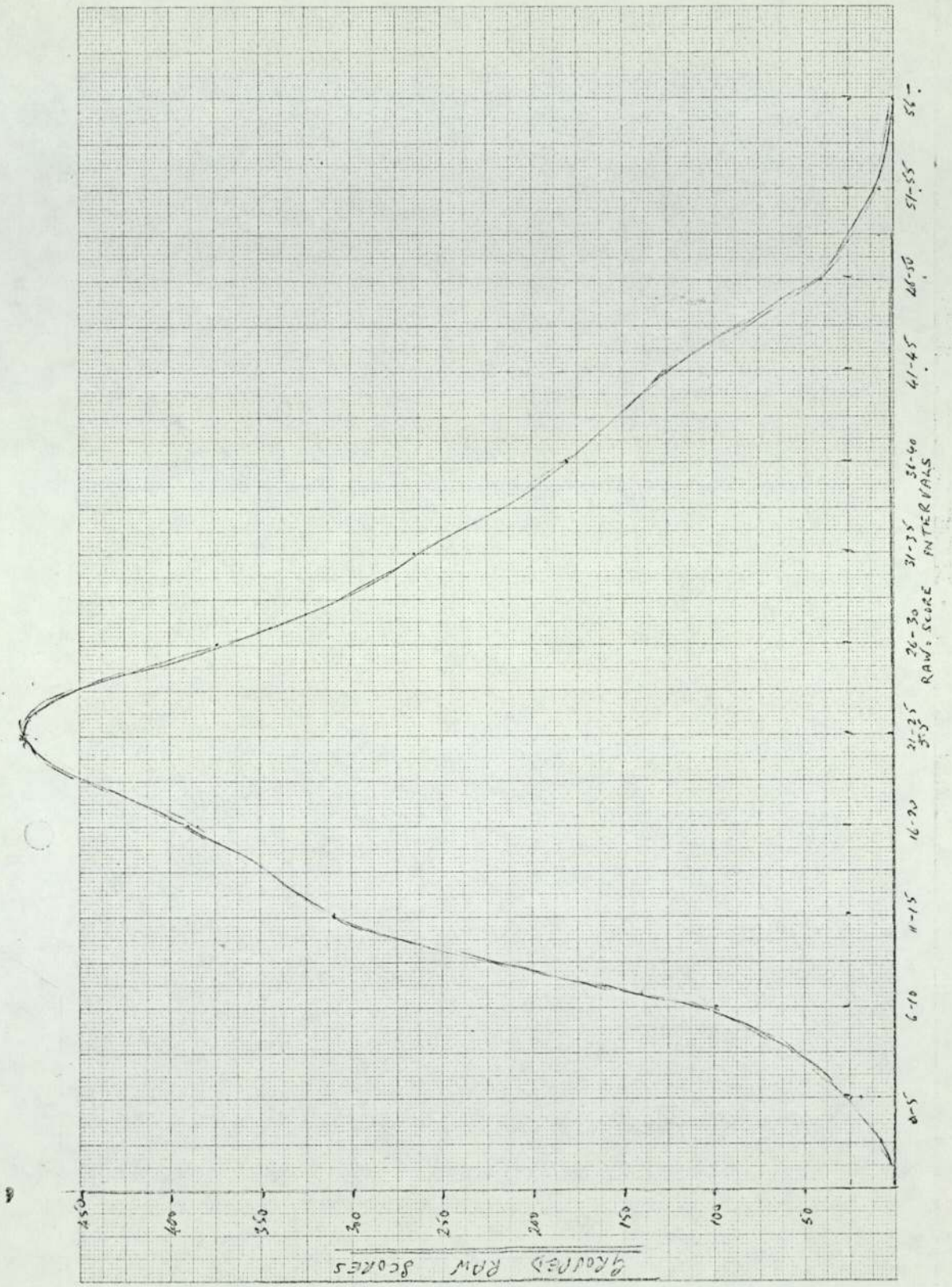
GRAPHICAL DATA GROUPED TOGETHER
FOR MALE IPATASQ SCORES

APPENDIX 20



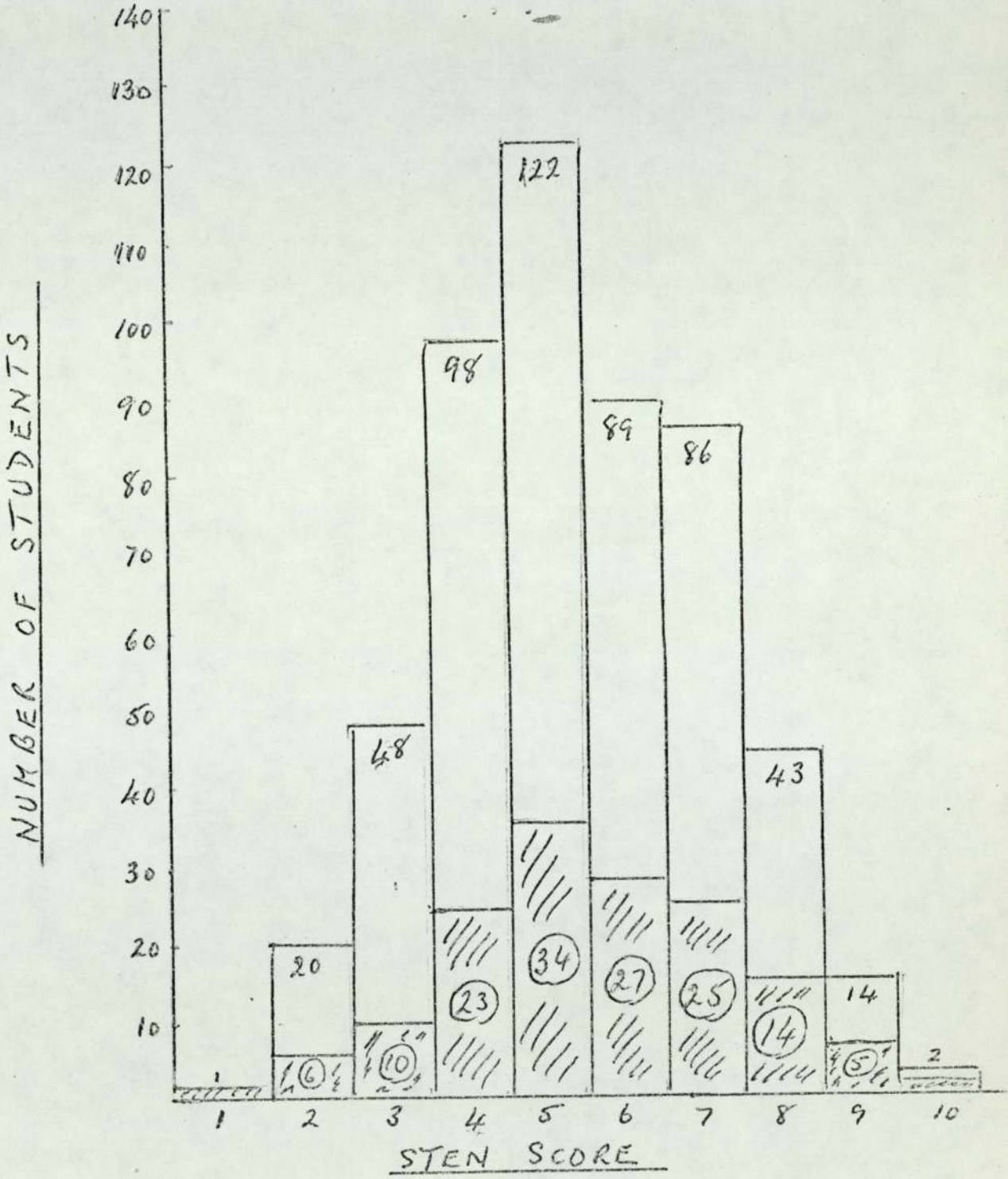
GRAPHICAL DATA GROUPED TOGETHER
FOR FEMALE IPATASQ SCORES

APPENDIX 21

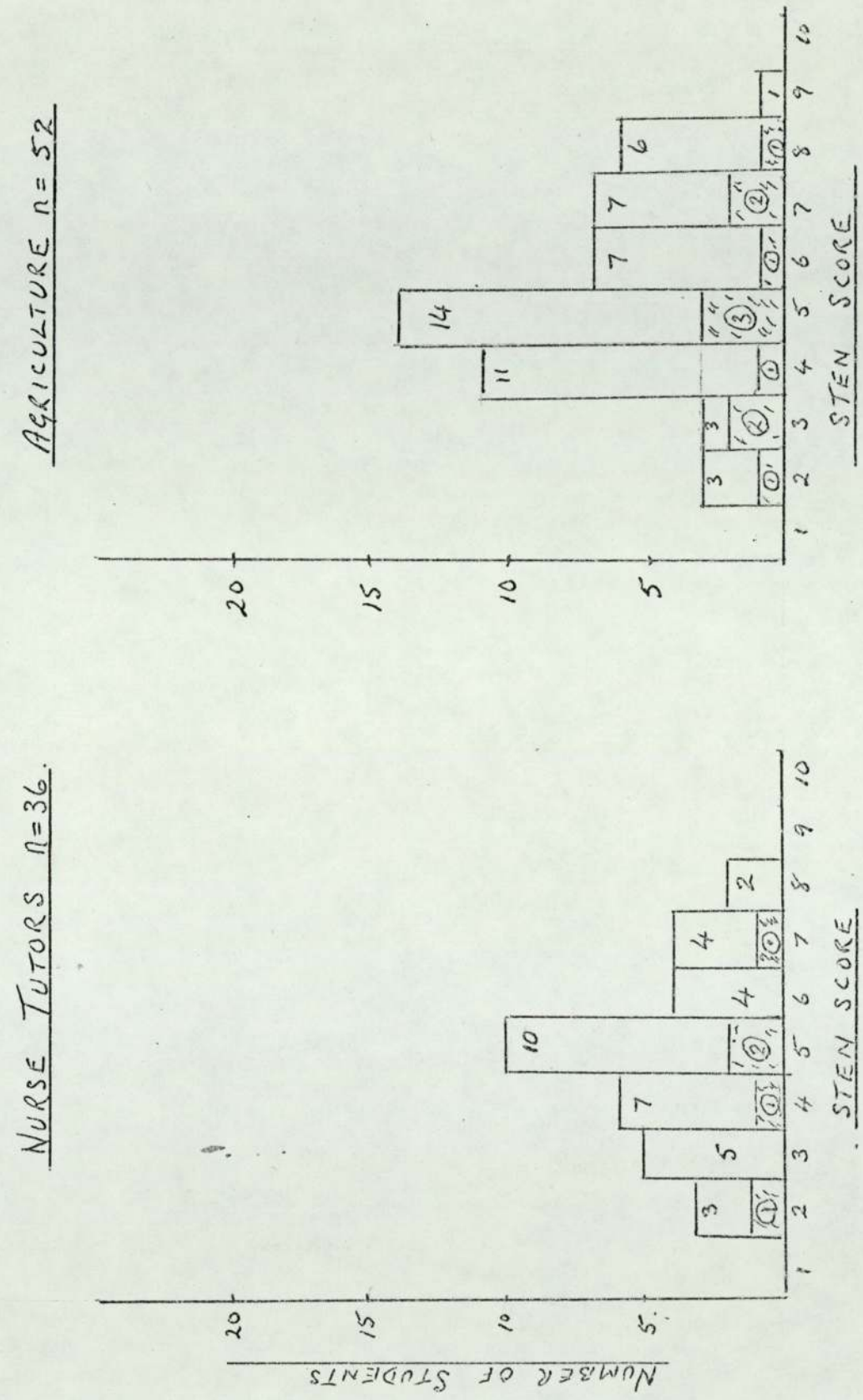


GENERAL POPULATION INTERVIEWEES

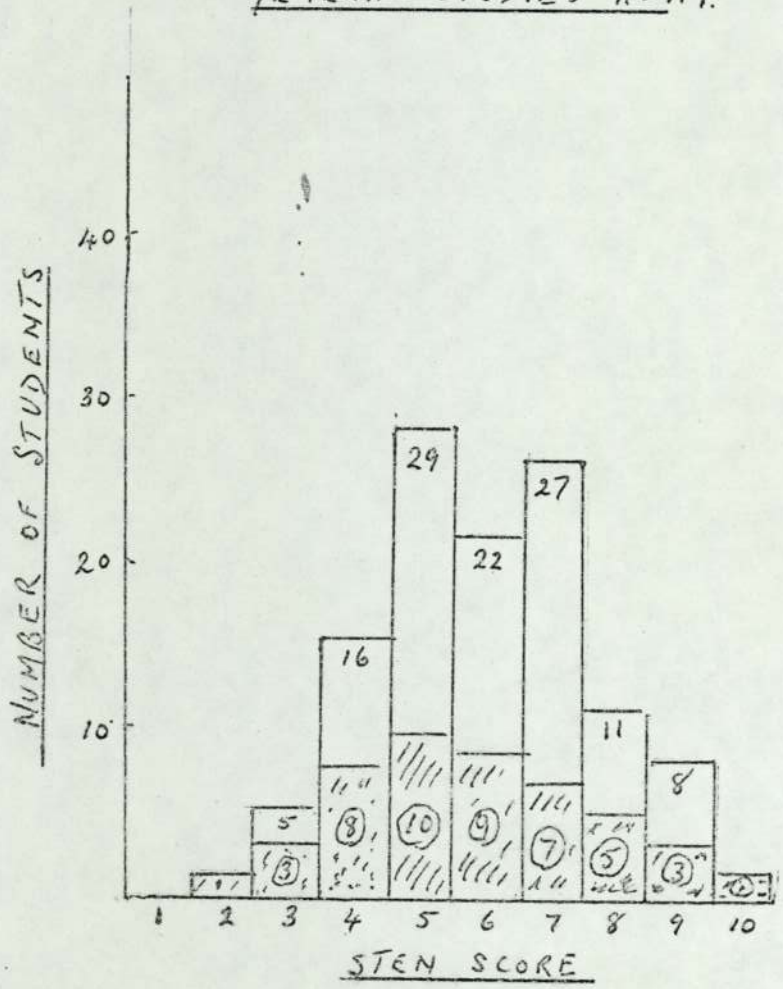
REJECTEES IN SHADED AREA.



DIFFERENCES IN ANXIETY LEVEL OF STUDENTS
IN DIFFERENT SUBJECT DISCIPLINES



GENERAL STUDIES n = 119.



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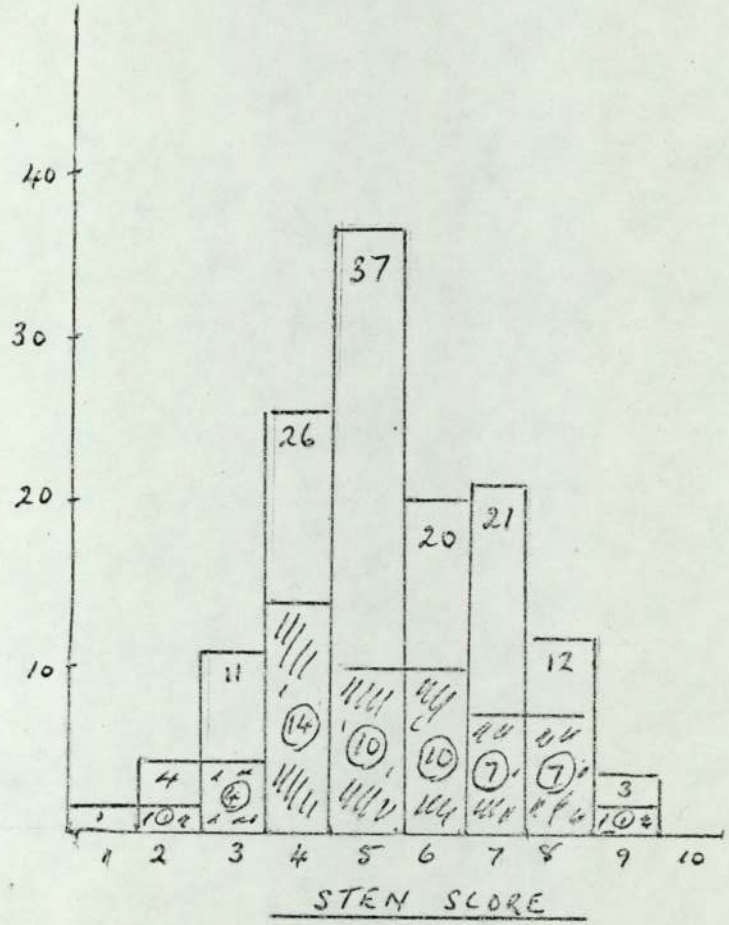

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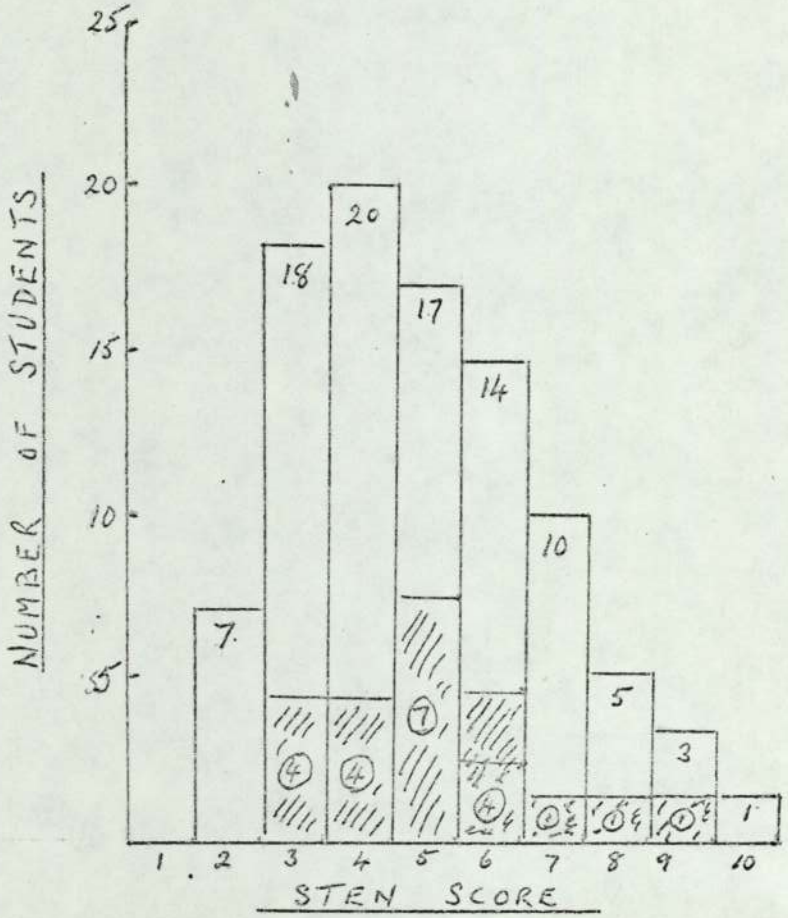

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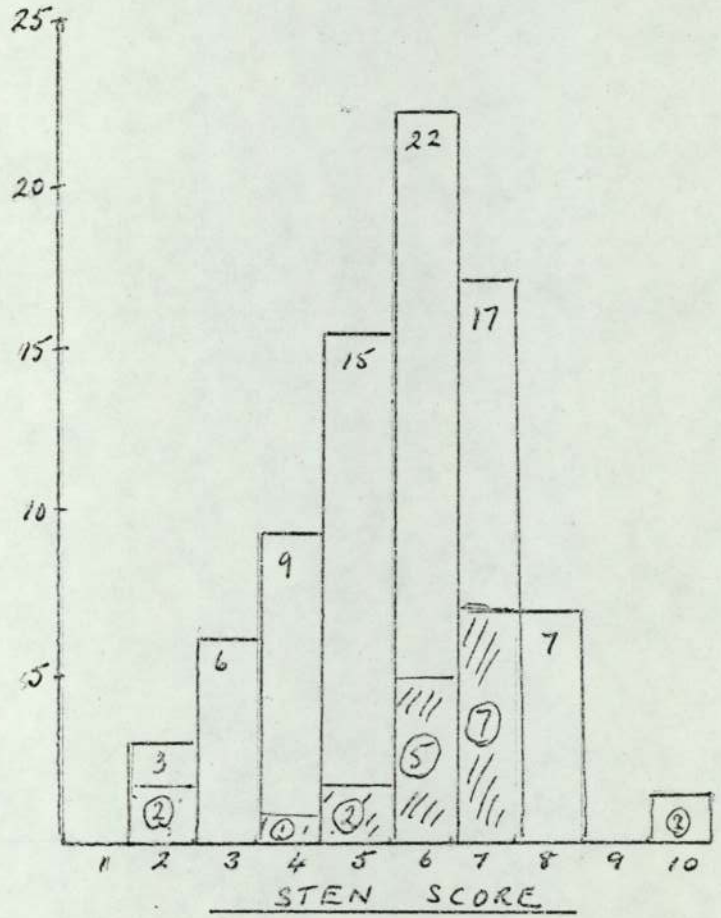

APPENDIX 24

INTERVIEW INSTRUCTIONS RELATED TO THE IPATASQ

As students, you are being invited to participate in some research work which is being undertaken in conjunction with the University of Aston. The Self-Analysis Form has been developed by the Institute of Personality and Ability Testing department in the USA under the direction of R B Cattell. You are asked to complete the form as quickly as possible. It should not take more than 10 minutes. This does not form part of the interview, in that you will neither be accepted nor rejected on the basis of any results. There is no compulsion to complete the form, but we shall be grateful for your help. Please make sure that your name and department are filled in correctly, together with your date of birth.

Thank you for your co-operation.

R CLARKE
Department of Education Studies

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