In this final chapter, it is obviously appropriate and necessary for me to try to draw out some of the main issues and themes that I have been discussing in this book. Indeed, I will in due course review the main findings from research into approaches to studying in campus-based education and distance education and identify their practical, theoretical and heuristic implications. What I want to do first, however, is to stand back from the substantive issues that have been discussed and consider the general nature of the research that I have been describing. In this regard, I want to make certain comments about the quality of research in campus-based and distance education and about the quality of the literature through which that research is disseminated. I shall then focus upon the key issue of whether campus-based and distance-learning students go about their studies in a similar manner, before considering the relationship between approaches to studying and academic attainment. Finally, I will discuss the contributions and limitations of qualitative and quantitative methods in understanding approaches to studying before making some final comments concerning research in campus-based education and research in distance education.

The quality of research in campus-based and distance education

In this book, I have provided an account of research that has been carried out into approaches to studying in both campus-based and distance education. From time to time, I have made critical comments about some of the studies that I have reviewed or about the inferences that have been drawn by their authors. This is both appropriate and inevitable in a book of this kind. Research in education (as in any other area of scientific or scholarly inquiry) must never be taken at face value but needs to be subjected to a continuing process of critical scrutiny and evaluation. It is, I think, fair to
say that research into campus-based education is nowadays an established field, with explicit research standards and recognized means for the discussion and dissemination of findings through a number of respected academic journals. A brief scrutiny of the bibliography that follows this chapter will readily identify the journals in question.

In comparison, I also think that it is fair to say that research into distance education is less well established and that there are several issues to be raised concerning the quality of that research and how it is disseminated, especially with regard to research on approaches to studying. Bååth (1982: 13) bemoaned ‘the severe lack of scientifically validated knowledge’ on the subject of approaches to learning in distance-learning students. It is obvious from the amount of material reviewed in this book that this kind of complaint could not be made today and, in a moment, I shall describe some tentative conclusions that one can draw from that material. However, to say this is not to imply that the available research evidence and the available research literature is entirely lacking in flaws. Indeed, one could debate at some length precisely how ‘scientifically validated’ the research on approaches to studying in distance education has really been.

One issue is that some researchers have adopted conceptual frameworks or research methods designed for use with campus-based students and have used them uncritically in the context of distance education. This kind of unreflective ‘borrowing’ in research on distance education was criticized by Gibson (1990). In the choice of research methods, it could perhaps be justified by the need to ensure that the same instrument was being used in different situations. However, in some cases, questionnaires were not sufficiently modified (or else were not modified at all) for the distinctive context of distance education, so that some items were really quite inappropriate. Examples include the research by Ekins (1992a, b) using the SPQ (see Chapter 5) and the research by Joughin et al. (1992) using the DESP inventory (see Chapter 8): in both cases, distance-learning students were asked to rate items that referred to face-to-face lectures. Of course, this is merely a special case of the general issue in cross-cultural research of ensuring that instruments are properly translated so that they can be used in different cultural contexts (see Van de Vijver and Hambleton 1996).

A different issue is that some researchers have drawn inferences concerning distance-learning students without including any comparison group of campus-based students, while others have compared the approaches to studying of distance-learning students and campus-based students without taking into account the many differences that exist between these two populations of students apart from their mode of study or course delivery. I have emphasized these differences at various points in this book. The most obvious ones are in:

- age: in most national systems, students taking courses by distance learning are on average older (and also show a greater range of ages) than students at campus-based institutions
prior academic qualifications: students taking courses by distance learning may lack the entrance qualifications that are normally required of students at campus-based institutions, especially if distance-learning institutions operate an 'open' admissions policy
recent academic experience: distance-learning students may have returned to education after many years, whereas most students attend campus-based institutions within a few years of having completed their secondary education.

Obviously, the third of these factors is likely to be confounded with the other two factors but in principle any or all of them may influence students' approaches to learning in higher education.

Recently, there has been a wider debate in the US concerning the general adequacy of research carried out in distance education. Russell (1999) had for some years been compiling an ongoing bibliography of research studies that failed to show a statistically significant difference in various measures of outcome as the consequence of employing different kinds of educational technology. Russell himself inclined to the view that one should use cheaper and simpler forms of technology, as these were apparently just as effective as more sophisticated and expensive ones (Russell 1999: xiii, xx). A more cynical view, however, is that there is simply a good deal of bad research in distance education. This view was taken in one report, which concluded that

- 'there is a relative paucity of true, original research dedicated to explaining or predicting phenomena related to distance learning,'
- 'the overall quality of the original research is questionable and thereby renders many of the findings inconclusive.'

(Phipps and Merisotis 1999: 2–3)

However, the latter report has itself come under attack for its uncritical assumption that it is possible to make straightforward comparisons between academic outcomes in campus-based and distance education and for adopting a simple-minded and contradictory view of the basic nature of educational research (Brown and Wack 1999). Similar issues have been mentioned earlier in this book: for instance, whether student retention means the same thing in campus-based and distance education (see Chapter 8). In their report, Phipps and Merisotis said little about the process of learning and based their conclusions primarily on North American research. Even so, some of their points are worth mentioning because they have cropped up from time to time in previous chapters as criticisms of research on approaches to studying in both campus-based and distance education:

- 'Much of the research does not control for extraneous variables and therefore cannot show cause and effect.'
- 'Most of the studies do not use randomly selected subjects.'
- 'The validity and reliability of the instruments used to measure student outcomes and attitudes are questionable.'

(Phipps and Merisotis 1999: 3–4)
Apart from the quality of research in distance education, there must also be a question mark over the quality of the relevant literature. A substantial proportion of the existing publications on distance education (and not merely on approaches to studying in distance education) take the form of in-house publications, institutional technical bulletins, research students' dissertations or proceedings of academic conferences. This, too, can be readily confirmed by a brief scrutiny of the bibliography following this chapter. In such cases, it is often not clear what kind of editorial review (if any) was imposed before these publications were released. One cannot deny that this 'grey' literature contains a great deal of useful information and provides many valuable insights, but there is clearly a possibility that it lacks the full academic rigour of materials that have been properly subjected to the formal processes of independent peer review. Of course, as Suen and Stevens (1993) demonstrated in the case of one journal in distance education, even articles that are published in peer-reviewed journals may turn out to be flawed in key respects.

In the past, the research literature on distance education has been described as being dominated by speculation, opinion and anecdotal reports based on the authors' own personal experiences; where studies have attempted to provide genuinely new evidence about distance learning they have been characterized as largely descriptive and empirical in nature, rather than analytical or theoretical (Coldewey 1982, 1988; Moore 1985; Cookson 1989; Phipps and Merisotis 1999: 27). In addition, this literature has often tended to focus on institutional issues of organization or policy, rather than on pedagogical issues relevant to the practical business of studying in distance education (Villegas Grijalba 1995). Fortunately, in the previous chapters, I have been able to provide a good many counterexamples to these trends from the research on approaches to studying in distance education carried out during the 1980s and 1990s.

Another issue is the relative insularity of research on campus-based and distance education. In my preface, I mentioned that there had in the past been little dialogue between the communities of researchers in campus-based and distance education. Coldewey (1988), in particular, noted that researchers in distance education seemed to be reluctant to link their work to existing areas of scholarship and inquiry in mainstream educational research. In fact, research on approaches to studying has proved to be an exception to this trend, in that researchers in distance education have been at the forefront of some of the key theoretical developments in the field (see Chapters 4 and 9, in particular). Even so, there is also an insularity within the field of distance education, as Calvert (1995) noted from an analysis of articles published in the four main journals:

- American Journal of Distance Education (US)
- Distance Education (Australia)
- Journal of Distance Education (Canada)
- Open Learning (UK).
Calvert showed that each of the journals was dominated by articles from authors in the country in which the journal was based; that most authors cited other articles that had been published in the same journal and that most authors cited articles by authors from their own country, even when their own article was published in a journal based in a different country. Calvert described these trends as evidence of parochiality in research on distance education. One might, of course, find similar trends in other areas of inquiry. However, Calvert also noted that issues and debates did not cross over from one journal to another and this is not a sign of healthy, open discourse.

Approaches to studying in campus-based and distance education

With these caveats in mind, the evidence and arguments that have been reviewed in this book can be summarized as follows.

First, qualitative investigations based upon semi-structured interviews with individual students have identified certain study approaches, conceptions, orientations and learning styles in higher education (see Chapters 2–4). These have all been identified both in campus-based students and in distance-learning students, which implies that the two populations of students are at the very least commensurable in their approaches to studying. There is very little information, however, about whether the distributions of such study approaches, conceptions, orientations and learning styles differ between campus-based and distance-learning students, and even less about whether any differences of this kind should be attributed to the different modes of course delivery. The chief exception is that distance-learning students tend not to show a social orientation, but this is not surprising given the physical separation from teachers and other students that is inherent in distance education. Instead, distance-learning students appear to be more likely to exhibit a personal orientation. In this regard, they resemble older students at campus-based institutions and differ from younger campus-based students. There must therefore be a strong presumption that differences in personal orientation depend upon age rather than mode of course delivery.

Second, quantitative investigations have used a variety of formal inventories and questionnaires to assess approaches to studying in large groups of students (see Chapters 5–10). Although these have not proved entirely satisfactory as research instruments, they have served to identify some important constructs that seem to underlie students' accounts of their approaches to learning in higher education. The most important and most general example is the distinction between an orientation towards the underlying meaning of the course materials and an orientation towards simply being able to reproduce those materials for the purposes of academic assessment. There is, in contrast, very little support for any 'strategic' approach to assessment of the sort that was posited by Ramsden (1979),
nor equivalently for any ‘achieving’ orientation towards studying. There is, in addition, little unambiguous support for the various learning styles and pathologies that were described by Pask (1976), except as components of the two fundamental orientations.

In the course of confirming the existence of these two basic study orientations, investigations have found all of the major inventories to be wanting, in so far as it has not proved possible to confirm their intended constituent structure through the application of factor analysis. The one exception is the 32-item version of the ASI (Richardson 1990), which appears to possess satisfactory psychometric properties, at least when used with either campus-based or distance-learning students in the UK (see Chapter 7). However, the application of factor analysis has produced similar solutions in campus-based and distance-learning students on both the 64-item version of the ASI and the ILS. This means that these two instruments have a similar constituent structure (albeit not the one that they were intended to have) in both campus-based students and distance-learning students. This in turn confirms the implication of the findings from qualitative investigations that these two populations are commensurable in their approaches to studying. In other words, it makes sense to compare them in terms of the same dimensions, though this then leaves open the question of whether they are different in their distributions on these dimensions.

Third, researchers have found statistically significant differences between campus-based and distance-learning students in the scores obtained on the individual subscales of the ASI, the ILS and the LASSI. Most typically, distance-learning students tend to obtain higher scores than campus-based students on those aspects of studying that are more desirable in the sense of being more appropriate to the avowed aims of higher education, and they tend to obtain lower scores than campus-based students on those aspects of studying that are less desirable or appropriate. This is of practical importance to distance educators and of political importance in demonstrating the value of distance education. As I explained in my Preface, national governments are likely to become increasingly interested in the establishment or expansion of distance education. This may be motivated solely by economic considerations; but governments and institutions need have few qualms about such developments with regard to the quality of the students’ learning.

Fourth, however, as I mentioned earlier, distance-learning students differ from campus-based students on a number of characteristics that are likely to influence their approaches to studying. In particular, distance-learning students tend to be older than campus-based students, and it is well established that older students tend to obtain higher scores than younger students on those aspects of studying that are more desirable or appropriate and lower scores than younger students on those aspects of studying that are less desirable or appropriate (for a comprehensive review, see Richardson 1994b). This would suggest that the differences in approaches to studying between campus-based and distance-learning students can be attributed
at least in part to the confounded effects of differences in the students’ ages.

Some researchers have also confounded effects of the mode of course delivery with differences in students’ previous academic qualifications or experience. In campus-based students, these are typically unrelated to their approaches to studying (Biggs 1970b; Entwistle and Ramsden 1983: 48; but compare Schmeck and Grove 1979). However, this may be because such students have a relatively narrow range of previous academic experience. As I mentioned in Chapter 8, Vermunt and van Rijswijk (1988) found that students joining the Dutch Open University who had prior experience of higher education were less likely to exhibit an externally regulated and reproduction-directed learning style than students without prior experience of higher education. In a survey of students at the Open University in the UK, my colleagues and I similarly found that scores on reproducing orientation were inversely related to the students’ level of education before joining the Open University (Richardson et al. 1999).

Other researchers have confounded effects of the mode of course delivery with differences in students’ academic disciplines, their levels of study or their response rates. The possible role of academic discipline was assessed by Ramsden and Entwistle (1981) in campus-based students. Students taking arts courses were more likely than students taking science courses to exhibit a deep approach and other aspects of meaning orientation, whereas the opposite was true in the case of syllabus-boundness and other aspects of reproducing orientation (see also Entwistle and Ramsden 1983: 181–4). Biggs (1987: 50) obtained similar results in campus-based students, as did Harper and Kember (1986) in both campus-based students and distance-learning students. These effects are often attributed to the substantial knowledge base that science students need to learn but they might also be due to different teaching practices in departments responsible for providing courses in the arts and sciences (see Kember and Gow 1994).

The effect of a student’s level of study is potentially interesting, in so far as most teachers in higher education would hope that they were bringing about genuine intellectual development in their students during the course of a degree. In fact, there is evidence from several studies that campus-based students are likely to adopt less desirable approaches to studying as they proceed through their degree programme (see Watkins and Hattie 1985; Biggs 1987; Gow and Kember 1990; Volet et al. 1994) and even within the first year of study (Coles 1985). Vermunt and van Rijswijk (1988) noted a similar trend in distance-learning students. There is evidence that this pattern can be avoided and even reversed in campus-based education (Vermetten et al. 1999b), especially by the introduction of a problem-based curriculum (Coles 1985; Newble and Clarke 1986, 1987), as well as in distance education (Richardson et al. 1999). However, extrapolating from these results suggests that exposure to higher education could turn out to be disastrous for students intending to enter professions (such as medicine) in
which practitioners are expected to engage in a continuous process of maintaining and updating their knowledge and skills.

Newble et al. (1990) investigated this notion by comparing approaches to studying in medical students and in practising physicians. The physicians obtained much lower scores on surface approach than the medical students and they also tended to obtain higher scores on deep approach. Newble et al. noted that the causal relationship here was not clear because physicians tended to be recruited from amongst the more successful medical students, who might in turn be those with more desirable approaches to studying. Moreover, the difference appeared to lie not in the physicians' level of seniority or their amount of clinical experience but in whether or not they had undertaken additional postgraduate academic training. The causal relationship was once again not clear, because it might be that the physicians with more desirable approaches to studying were those who were more likely to choose to undertake additional academic training. Nevertheless, the results suggest that in some physicians inappropriate patterns of learning are entrenched during their medical education and can persist through their subsequent careers.

The effect of response rate has been well discussed at a number of points in this book, where I pointed out that students who respond to postal surveys differ from non-respondents in many characteristics, including their approaches to studying. It follows from this that it is not valid to make comparisons between samples of students that differ in the proportion of respondents to nonrespondents. One example is the study by Wong (1992) discussed in Chapter 6, where the internal or campus-based students produced a response rate of 74 per cent, whereas the external or distance-learning students produced a response rate of only 19 per cent. Another example is the study by Busato et al. (1998) discussed in Chapter 9, where students in their first year of a campus-based programme yielded a response rate of 94 per cent whereas those in subsequent years yielded at best a response rate of only 22.5 per cent. From a research point of view, it is obviously desirable to try to maximize response rates to student surveys. However, there is also an ethical issue in requiring students to take part in activities that are of no direct benefit to the participants themselves. In the study by Busato et al., the requirement to participate might have been justified by its supposed benefits to the participants as students of psychology but it can be argued that any coercion to participate in research is unethical (see Coulson 1999).

One study that used appropriate statistical techniques to take account of the possible effects of age, gender and discipline found no significant differences between campus-based students and distance-learning students taking the same courses in terms of their reported approaches to studying (Harper and Kember 1986). Accordingly, the safest conclusion that one might reach from the available evidence is that students who are taking courses by distance learning show different approaches to studying from campus-based students, but that these differences are more likely to be due
to the effects of background variables (most notably, age, previous qualifications or experience, academic discipline and level of study) than to the effects of different modes of course delivery.

So, are there no differences between campus-based and distance-learning students that could be linked to the different modes of course delivery? From the research discussed in this book, there seem to be two possible candidates:

- One is the finding by Vermunt (1998) that distance-learning students exhibit learning styles that are more desirable than those exhibited by campus-based students according to their scores on the subscales of the ILS. Distance-learning students tended to obtain higher scores on the subscales associated with a meaning directed learning style but lower scores on the subscales associated with an application directed learning style and an undirected learning style. In Chapter 9, I argued that these results were qualitatively different from the effects of age upon students' responses to the ILS, and thus that they could not be attributed to the confounded difference between campus-based and distance-learning students in terms of their mean age. Nevertheless, in principle, it is possible that these results are simply due to other confounded differences in uncontrolled demographic variables.

- The other candidate is the finding by Kember and Harper (1987b) that the implications for students' subsequent academic performance of adopting particular approaches to studying appear to be somewhat different in campus-based students and in distance-learning students. Kember and Harper had taken into account the possible effects of age, gender and academic subject in making direct comparisons between campus-based and distance-learning students in terms of their approaches to studying. However, their inference that the two populations of students were different in terms of the prognostic implications of approaches to studying was not based upon any formal statistical procedure and there is a strong possibility that it confounds the differences in the mode of course delivery with differences in demographic variables. Even so, this is an area of concern that deserves more attention in future research.

Approaches to studying and academic performance

There is, in fact, a body of research evidence from campus-based education that is worth citing in this connection. First, in interview-based research, a deep approach and a strategic approach tend to be associated with good academic performance, whereas a surface approach tends to be associated with poor academic performance (see Miller and Parlett 1974: 55; Svensson 1977; Ramsden 1979, 1981; Entwistle and Ramsden 1983: 176–8). Moreover, students' performance also varies with the sophistication of their
conceptions of learning (Martin and Ramsden 1987). Second, a number of studies have found that success in subsequent academic assessments can be predicted on the basis of the students’ scores on the subscales of the ASI. In particular, academic performance tends to be positively related to scores on deep approach, intrinsic motivation and strategic approach but negatively related to scores on surface approach, disorganized study methods and negative attitudes to studying (Entwistle et al. 1979; Ramsden and Entwistle 1981; Watkins 1982, 1983; Clarke 1986; Miller et al. 1990).

When they were developing the ILP, Schmeck and Grove (1979) found that students’ current grade point averages were positively correlated with their scores on the synthesis–analysis, fact retention and elaborative processing scales, though not on the study methods scale. Similar results were obtained by Miller et al. (1987, 1990), by Gadzella et al. (1987) and by Watkins and Hattie (1981a; Watkins et al. 1983). However, Watkins and Hattie (1981a) found that the magnitude of these correlations varied across different faculties, while Lockhart and Schmeck (1984) found that the pattern of relationships depended on the demands of particular forms of academic assessment. Moreover, Moss (1982) failed to find any positive correlations between scores on the ILP and grade point average in a sample of students who had been referred for remedial study skills tuition.

Nevertheless, Kember and Harper (1987b) found that the aspects of studying that were most important in predicting academic outcomes depended on the outcome being predicted (course completion versus final performance) (see also Richardson et al. 1999). A further example of this comes from studies using Canfield’s LSI (see Chapter 10). Alsagoff (1985, 1986) found that current performance was higher in students who affiliated with their peers rather than their instructors, whereas Coggins (1988) found that the likelihood of course completion was actually lower in such students. As Kember and Harper pointed out, all these findings suggest that academic achievement should not be characterized as a single continuum running from excellence to failure to non-completion.

Moreover, the relationship between approaches to studying and any single measure of academic attainment is by no means a simple one. For instance, Trigwell and Prosser (1991a) found that even a surface approach could be associated with good performance in academic assessments if the teacher demonstrated the relevance of the subject matter, made opportunities for students to ask questions and provided clear assessment criteria. Indeed, several investigations have found that academically unsuccessful students do not just exhibit ‘poorer’ approaches to studying but fail to exhibit any coherent approaches at all. This outcome was obtained in two studies where the data were processed using multi-dimensional unfolding analysis (Meyer et al. 1990a,b) and in two further studies where the data were processed using factor analysis (Entwistle et al. 1991; Meyer and Dunne, 1991). In short, poor academic performance appears to be associated with a disintegration or fragmentation of the normal patterns of studying.
Qualitative and quantitative research into student learning

In research on approaches to studying in campus-based and distance education, qualitative and quantitative methods have proved to be complementary in their strengths and their weaknesses (Coldewey 1988; and see the more general discussion by Hammersley 1996). On the one hand, students' approaches, conceptions, orientations and learning styles can be investigated directly through their individual accounts provided in semi-structured interviews. However, qualitative investigations have often involved relatively small samples of students and they have generally provided no concrete findings about the distributions of approaches, conceptions, orientations or learning styles or about how those distributions might vary with other variables of interest, such as age, gender, academic subject or educational level. In fact, the published accounts of qualitative research into student learning typically provide little or no information about how the samples of students were selected, recruited or rewarded, and in principle they might well be unrepresentative of the populations from which they have been drawn. One counterexample illustrating good practice in research on distance learning is an article by Kember et al. (1990).

On the other hand, students' approaches, conceptions, orientations and learning styles can also be studied through the responses that they give to quantitative instruments such as inventories and questionnaires. In this case, the identification of approaches, conceptions, orientations and learning styles can only be carried out indirectly, by inference from the patterns of responses to those instruments that are given by large groups of students. This process rests upon technically sophisticated procedures, such as factor analysis or multi-dimensional unfolding analysis, whose detailed implementation remains highly contentious. Nevertheless, the published accounts of quantitative research are typically more careful and explicit about the mechanisms by which the samples of students have been obtained; they often provide precise information concerning the distributions of scores in particular samples; and they can evaluate particular hypotheses about the relationships between individual differences in studying and background variables.

Most of the research focusing on the role of student characteristics in determining approaches to studying has focused on three variables:

- **Gender.** I have argued in earlier chapters that there are no overall differences in approaches to studying between men and women in higher education (for a review, see Richardson and King 1991). However, it would seem that differences may arise in particular situations and it would be of interest in future research to determine which properties of situations lead to such an outcome. Severiens and ten Dam (1997) proposed that apparent gender differences are actually due to differences in gender identity, which varies among both men and women.
• **Age.** Earlier, I referred to the general finding that older students tend to obtain higher scores than younger students on measures of deep approach and meaning orientation, whereas they obtain lower scores than younger students on measures of surface approach and reproducing orientation (for a review, see Richardson 1994b). This is contrary to the stereotypes held by many people in higher education, according to which the predicament and the experience of older students in higher education are inherently problematic (Richardson and King 1998).

• **Culture.** In Chapter 7, I argued that the basic distinction between meaning orientation and reproducing orientation appeared to emerge across all national systems of higher education but that it tended to receive a specific interpretation in each system or culture (for a review, see Richardson 1994a). The word 'culture' can be understood broadly, so that it includes the culture of the US (Richardson 1995a), the culture of Access courses (Hayes et al. 1997) and the culture of people who are deaf (Richardson et al. 2000).

This is an interesting starting point for understanding the ways in which people differ from one another in their approaches to studying. Nevertheless, it is also worth adding that other characteristics (such as ethnicity, disablement and social class) may be just as important but have so far been largely ignored in research on student learning in higher education.

The fact that the responses given to formal questionnaires can be encoded and aggregated in a quantitative manner does not mean that they can be regarded as objective or unbiased measures of some underlying psychological reality. To be sure, the respondents are highly constrained by the predetermined format of any particular questionnaire and this means that they are unable to calibrate their understanding of the individual items against the meanings that were intended by the person who originally devised the questionnaire or by the person who actually administers it to them. Nevertheless, as Strack and Schwarz (1992) demonstrated, responses to questionnaires are communicative and collaborative acts that are based upon the same principles of everyday conversation as responses to an interview. In the absence of any explicit feedback, respondents will use cues that allow them to make pragmatic inferences about the intended meaning, such as the content of neighbouring items or the range of response categories available.

Accordingly, the responses given to questionnaires on student learning always stand in need of analysis and interpretation. As will have become apparent, the most common analytic technique is that of factor analysis, which endeavours to reduce the data generated by a very large sample of individuals to a few coherent and consistent constructs. This kind of technique should always be carried out when a questionnaire is employed in a situation different from that in which it was originally developed, in order to check that the instrument's intended constituent structure can be reconstructed in this new situation. Examples would include the use of a
questionnaire initially devised to study campus-based undergraduate students in research on Access students, disabled students, mature students or postgraduate students, or the use of a questionnaire that was developed in Australia or the US in research carried out in the UK.

Although the results of factor analyses carried out upon responses to questionnaires have been broadly consistent with those of interview-based studies in demonstrating two basic approaches or orientations to learning, they are discrepant in one fundamental respect. The accounts that have been derived from interviews indicated the existence of two distinct categories or forms of understanding (Marton 1975; Entwistle and Marton, 1984; Marton and Säljö 1984) or a single bipolar dimension along which individual students might vary (Marton 1976c). Nevertheless, in questionnaires, deep and surface approaches are operationalized as separate scales that turn out to be orthogonal to each other, so that an individual student might score high or low on both (Biggs and Rihn 1984; O’Neil and Child 1984; Biggs 1985, 1987: 16; Trigwell and Prosser 1991a; Richardson and Woodley 1999). As Trigwell and Prosser (1991a) pointed out, this has the implication that interventions aimed at improving student learning should be concerned more with encouraging a deep approach than with necessarily discouraging a surface approach.

A productive rapprochement?

In this chapter, I have so far come to two conclusions, and to these I wish to add a third. The practical conclusion is that students in distance education exhibit approaches to studying that tend to be more desirable than those of campus-based students, in the sense that they are more appropriate to the avowed aims of institutions of higher education. The theoretical conclusion is that these differences are probably due to the effects of background variables and that students in distance education show no intrinsic differences in their approaches to studying attributable to the mode of course delivery. Finally, my heuristic conclusion is that this should mean that a productive rapprochement can be achieved between the two previously separate research communities of those studying campus-based education and those studying distance education.

On the one hand, if students in distance education are qualitatively similar to campus-based students in their approaches to studying then, as Morgan et al. (1980) commented, the findings in the mainstream research literature concerned with approaches to studying in campus-based education will be broadly valid for understanding approaches to studying in distance education. In particular, these research findings can in the future be fully exploited by academic staff in distance education when seeking new ways in which to develop and to evaluate their courses. Moreover, there will be no excuse for the insularity in research on distance education of which Coldeway
(1988) complained, at least with regard to future research on students' approaches to learning in distance education.

On the other hand, there is also an insularity (or perhaps 'ignorance' would be a more accurate word) in mainstream educational research with regard to the findings of research into distance education. If campus-based students are qualitatively similar to distance-learning students in terms of their approaches to studying, then the previously separate literature on approaches to studying in distance education can be used to illuminate the processes at work in campus-based higher education. To reiterate the example that I put forward in the Preface at the outset of this book, the effects of students' age or educational background upon their approaches to studying might be more apparent in distance education than in campus-based education because in the latter context they are subject to restriction of range due to the application of selective entrance requirements. As a consequence, research on distance education should not remain marginal but should become of interest to everyone involved in mainstream higher education. It is to this end that I dedicate this book.

Concluding summary

- Research into distance education can be criticized for the unreflective borrowing of concepts and methods from research on campus-based students, the lack of attention to differences in background variables between campus-based and distance-learning students and the quality and insularity of the research literature itself.
- Nevertheless, campus-based and distance-learning students are commensurable in so far as the same study approaches, conceptions, orientations and learning styles have been identified in both populations.
- Distance-learning students exhibit approaches to studying that are more desirable than those of campus-based students in the sense that they are more appropriate to the avowed aims of institutions of higher education.
- These differences are probably due to the effects of background variables (such as age, previous qualifications or experience, academic discipline and level of study) rather than to the different modes of course delivery.
- In principle, this should make it possible to achieve a productive rapprochement between the two previously separate research communities, whereby research in campus-based students is used to develop courses in distance education and research in distance education is used to illuminate the processes at work in campus-based education.