

# A DANGEROUS AGE? AGE-RELATED DIFFERENCES IN STUDENTS' ATTITUDES TOWARDS THEIR TEACHER TRAINING COURSE

DAVID MILLER AND EDNA FRASER

---

## SYNOPSIS

The views of students towards their teacher training course were investigated by questionnaire survey and semi-structured interview. Older students, particularly those aged 31–35 at the start of their course, were more likely to comment on the pressures of family commitments, and tended to be more critical of the style of teaching and the responsiveness of the course to their needs. Although many of the factors emerging from the investigation have previously been identified in the literature, this study suggests that students in the 31–35 age group exhibit a 'peak effect' of vulnerability to such factors. In addition, the distinctive nature of a teacher education course may contribute to the pressures. There are implications in terms of flexibility in course management, and differentiation of course experiences.

## INTRODUCTION

In common with most sectors of higher education, institutes for teacher education have been recruiting an increasing number of mature, non-traditional students. Since these individuals are likely to have a different background of experiences, knowledge and attitudes from their younger counterparts, there is clearly a need to find out more about their perceptions of the experiences which they are offered.

The literature on mature students tends to present the student population as comprising two groups: traditional, (i.e. younger) students and non-traditional, mature or adult students. Although the area of 'mature entrants' is now attracting an increasing amount of research, there are difficulties in gaining a clear picture of the scene. As Gallagher and Wallis (1993) explain, 'the limited extent of this research, combined with the different questions explored by different methods, leave a substantial number of issues on which it is difficult to make definitive statements.'

Indeed, one of the central difficulties is that different researchers have employed different operational definitions. Thus, in a typical selection of studies, mature students have been variously defined as being over 25, over 23, or over 21 years at the time of commencement of their course. Alternatively they have been defined as students who have been away from continuous education for a given period of time; Horrobin et al. (1986), for example, apply the criterion of more than one year. Other writers have focused not on age, but on the fact that these students have entered HE without the standard entry qualifications. Gallagher and Wallis (1993) in their review of recent research refer to 'non-traditional entrants', that is, those who enter on the basis of qualifications other than the minimum prescribed Highers or A-levels. Others have referred to 'late entrants', 'RTS (return to study) students', 'career change students', 'non-standard entry students' and 'new audiences'.

While acknowledging this lack of conceptual consistency, it is nevertheless possible to identify some key elements. Quantitative research has focused on the differences between mature students (variously defined) and their younger counterparts, comparing 'output factors' of completion rate and class of degree awarded. Despite differences in emphasis and some contradictory findings, the evidence paints a fairly positive picture of the older students. In broad terms, it has been found that although mature students are somewhat less likely to complete

their courses, (Woodley, 1984; Gallagher and Wallis, 1993), those who do graduate obtain degrees that are at least as good as their younger colleagues (see also Walker 1975; Ashcroft and Peacock, 1993). Some subject-related differences have been identified: for example, studies by Woolly (1983), Osborne and Woodrow (1989) and the review by Gallagher and Wallis (op. cit.) indicate that older students do better than younger ones in arts and social science, but less well in science, engineering, health and medicine.

The picture presented by quantitative research is complemented by the insights provided by recent qualitative studies in which a variety of factors which seem to have a significant effect upon the experiences of adults in higher education have been explored. Many writers refer to the extra commitments for which adult students have responsibility; for example, the logistics of running a family and managing family finances while studying full time have been identified as factors which create extra pressure, (Gardner and Pickering 1991, 1992). Difficulties with nursery and child care arrangements, problems with access to library facilities and feelings of isolation have also been identified, (e.g. MacDonald, 1992). Not surprisingly, mature students often feel tensions between course and family commitments (Ashcroft and Peacock 1993). In addition, mature female students may experience particular problems when family members do not accept the personal growth that takes place as a result of their studying (Blair, McPake and Munn, 1993). Despite these particular difficulties and competing demands, the high level of commitment of mature students is often cited as a contributory factor to the good performance of these students (Powell, 1992; Bullough and Knowles, 1990).

Additionally, some older students come to higher education with a 'powerful personal history' of anxiety about a low school performance (Gardner and Pickering, 1991); mature students often feel they have not entered university by the normal way, but have come in through 'the back door', and consequently feel the need to prove themselves by doing as well as possible (Ashcroft and Peacock, 1993). Many mature students have entered higher education via the Scottish Wider Access Programme (SWAP) which guarantees students entry to certain HE courses upon successful completion of a specific programme of study at FE college. A number of authors have investigated the progress of these 'Access students' in higher education, (see for example, Yates and Davies, 1987; O'Dea and McPhee, 1994; Johnstone, Cope and Osborne, 1992; Munn, Johnstone and Robinson, 1994.). Although concerns have been raised about matching the teaching approach and assessment practices across FE and HE, overall these investigations tend to paint a very positive picture of the attitudes and attainments of these students as they progress through their degree courses.

It seems that the first year of higher education is particularly crucial for mature students, and several writers have pointed to the importance of providing extra help and positive feedback for them at that time, (e.g. Munn, MacDonald and Lowden, 1992; Bridgwood, 1992). However, factors which are regarded as fairly normal features of academic life can present particular problems for mature students, for example uncertainty about the standards expected of them, insecurity made worse by the delay in receiving feedback on academic progress, lectures timetabled in the latter part of the day, and feelings of isolation. In addition, mature students have expressed concern that they speak too much in seminars, and therefore make themselves unpopular with younger students (Field, 1989).

Mature students often feel that the organisational arrangements and the institutional climate at university are designed to meet the needs of a young, largely campus-based student population. Clearly, younger students have anxieties too, but as Gardner and Pickering (1992) point out, they at least feel that the university is geared to their needs and interests—and they are in the majority. Some institutions

have attempted to be more responsive, for example MacDonald (1993) reports on recent innovations to help mature entrants at three West of Scotland institutions, and Bridgwood (1992) discusses the development of a successful mentor system. Not surprisingly perhaps, there is evidence that the role of the tutor is central to the experiences of mature students (Munn, MacDonald and Lowden 1992; Gardner and Pickering 1991).

As a final point, it should be noted that although some of the large scale studies (for example Walker, 1974, and Woodley, 1984) have analysed student performance by age groups, most researchers have adopted a simple two-fold categorisation of students as young or mature. While this may have proved useful in providing a basic framework for the investigation of differences, and in so doing helped to highlight important issues, it would seem unlikely that mature students can be categorised as a single, homogeneous group. One of the aims of this study therefore was to investigate further the possible existence of identifiable sub-groups within the cohort of mature students and to examine their particular characteristics. It is this aspect of the findings which is reported on below.

#### THE INVESTIGATION

This study sought to explore the views of students towards their pre-service teacher education course, and look for evidence of sub-groups within the student body who were distinctive in their characteristics. The subjects were undergraduate students on the BEd course of a Scottish Teacher Education Institute (TEI). Students were classified as being Direct Entrants (DEs) if they started the course straight from full-time school education, and Non-Direct Entrants (NDEs) if they did not. Biographical data supplied by the subjects allowed the responses of NDE students to be analysed according to different criteria, including age at commencement of their course.

The main body of data was gathered by an anonymous questionnaire survey. The items were designed to take account of the following: key issues identified from the literature, information from the authors' own experiences of working with a range of students over a period of many years, and concerns raised by the students themselves. Data on the last of these had been obtained by circulating a short survey to all students on the BEd course to which 101 students responded, expressing their views on the course and identifying perceived difficulties. This approach increased confidence that no significant factors had been overlooked, and helped to ensure the construct validity of the final instrument.

The questionnaire items related to particular aspects of college life: for example, teaching and learning (e.g. I prefer open learning approaches to lectures and tutorials); motivation and self esteem (e.g. The course has had a positive effect on my self esteem); and personal factors (e.g. I often feel that I'm not doing the course justice because of family commitments). Respondents had to state whether they agreed or disagreed with each statement, using a five-point scale, and the normal conventions were followed in ensuring that the questionnaire included a balance of statements with positive and with negative connotations. Questionnaires were distributed to all NDE students in the spring of 1995, together with a stratified random sample of DEs. Overall 256 students responded, representing a return of 54%, fairly evenly distributed over the four years of the course. Table 1 shows the numbers in each age category:

TABLE 1: the sample

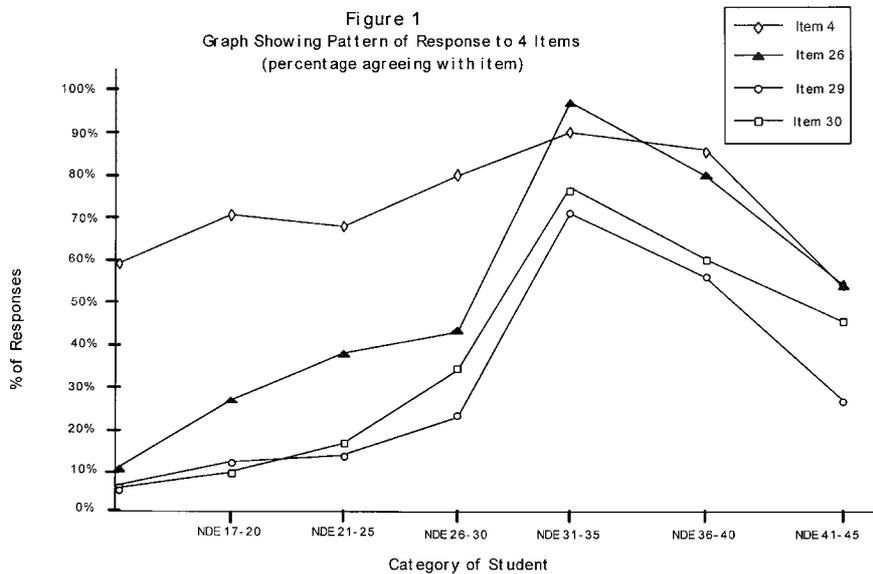
DEs	NDEs Total	NDEs by age categories						
		17-20	21-25	25-30	31-35	36-40	41-45	>45
86	170	41	29	30	31	25	11	3

In order to provide descriptive statistics, the raw data were tabulated and the categories agree/agree strongly were conflated, as were disagree/disagree strongly; percentage figures were then calculated to facilitate inter-group comparisons. The initial comparison concerned patterns of response for DEs and NDEs. Subsequently the data from the NDEs were analysed according to various criteria, including age bands, as indicated above.

#### THE FINDINGS

In reviewing the data one particular trend became apparent. When the NDE responses were analysed according to age categories, it was found that one group tended to be distinctive in their views. More specifically, they tended to be consistently more negative in their attitudes to several issues.

For example, as Figure 1 shows, there was an increasing tendency with age for the NDEs to respond to items associated with the pressures of family commitments. These attitudes were almost certainly related to the increase in child-care worries and other family pressures which older students experience (see, for example, MacDonald, 1992; Gardner and Pickering, 1991). This trend showed a marked peak at the age range 31–35, the group in which we found the highest proportion of parents.

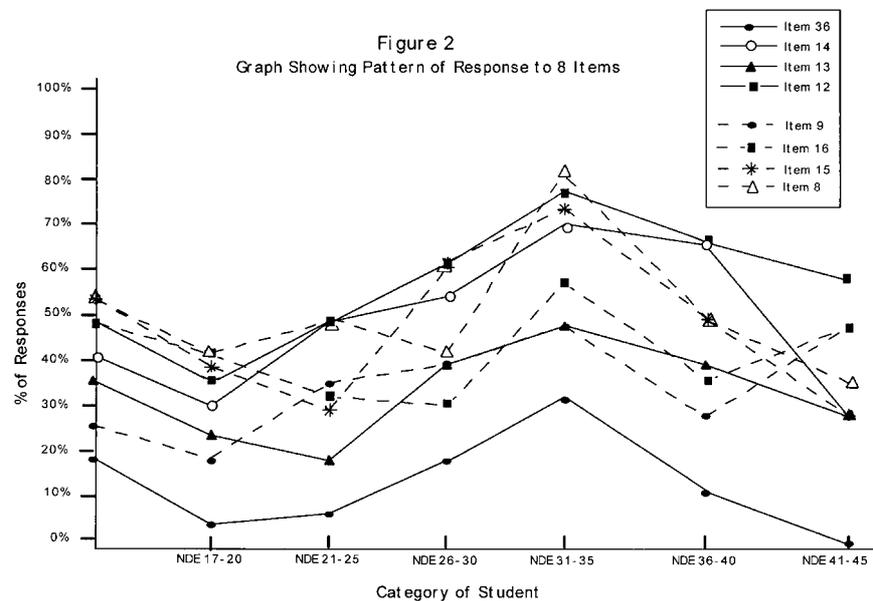


- Item 4 The pressures of the course affect my personal and social life
- Item 26 I often feel I'm not doing the course justice because of family commitments
- Item 29 I often feel tensions between my responsibility towards the family and the demands of the course.
- Item 30 I sometimes feel guilty about doing the course.

While this finding in itself merely confirms that students in teacher education courses exhibit similar characteristics to those in other higher education courses, comparable patterns of response were found in relation to other items which at first sight had little to do with family commitments.

Figure 2 shows the patterns of response for these items. It should be noted that for ease of interpretation, the graph shows the percentage of students who agreed with items 15 and 36, but percentages who disagreed with the other six items.

- Item 8 The style of teaching and learning in college is pretty much as I expected
- Item 9 The college course builds upon my previous knowledge and experience
- Item 16 Feedback from assessment helps to motivate me
- Item 15 I feel I am demotivated by the way the course is run
- Item 12 College is aware of the needs of people like me
- Item 13 College is responsive to the needs of people like me
- Item 14 The course has had a positive effect on my self-esteem
- Item 36 There should be special classes for mature students



The items in which the 'peak' effect was most marked touch on a number of aspects of course experiences, but in particular the style of the teaching, and the responsiveness of the course to the needs of the students. These findings reflect issues identified in previous studies of mature students, but the peak effect for this particular age cohort remains unexplained. We were concerned therefore to address the following questions: what particular features of the experiences of such students might account for these peak effects? And, are there also specific aspects of teacher education courses which might be contributing factors?

In order to explore further our interpretations of the questionnaire data we interviewed a small number of students (N=10) in this age range using a structured schedule in which the questions focused on the following issues. Firstly, the pressures felt by the students (Do you ever feel under pressure from the course? Can you describe what these pressures are? What changes might be made to counteract these pressures? etc.). Secondly, the style of teaching and learning on the course and how

this affected their achievements and motivation (Does the style of teaching and learning in College respond to your needs as a learner? etc.). Thirdly, factors related to self-esteem (Has doing the course had a positive effect on your self esteem? etc.). We also solicited responses to the following question: 'Our data so far has suggested that people in your age group may experience more pressure than students in other age groups. Have you any ideas on this?' The additional information derived from these interviews highlighted the complexities underlying the three factors involved.

#### *Family Commitments*

The data from the questionnaires had indicated that the age group contained the highest proportion of students who were parents, and the interviews highlighted some difficulties associated with heavy family commitments. For example, several students commented on how an established family life was severely disrupted by their entry to College:

When I first thought about the course and discussed it with my wife, we knew the financial side would be difficult but it was the emotional aspects which were more difficult. I couldn't go on the Environmental Studies trip because it cost £5. It was too much at the end of term. It has been interesting to see how my children have coped. My eight-year-old son ran crying after the bus when I left on a Sunday. My youngest daughter, three years, doesn't like me going away on a Sunday, she clings to me when I am at home. (Student D)

While not all accounts were quite as fraught, it was clear that many students in this age group had had to make complex arrangements to take account of their family commitments. There were also particular aspects of the teacher education course which brought additional difficulties, the most commonly identified being the school placements which occur at regular intervals throughout the course. Some students believed that no special consideration was given to their other commitments when the placements were allocated, and they found it difficult to negotiate changes:

I don't think College takes into account the distance to school experience when you are a single parent. One session in second year I was unhappy about going out to Kintore because of the time it took to get there and back to collect my child. (Student H)

I think the distance I travel on a daily basis shows my commitment. One placement was difficult—in Aberdeen in the third year. This was eventually changed to Lhanbryde. I was really rankled about this. It did not help to be told I should have been aware of this before I started the course. I have a husband and four children. I saw the Vice Principal about the distance and the placement. (Student C)

The problems associated with travelling for placements were identified by a number of interviewees as constituting the biggest obstacle which they encountered, and the thing they would most wish to see responded to more sympathetically.

Several students commented upon how relationships with their own children were affected. Importantly, it would seem that the nature of their professional training, (involving developing their understanding of the needs of all children, and spending much time with other people's children) served to further highlight what their own family might be missing. The irony was not lost on one student:

You know, I can't help reflecting on the fact that when I'm in the nursery I

spend time with any child who wants it, read them a story, play with them or whatever—but I don't have time to do that with my own children. (Laughs)  
I sometimes think the only way I'll be able to spend time with him is to get a placement at his school. (Student E)

#### *Aspects of teaching and learning*

The course did not build on my previous experience. The course is not aware of the needs of mature students. Postgraduate students are treated in a different way—like adults. Our needs are not addressed....it's all to do with being treated as an eighteen year old rather than as someone who has had previous experience. (Student B)

The literature had already suggested that some mature students feel that undergraduate courses are not geared to meeting the needs of older students, and the students in this study expressed views along these lines; consequently, it was important to investigate which particular needs they felt were not adequately responded to in terms of teaching and learning.

Tutors have frequently commented on the fact that many students come into teacher education with a model of a learner which involves receiving a set curriculum from 'experts'; this can be contrasted with the professed tutor perspective of the student as an active learner who is encouraged, indeed required to have 'ownership' of their own learning. While one of the students indicated that she had indeed liked 'sitting in a lecture hall taking notes', a number of others indicated that the course, despite the professed aspirations of the tutors, failed to offer them the degree of responsibility they felt able to assume. It also failed to give enough recognition to the less visible and unassessed activities of independent learning and striving to learn for its own sake, which these students valued:

Intellectually the course does not fulfil my needs. No time is given to personal study. I should have more responsibility for my learning. You learn and it broadens your horizons and it helps you to look at teaching from a different point of view. (Student J)

The non-assessed part of the course means a lot to me—to most mature students. I'm not just conscientious where it is seen. You want to know that you can do things—get personal satisfaction. It rankles that some students don't do the non-assessed part. (Student B)

These students had an appreciation of a range of ways in which teaching and learning could be made more effective; one suggestion involved the tutor in role play as the teacher, with the students as the class, but this had not been adopted. Their courses had clearly given them the knowledge and the technical language to identify and articulate some of the professional failings in the experiences they were offered:

We all know that certain people prefer different approaches. It's differentiation really. Is there enough differentiation? Maybe there should be more. We are all taught the same way—they should try to appreciate that some prefer one style to another. We are treated like somebody newly out of school early on—that annoyed me. (Student D)

But diversity in presentation itself was not enough. Experiences offered had to be more than varied and well intentioned; they had to be effective, otherwise the most precious resource of this hard pressed group—that of time—was squandered:

I don't like workshops—I feel they're not worthwhile, especially those hypothetical workshops—they are just a waste of time. Wasting time is my pet hate—we don't have time to waste. (Student F)

### *Self-image and self-esteem*

I really don't know if people appreciate my commitment to the course. I don't know if they know who I am. (Student I)

There were many indications that students in this age category felt the characteristic need to 'prove themselves' (e.g. Gardner and Pickering, 1991). This need, and the uncertainty of what was expected of them in assignments, were well represented in their interview responses. However, there were also indications that they had now reached a time of life when their life experiences had given them a fairly robust self image and set of skills which the course in various ways failed to acknowledge:

Maybe if it was just taken into account that we have held down jobs, sometimes managerial jobs, and that we have our own children. (Student G)

And there were indications too that this particular group of students were driven by two factors not previously identified in the literature. Firstly, the qualification they sought was not a general degree; they had undertaken a highly demanding, specialised course over four years, with the express intention of entering one particular profession:

My self-esteem sometimes plummets when I see how much I have to do. The really heavy workload affects your self esteem in the short term—you start to doubt yourself because you think you'll not be able to do it all. But I don't let it affect me. I want to be a teacher—it's at the top there—at the pinnacle. I'll do what I have to. (Student A)

Secondly, they were at the age when they saw this particular course as their last chance of gaining that particular professional qualification:

If I didn't expect so much from myself I could balance everything. Being the age I am, if I don't make it, I won't get another chance. I don't want to blow it. (Student G)

Younger students seem to be more confident. I don't know why this is—do they have less to lose? They will have another opportunity. This is my last chance—a lot of the older ones feel the same. How badly you want something—makes you worry more. (Student D)

For some approaching the end of their course, there was the dispiriting perception that despite their struggles the goal was not coming clearly within their reach.

I am worried about an assignment, my husband is worried about his job—there is so much tension. I worked part-time for the first two years—fourteen hours—all day Sunday, Tuesday and Thursday from 5.30. ...I have a sense of loss, of grief, at the end of the course. All of this work for four or five years—including the access course, and there is nothing at the end of it—no job prospects. I feel angry. (Student B)

### **A DANGEROUS AGE?**

Information from our initial open survey, and the trend in the data shown in figures 1 and 2 above, confirm that the factors which are associated with negative perceptions and responses to the questionnaire items are present in all the non-direct entry age cohorts;

they are not experienced exclusively by those in the 31–35 years age group. Other studies had already identified many of the factors emerging from our interviews: the family commitments, the perceptions that the institution and the courses fail to take into account the characteristics and needs of older students, the effects of low self esteem, and the pressures which older students impose upon themselves. However, our study suggests that students in the 31–35 age group exhibit a ‘peak effect’ of vulnerability to many or all of these factors. This vulnerability may well be exacerbated by some of the particular characteristics and requirements of a teacher education course, and the fact that they have committed themselves to undertaking a demanding vocational degree with no guarantee of employment at the end. For many of this age group of undergraduates, it is their last chance to gain the degree which allows entry to the profession they have chosen, and it is proving to be a stressful gamble.

Although a few of the students expressed the view that they ‘shouldn’t be treated any differently — it is a degree course after all’, suggestions were made by a number of interviewees which would help to mitigate the pressures felt by older students. For example, improvements in communications with students, such as timetables being issued in good time, would avoid the wasting of time and allow students to be well enough prepared and organised to fit in with the requirements of the course. In addition, greater flexibility in course management would be appreciated, including some degree of negotiation on the location of placements.

The need for feedback has been identified as an important factor in assisting students to work effectively; however, a number of students in this age band indicated that their need for feedback went beyond the merely academic:

I don’t think the College or course appreciate the amount of time I put in. The grades I am getting show my commitment, but the College probably thinks I’m getting them easily. They don’t know what I’m putting in to get these grades. (Student G)

This single mother felt that the comments on her assignments meant more than the grades, and that while no special allowances were sought, some empathy or occasional acknowledgement of the physical and emotional effort expended would have given a significant boost to her feelings and sense of achievement. Tutors might therefore be encouraged to respond to students in this age band in more than just a narrow academic way, acknowledging the efforts involved in securing their academic achievements.

It might also be instructive to track some students throughout the academic session to identify significant events which appear to affect self esteem. This could be particularly important, since Abouserie (1994) in her study of second year university students found low self esteem to be associated with higher levels of stress.

#### IMPLICATIONS

It is clearly not possible to claim that these findings are typical of students in this age band in other teacher education institutes; they may simply be characteristic of the student sample concerned. However, the factors identified are of a general nature, and likely to be present in similar populations wherever they undertake their courses. For example, given the national uncertainties and turbulence in teacher education and in the teaching profession at present, it would be surprising if the anxiety levels of this particular age group concerning their prospects of employment were not universal.

Whether it is the case that these students are more negative because of home and family pressures, or whether there is a more complex interplay of different factors at work, the findings from this study constitute a step forward. For, although some of the quantitative studies referred to earlier have identified age-related differences

in performance, (for example, Woodley, 1984) this study points to age related differences in attitude. In essence, it suggests that there may be real differences between groups of students who are currently classified under the umbrella term 'adult learners' or (depending upon the definition employed) 'mature students' or 'non-traditional entrants'. More specifically, it would suggest that there are clear differences in attitudes held by students in the 31–35 group and those younger NDEs, for example aged between 21 and 25.

Certainly, gathering of further data, including that from other institutions, should help to clarify the picture, but already our findings would suggest that the conventional two-fold classification of the student body may have outlived its usefulness. The term 'mature student' may be a convenient administrative label, but perhaps it is time to consider a more meaningful way of categorising students, and focusing initially on the needs and perceptions of different age groups may provide a useful starting point.

It may be helpful to consider the findings presented here in the light of work carried out by Powell (1992) in which he drew attention to the way in which non-traditional students' previous experiences and existing knowledge differed from that of traditional students, and how these factors influenced their pedagogical constructs. It would not be surprising to learn that the differences between groups of students in the current study, (particularly in relation to views on teaching and learning) are also related to such factors. If so, there are important implications for institutions, for if different students approach the teacher training curriculum in different ways, course experiences should be differentiated to take account of this. Such differentiation may have to go beyond the organisational aspects (for example, taking into account the extra commitments of such students when deciding on timetables, placements, etc.) to considering also issues of prior experiences, conceptual understanding and preferred learning style. The recent moves towards modularisation (including the scope offered for APL, APEL and individual pathways) may provide some opportunities here. The recent and rapid developments in information technology may also point towards taking the wide differences in knowledge and skills of the students into greater account when planning courses. Clearly, for a variety of reasons, the different components of the courses may need to be considerably more flexibly offered and delivered than at present. In addition, there may be pointers here for those concerned with guidance and counselling.

Finally, whatever the causal factors, it seems that many of the students in the 31–35 group appear to be at risk; at the very least, they appear to have special needs which we are only just beginning to acknowledge and understand. This is an important issue, since these individuals constitute a pool of talent with additional skills and life experiences to bring to primary teaching. Indeed, in many ways they are exactly the type of students towards whom recent changes in official policy on recruitment have been directed. In this article we have presented an account of only the students' negative perceptions and difficulties; this fails to give prominence to one of the key factors emerging from their interviews—their focused motivation and determination to undertake, with some degree of distinction in their work, a vocational degree which will allow them entry to a particular profession.

In the current climate, with continuing reductions in time available for both formal and informal contact between students and tutors, it is not easy to become aware of the needs and perceptions of all our learners—a dangerous age in more ways than one perhaps. The more we know about our student body, the better we can help individuals to become enthusiastic, competent professionals.

#### ACKNOWLEDGEMENTS

The authors would like to thank the anonymous referees for their helpful comments, and in particular Professor Mary Simpson for her invaluable advice and encouragement.

#### REFERENCES

- Abouserie, R. (1994), 'Sources and Levels of Stress in Relation to Locus of Control and Self Esteem in University Students', *Educational Psychology*, 14:3, 323–330.
- Ashcroft, K. and Peacock, E. (1993), 'An evaluation of the progress, experience and employability of mature students on the BEd course at Westminster College, Oxford', *Assessment and Evaluation in Higher Education*, 18:1, 57–70.
- Blair, A., McPake, J., and Munn, P. (1993), *Facing Goliath: Adults' Experiences of Participation, Guidance and Progression in Education*, Edinburgh: SCRE.
- Bridgwood, A. (1992), 'Someone to talk to: developing a mentor system', *Journal of Access Studies*, 7:2, 204–214.
- Bullough, R. V. and Knowles, J. G. (1990), 'Becoming a teacher: struggles of a second career beginning teacher', *International Journal of Qualitative Studies in Education*, 3:2, 101–112.
- Field, J. (1989), 'Mature students in the undergraduate community: what kind of special case?', *Pastoral Care in Education*, 7:3, 16–18.
- Gallagher, J. and Wallis, W. (1993), *The Performance of Students with Non-Traditional Qualifications in Higher Education: a Review of Research Literature commissioned by the Scottish Vocational Education Council*, Glasgow: SCOTVEC
- Gardner, P. and Pickering, J. (1991), 'Learning with yuppies': or, on counselling mature students, *Pastoral Care in Education*, 9:1, 13–19.
- Gardner, P. and Pickering, J. (1992), 'Learning to live with Madonna: or, mature students on campus', *Pastoral Care in Education*, 10:4, 3–8.
- Horrobin, J. C., Branscombe, M. E., and Evetts, R. D. A. (1986), *Mature Students in Higher Education*, University of St Andrews Department of Adult Education.
- Johnstone, R., Cope, P., and Osborne, M. (1992), 'Recruiting mature students into concurrent initial teacher training: the Stirling access to teaching scheme', *Scottish Journal of Adult Education*, 1:1, 44–51.
- MacDonald, I. (1992), 'Meeting the needs of non-traditional students—challenge or opportunity for higher education', *Scottish Journal of Adult Education*, 1:2, 34–46.
- MacDonald, I. (1993), 'Meeting the needs of non-traditional students in higher education: grasping the nettle', *Scottish Journal of Adult Education*, 1:4, 5–12.
- Macintyre, C. and Tuson, J. (1995), 'Stress in school experience', *Education in the North*, New Series, 3, 71–73.
- Munn, P., Johnstone, M. and Robinson, R. (1994), *The Effectiveness of Access Courses*, Edinburgh: SCRE.
- Munn, P., MacDonald, C., and Lowden, K. (1992), *Helping Adult Students Cope*, Edinburgh: SCRE.
- O'Dea, M. and McPhee, A. (1994), 'The Scottish Wider Access Programme and the attainment of students in a college of education', *Scottish Educational Review*, 26: 1, 34–40.
- Osborne, M. and Woodrow, M. (1989), *Access to Mathematics, Science and Technology*, London: Further Education Unit.
- Powell, R. R. (1992), 'The influence of prior experience on pedagogical constructs of traditional and non-traditional pre-service teachers', *Teaching and Teacher Education*, 8:3, 225–238.
- Walker, P. (1975), 'The university performance of mature students', *Research in Education*, 14, 1–13.
- Woodley, A. (1984), 'The older the better? A study of mature student performance in British universities', *Research in Education*, 32, 35–50.
- Woolly, A. (1983), 'Taking account of mature students', in D. Jacques and J. Richardson (Eds), *The Future of Higher Education*, Guildford: SRHE and NFER/Nelson.
- Yates, J. and Davies, P. (1987), *The Progress and Performance of Former Access Students in Higher Education 1984–1986*, Centre for Access Studies, Roehampton Institute of Higher Education.