In the experiments that were discussed in the previous chapter, Marton and his colleagues found evidence for two different levels of processing, a deep level and a surface level. A participant's adoption of one level of processing rather than the other could apparently be influenced to some extent, at least, by manipulating the conditions of learning, and this appears to be true in normal academic studying, too. Nevertheless, Marton's (1975) original point was that different students show different levels of processing even under constant conditions of learning, and that here the participants' adoption of one level of processing rather than the other seemed to depend on their conception of learning and their conception of themselves as learners. Participants who adopted deep-level processing generally took an active role and saw learning as something they did; those who adopted surface-level processing generally took a passive role and saw learning as something that just happened to them. Marton (1976c) argued that, in the same way, students' adoption of deep or surface approaches in the course of their normal academic studying would be constrained or facilitated by their conceptions of learning.

How could these conceptions of learning be investigated? Dahlgren's (1975) study had shown that Marton's (1975) analysis of levels of outcome could be applied to the acquisition of basic concepts in economic theory. Dahlgren and Marton (1978) extended this approach to explore the different kinds of understanding that resulted from academic studying. In their subsequent research, Marton and his colleagues were less interested in the study of 'on-line' processing in artificial experiments and more interested in the study of people's underlying conceptions of a particular domain or phenomenon. Marton (1978) argued that conventional research on learning had adopted a 'first-order' or 'from-the-outside' perspective that tried to describe both the learner and the learner's world in broadly the same terms. He characterized his own work as adopting a 'second-order' or 'from-the-inside' approach that sought to describe the world as the learner experienced it, an approach that Marton (1981) labelled 'phenomenography'. As he subsequently explained,
Phenomenography is a research method for mapping the qualitatively different ways in which people experience, conceptualize, perceive, and understand various aspects of, and phenomena in, the world around them.

(Marton 1986: 31; see also Marton 1988: 178–9)

This shift in the focus of interest of Marton and his colleagues was accompanied by a shift in the kind of research methods that they used. In their initial studies, students had been asked to recall the content of academic texts and different levels of outcome had been identified in the transcripts of the students' oral accounts. This process apparently involved a straightforward application of the techniques of content analysis (see, for instance, Krippendorff 1980) in which the participants' understanding of the texts was compared with the meanings that their original authors had intended to convey. (Nowadays, postmodernist critics would suggest that this was not quite so straightforward, in so far as it privileged one authorized conception, frequently the researchers' own understanding of the subject matter, as the ultimate point of comparison for the students' accounts: see, for example, Webb 1996: 87–9; 1997; Ashworth and Lucas 1998.)

In the initial studies that were described in Chapter 2, the students had also been asked about how they had tackled the task of reading the academic texts and about how they tackled their normal academic studies. Inspection of the transcripts of their oral accounts had given rise to the distinction between deep-level and surface-level processing in the former case and to the distinction between deep and surface approaches to studying in the latter case. Marton (1979) characterized this as an application of the 'introspective' method in psychology, where people were asked to describe their mental processes whilst carrying out an experimental task. As he noted, after the domination of behaviourism during the first half of the twentieth century, this approach was enjoying something of a revival in education and psychology and it subsequently came to be described as 'protocol analysis' (see, for example, Ericsson and Simon 1980, 1984).

Of course, the introspective accounts that were obtained by Marton and his colleagues took the form of retrospective reports rather than concurrent reports. This could be justified on the basis that giving concurrent reports tends to disrupt interpretative processing when participants are called upon to explain their thought processes (Ericsson and Simon 1984: 78–107, 1993: xvii–xxxii) or when the task demands creative insight (Hoc and Leplat 1983; Schooler et al. 1993). The validity of introspective reports depends on the fact that the mental episodes in question persist as objects of focal attention in short-term memory, from which it follows that accounts obtained soon after the completion of the task in question will usually be an accurate reflection of on-line cognitive processing (Ericsson and Simon 1980, 1984: 19, 25–30). This is a plausible account of people's reports of how they have just set about the task of reading an academic text. Unless they can retain an accurate permanent record of the relevant mental activities, however,
their accounts of normal academic studying are likely to depend, at least in part, on inferences and reconstructions derived from their own subjective and implicit theories of the processes involved (see Nisbett and Wilson 1977; Ericsson and Simon 1980, 1984: 19–20; White 1989). If this is case, there will be an intrinsic connection rather than an adventitious one between students' reported approaches to studying and their underlying conceptions of learning.

Marton and his colleagues were more circumspect in describing the analytic methods by which they had identified different conceptions of a particular domain or phenomenon. They appear to have subjected the transcripts of students' oral accounts to an iterative and interactive process in order to identify fundamental categories or themes, each illustrated by relevant quotations from the transcripts. According to Marton and Säljö (1984), the categories were expected to emerge from comparisons conducted within the data, whereas in traditional content analysis they would be defined in advance and imposed on the data. Precisely the same approach to the analysis of qualitative data can be found in 'grounded theory', which is a methodology devised by Glaser and Strauss (1967) according to which theoretical concepts and hypotheses are to be discovered in and refined against participants' accounts. The central idea is that theoretical development results from an iterative process based upon the constant sampling, comparison and analysis of excerpts from interviews or other discursive material (see Strauss and Corbin 1990, 1994).

Several authors have noted a broad similarity between phenomenography and grounded theory (for instance, Entwistle and Ramsden 1983: 14; Francis 1993; Baxter Magolda 1998). Marton himself only occasionally acknowledged such parallels (Marton 1978; Marton and Booth 1997: 134). Nevertheless, in the absence of published guidance on the analytic procedures involved in 'doing phenomenography', many researchers simply adopted the techniques of grounded theory in order to analyse transcripts of interviews with students about their experiences of studying in higher education (Laurillard 1978: 65–7; Morgan et al. 1982; Taylor 1983). In addition, Säljö (1982: 17, 1984) referred to Glaser and Strauss's (1967) book in explaining his own application of phenomenography, and he went on explicitly to identify the process of deriving categories of description within phenomenographic research with the analytic techniques of grounded theory (Säljö 1988). This identification is supported implicitly by several other accounts of the analytical methods involved in phenomenographic research (for example, Marton and Säljö 1984; Marton 1988, 1994; Entwistle and Marton 1994; Marton and Booth 1997: 129–35; Entwistle 1997a).

Since the 1970s, the phenomenographic approach has been widely used to investigate conceptions held by both children and adults about key concepts, principles and phenomena in a wide variety of domains, although much of the work has been focused upon the development of students' understanding in science and mathematics (for a convenient summary, see Marton 1994). Although it is widely held to be an important and influential
approach to educational research, the phenomenographic approach is vulnerable to criticisms on both conceptual and methodological grounds (see, for instance, Ashworth and Lucas 1998; Richardson 1999). It is also generally concerned with the product of learning rather than the process of learning, and the majority of phenomenographic research is therefore of incidental interest in the present context. The most important exception is research on people's conceptions of learning itself, and this is the topic of the present chapter.

Conceptions of learning in campus-based education

Säljö (1979a,b; see also Säljö 1982: chapter 6) investigated conceptions of learning through interviews with 90 people between the ages of 15 and 73 years who had been recruited from a number of institutions of further and higher education in Sweden. (These institutions were not identified but, so far as one can tell, none of the students was studying by distance learning.) An initial analysis of their accounts indicated that for many people the nature of learning was taken for granted: it was described as an essentially reproductive activity that was tantamount to rote memorization. This conception of learning appeared to be self-evident and unproblematic and was linked to the consistent adoption of a surface approach in academic studies.

For other students, however, learning had become 'thematic', in the sense that they had become 'aware of the influence of the context of learning on what you should learn and how you should set about it' (Säljö 1979a: 448). For these participants,

learning is something which can be explicitly talked about and discussed and can be the object of conscious planning and analysis. In learning, these people realize that there are, for instance, alternative strategies or approaches which may be useful or suitable in various situations depending on, for example, time available, interest, demands of teachers and anticipated tests.

(Säljö 1979a: 446)

This was an interpretative conception of learning that involved the extraction of meaning from the materials to be learned, a process that was described as 'real learning' or 'learning for life', as opposed to the artificial kind of learning required in primary and secondary education. Some of the participants described a process of development from the former conception of learning to the latter, a process that in many cases had been occasioned by the transition from secondary school to university and the realization of the demands of learning in higher education. Säljö's account implies that the latter conception of learning would be linked to the use of either a deep approach or a surface approach in academic studies, depending on
the perceived demands of the specific learning context. This is, of course, precisely what was described by Laurillard (1978, 1979, 1984), Ramsden (1979, 1981) and Gibbs (1992: chapter 1), as discussed in Chapter 2.

During the course of their interviews, the participants in this study had been asked specifically: 'Well, what do you actually mean by learning?'. On the basis of a more thorough analysis of their responses to this question, Säljö broadened his initial distinction between a reproductive conception and an interpretative conception into five more specific conceptions of learning:

1. Learning as the increase of knowledge.
2. Learning as memorising.
3. Learning as the acquisition of facts, procedures, etc., which can be retained and/or utilised in practice.
4. Learning as the abstraction of meaning.
5. Learning as an interpretative process aimed at the understanding of reality.

(Säljö 1979b: 19)

Säljö pointed out that the first two conceptions of learning represented a cognitive orientation towards learning tasks that was 'reproductive', whereas the last two conceptions of learning represented a cognitive orientation that was 'reconstructive'.

These five conceptions of learning had been found in different participants and so Säljö had no direct information concerning either the logical or the chronological relationships among them. Nevertheless, he claimed that they constituted a developmental sequence or hierarchy (see also Säljö 1982: chapters 12–13; Marton and Säljö 1984). Säljö justified this claim in two ways. First, as mentioned above, some of the participants had made comments during their interviews to do with a process of transition that they had gone through between school and university. Second, Säljö maintained that there were parallels between his own results and an account of intellectual development that had been presented by Perry (1970) on the basis of a longitudinal study that he had conducted in the 1950s and 1960s of students at Harvard University in the US.

According to Perry's model, students proceed through a series of nine possible developmental stages, moving from a simplistic or absolute stance on the fundamental nature of knowledge towards a complex, pluralistic one. These are described in detail in Box 3.1, but Perry (1970: 57) summarized the nine stages in the form of three broad 'divisions'. During the initial period of dualism (positions 1, 2 and 3), the student develops an attitude of multiplicity, an awareness that there might be an indefinite number of legitimate points of view in some specific area. Then, during the period of relativism (positions 4, 5 and 6), the student perceives the general legitimacy of uncertainty, but at the same time he or she appreciates the need to achieve some kind of personal commitment as a means of resolving this uncertainty. Finally, during the period of commitment in relativism
Box 3.1 Perry's (1970) scheme of intellectual and ethical development in higher education

Position 1: The student sees the world in polar terms of right–wrong–good vs. other–wrong–bad. Right Answers for everything exist in the Absolute, known to Authority, whose role is to mediate (teach) them. Knowledge and goodness are perceived as quantitative accretions of discrete rightnesses to be collected by hard work and obedience (paradigm: a spelling test).

Position 2: The student perceives diversity of opinion, and uncertainty, and accounts for them as unwarranted confusion in poorly qualified authorities or as mere exercises set by Authority 'so we can learn to find The Answer for ourselves'.

Position 3: The student accepts diversity and uncertainty as legitimate but still temporary in areas where Authority 'hasn't found The Answer yet'. He supposes Authority grades him in these areas on 'good expression' but remains puzzled as to standards.

Position 4: (a) The student perceives legitimate uncertainty (and therefore diversity of opinion) to be extensive and raises it to the status of an unstructured epistemological realm of its own in which 'anyone has a right to his own opinion', a realm which he sets over against Authority's realm where right–wrong still prevails, or (b) the student discovers qualitative contextual reasoning as a special case of 'what They want' within Authority's realm.

Position 5: The student perceives all knowledge and values (including Authority's) as contextual and relativistic and subordinates dualistic right–wrong functions to the status of a special case, in context.

Position 6: The student apprehends the necessity of orienting himself in a relativistic world through some form of personal Commitment (as distinct from unquestioned or unconsidered commitment to simple belief in certainty).

Position 7: The student makes an initial Commitment in some area.

Position 8: The student experiences the implications of Commitment, and explores the subjective and stylistic issues of responsibility.

Position 9: The student experiences the affirmation of identity among multiple responsibilities and realizes Commitment as an ongoing, unfolding activity through which he expresses his life style.

Source: Perry 1970: 9–10
(positions 7, 8 and 9), the student goes on to work out the implications of achieving that personal commitment through his or her own experience.

How general is Säljö's (1979b) scheme of conceptions of learning? In Chapter 2, I mentioned a study by van Rossum and Schenk (1984) that was carried out at a campus-based university in the Netherlands. In this study, 69 first-year psychology students were asked to read and recall a short text; they then completed a questionnaire about how they had approached the task of reading the text and about how they approached their academic studies in general. Van Rossum and Schenk were able to use Säljö's scheme to classify the students according to their responses to the specific question: 'What do you mean by learning?' In addition, there was a relationship between their conceptions of learning and the levels of processing they had displayed when studying the text. Three-quarters of the students who exhibited Säljö's conceptions 1, 2 or 3 had used surface-level processing when reading the text; conversely, nearly all the students who exhibited Säljö's conceptions 4 or 5 had used deep-level processing when reading the text. Van Rossum et al. (1985) conducted a further study in which they interviewed 42 first- and second-year arts students at a campus-based university. Their accounts implied a similar set of learning conceptions that van Rossum et al. linked to the longitudinal model devised by Perry (1970).

Hounsell (1984a, 1984b, 1987) interviewed 17 history students and 16 psychology students at a campus-based university in the UK about how they had approached the task of writing a recent essay. He identified several different conceptions of what an essay was:

Some history students conceived of essay-writing as a question of argument, coherently presented and well-substantiated; others saw it as concerned with the arrangement of facts and ideas. And amongst the psychology students, essay writing was seen by some as a matter of cogency, where substantive discussion was rooted in a solid and coherent core of empirical findings, and by others as relevance, in the sense of an ordered presentation of material pertaining to a topic or problem.

(Hounsell 1987: 110; italics in original)

Hounsell claimed that these categories represented a general distinction between 'interpretative' and 'non-interpretative' conceptions of essay writing which essentially paralleled Perry's (1970) notion of contextual relativistic reasoning and Säljö's (1979a) thematic conception of learning. He suggested that the quality of tutorial feedback on essays was critical in enabling students to proceed from a non-interpretative conception of essay writing to an interpretative one.

Martin and Ramsden (1987) used Säljö's (1979b) scheme of conceptions of learning to classify 60 first-year history students at two campus-based universities in the UK. All of the students were interviewed twice, both before and after they had attended courses designed to improve their learning skills. In fact, the courses themselves seemed to have very little effect upon the students' underlying conceptions of learning. These were distributed
between Säljö's conceptions 2 and 5 but were concentrated in conceptions 3 and 4 both before and afterwards. (No student exhibited conception 1 in this study.) Nevertheless, there was a direct relationship between the students' conceptions of learning and their academic performance at the end of the year. The students who achieved the lowest grades all exhibited Säljö's conceptions 2 or 3, whereas those students who achieved the best grades all exhibited Säljö's conceptions 4 or 5.

In the classifications of conceptions of learning that I have discussed thus far, 'memorization' and 'understanding' are essentially seen as being mutually exclusive. In Chapter 2, however, I mentioned that investigations carried out with students in Hong Kong and China had identified a distinctive approach to studying that appeared to combine memorization and understanding. This suggests that Chinese learners might possess somewhat different conceptions of learning. Marton et al. (1996) interviewed 18 teacher educators from China about their understanding of the phenomenon of learning and they indeed identified some fundamental differences from the conceptions of learning found in Western learners. First, most of the participants distinguished between purely mechanical memorization and memorization with understanding. Second, some participants regarded memorization with understanding as a way of retaining what had already been understood, but others regarded memorization with understanding as a way of attaining a deeper understanding. Third, some participants regarded understanding as a relation between a learner and an object, but others regarded understanding as a process of personal development. Marton et al. concluded that the conceptions of learning that had been identified in Western students were not adequate to describe learning practices within the Chinese culture.

Even in Western cultures, students on courses with a less academic focus might exhibit rather different conceptions of learning. Eklund-Myrskog (1997), working in Finland, interviewed 27 student nurses at the start of their training and 33 student nurses at the end of their training. She found evidence for five different conceptions of learning, which she defined as follows:

- learning in terms of remembering and keeping something in mind
- learning in terms of understanding
- learning in terms of applying knowledge, based on understanding
- learning in terms of getting a new perspective
- learning in terms of forming a conception of one's own.

Eklund-Myrskog suggested that the first was a quantitative or reproductive conception, whereas the others were qualitative conceptions concerned with understanding. There was a trend for the student nurses to be more likely to show qualitative conceptions of learning after their training than before, but this was not statistically significant. Thus, the training programme appeared to have only a weak effect upon the development of student
nurses' conceptions of learning. They had also been asked to read a school
text about the essence of caring, and there was a similar non-significant
trend for them to be more likely to show deep-level processing in this task
after their training than before. Nevertheless, all of the participants with a
quantitative conception of learning displayed surface-level processing when
asked about how they had read the text, and all of the participants with
a qualitative conception of learning displayed deep-level processing.

Eklund-Myrskog (1998) then repeated this study with a class of male
students who were taking a course in car mechanics at a vocational school.
She interviewed 24 students at the start of the course and 30 students at the
end of the course. She identified just four conceptions of learning:

- learning in terms of remembering
- learning in terms of applying knowledge, based on knowing how to do
- learning in terms of understanding
- learning in terms of forming a conception of one's own.

Eklund-Myrskog suggested that the first two were quantitative conceptions,
whereas the other two were qualitative conceptions. On this basis, 79 per
cent of the students had a quantitative conception at the start of the course,
but only 50 per cent had a quantitative conception by the end. Here, the
trend towards more sophisticated conceptions was statistically significant.
Thus, even a course in car mechanics can bring about genuine intellectual
development. Nevertheless, Eklund-Myrskog claimed that the differences
among the conceptions of learning within each of the programmes was
smaller than the differences in the conceptions of learning between the two
different programmes. She concluded that conceptions of learning were
contextually dependent.

Conceptions of learning in distance education

In Chapter 2, I mentioned the longitudinal study carried out by the Study
Methods Group at the Open University in the UK to explore approaches to
studying in distance-learning students. The first interview in this study was
carried out with 29 students as they were about to embark on their first year
of study with the Open University and included questions about their gen-
eral notions of learning. On inspecting the transcripts, Morgan et al. (1981)
found that Säljö's (1979b) scheme of five conceptions of learning could
also be applied to these students. Indeed, some of the students appeared to
be undergoing a transition in their conceptions, in so far as they could
differentiate between their current understanding of learning and the learn-
ing demands they expected that Open University studies would be making
of them.

In a similar investigation, Vermunt and van Rijswijk (1988) conducted
interviews with students who had recently embarked on courses with the
Dutch Open University, which delivers courses primarily through specially prepared correspondence materials with tutorial support available at regional study centres. In analysing their transcripts, Vermunt and van Rijswijk compared their participants’ accounts with the descriptions of conceptions of learning that had been provided by Säljö (1979b) and by van Rossum et al. (1985) in the case of campus-based students. They concluded that the same descriptions ‘could easily be recognized’ within the population of new students at the Dutch Open University (Vermunt and van Rijswijk 1988: 653). It would appear, then, that the scheme of learning conceptions devised by Säljö (1979b) applies both to campus-based students and to distance-learning students.

The Study Methods Group maintained contact with 12 students from their original sample into their second and third years of study with the Open University in the UK. At this point, the students were interviewed once again about their general understanding of learning, but they were also asked to compare their current understanding with that in their first year of study with the Open University. Morgan et al. (1983: 17) commented that there were ‘many parallels’ between their own students’ accounts and the conceptions of learning that had been described by Perry (1970) and Säljö (1979b). Moreover, comparing the students’ concurrent accounts of their present conceptions with their retrospective accounts of their own previous conceptions seemed to suggest the existence of a developmental process leading to increasingly sophisticated conceptions of learning over the course of time (see also Morgan 1991).

Unfortunately, retrospective accounts of this sort may not be valid. Social psychologists have shown that people sometimes denigrate their past capabilities in order to fit their own implicit theories about personal change, and this can certainly occur when students are asked to assess the value of recent educational experiences (see Conway and Ross 1984; Ross 1989). It would, instead, be more convincing to have evidence of progression through different conceptions of learning from concurrent accounts obtained from the same students at different stages of their academic careers. Case studies of just this sort were provided by Gibbs et al. (1984), showing development during the first year of study with the Open University, and by Beaty and Morgan (1992), showing development in subsequent years (see also Morgan and Beaty 1997).

In fact, out of the 29 students in the original cohort studied by the Study Methods Group, ten were interviewed over a period of 6 years at the end of every year in which they had taken a course with the Open University, and six of these students were interviewed on either five or six occasions. Marton et al. (1993) presented a detailed analysis of their conceptions of learning and of the changes in their conceptions of learning across the period of 6 years. Their accounts revealed five conceptions of learning that were broadly similar to those that Säljö (1979b) had originally described, but there was a sixth conception. Marton et al. characterized the resulting sequence of six conceptions of learning as follows:
(A) Increasing one’s knowledge
(B) Memorizing and reproducing
(C) Applying
(D) Understanding
(E) Seeing something in a different way
(F) Changing as a person.

(Marton et al. 1993: 283–4)

The sixth conception was seen only during the later years of a student’s academic career with the Open University and only in students who had previously exhibited the fifth conception, so it is reasonable to infer that it represents an even more sophisticated conception of learning. In fact, it appears to reflect the kind of personal commitment that is involved in the later stages of Perry’s (1970) model of intellectual development. Out of the six students who were interviewed on five or six occasions, three had attained this conception by the conclusion of the study. Two of the remainder did not show any appreciable change in their conceptions of learning, but these students had exhibited the fourth and fifth conceptions, respectively, even at the outset of their studies with the Open University. The results obtained in the study mentioned earlier by Martin and Ramsden (1987) implied that academic progress in campus-based education depends on the attainment of more sophisticated conceptions of learning, and the findings obtained in the study by Marton et al. suggest that the same is true of distance education (Beaty and Morgan, 1992).

Coincidentally, all six of the students who had been repeatedly interviewed over 6 years by the Study Methods Group were women. In this regard, Perry’s (1970) original study was of limited value because it had been based on a predominantly male sample. (At the time when it had been carried out, women studied for Harvard degrees at the separate institution of Radcliffe College.) In the 1970s and 1980s, researchers in the US sought to remedy this by investigating intellectual development in female students (see, for example, Clinchy and Zimmerman 1982; Gilligan 1982; Baxter Magolda 1988; Gilligan et al. 1988). In particular, Belenky et al. (1986) carried out interviews with 135 women who were students, graduates or clients at health clinics about their conceptions of learning and knowledge. From a content analysis of the transcripts, they produced an alternative account of intellectual development to that put forward by Perry (1970). This account is based on five ‘ways of knowing’ which are summarized in Box 3.2.

Belenky et al. acknowledged that these epistemological categories were not sufficiently well defined to be interpreted as stages of intellectual development. Nevertheless, they do appear to represent increasing levels of intellectual complexity organized around the metaphor of silence and voice. Beaty et al. (1997) reconsidered the earlier findings of the Study Methods Group at the Open University in the light of these developments. They felt that the extended scheme of conceptions of learning (that is, conceptions
Box 3.2 ‘Women’s ways of knowing’

Silence, a position in which women experience themselves as mindless and voiceless and subject to the whims of external authority.

Received knowledge, a perspective from which women conceive of themselves as capable of receiving, even reproducing, knowledge from the all-knowing external authorities but not capable of creating knowledge on their own.

Subjective knowledge, a perspective from which truth and knowledge are conceived of as personal, private and subjectively known or intuited.

Procedural knowledge, a position in which women are invested in learning and applying objective procedures for obtaining and communicating knowledge.

Constructed knowledge, a position in which women view all knowledge as contextual, experience themselves as creators of knowledge and value both subjective and objective strategies for knowing.

Source: Belenky et al. 1986: 15

A–F above) was broadly compatible with Perry’s (1970) original interpretation. However, a more detailed inspection of the students’ interview responses suggested that, in their emphasis on personal perspectives and personal change, they were more consistent with the account that had been put forward by Belenky et al. (1986).

In a subsequent study, Hipp (1997) interviewed 16 women who were taking courses at Master’s level by external study with an Australian university. They participated in groups of four in an interview and discussion session using teleconferencing about a number of issues that had been identified through an earlier postal survey. Hipp independently linked the women’s conceptions of learning and their conceptions of themselves as learners with the different ‘ways of knowing’ that had been described by Belenky et al. (1986). She argued that positive, personal feedback from teachers was important in bringing about personal development and increased confidence in female students working by distance learning, although she suggested that specially designed workshops, teleconferences or self-help materials could also help to enhance their self-esteem.

Changing as a person

On the basis of their results, Beaty et al. concluded ‘Although we expect the architecture of the variations and commonalities in the experience of
learning to be generalisable, the individually characteristic themes may be
gendered’ (Beaty et al. 1997: 164). In particular, they argued that this was
true of the conception of learning as changing as a person. However,
Crawford (1989) had criticized the study carried out by Belenky et al. (1986)
because they had not included any comparison group of male participants
and yet had readily speculated about gender differences in ways of know-
ing. In the same way, the results obtained by Beaty et al. are quite unclear as
to whether the conception of learning as changing as a person was distinct-
ive of female students because no men were included in their final sample
of participants. At the same time, it should also be noted that later writers
have rejected the idea of female ways of knowing in favour of distinctively
feminist epistemologies (see Alcoff and Potter 1993; Lennon and Whitford
1994).

To try to reconcile Perry’s (1970) original model of intellectual develop-
ment with subsequent theories, Baxter Magolda and Porterfield (1985)
developed a structured instrument called the Measure of Epistemological
Reflection. This contained a series of open-ended questions about different
domains: decision making, the role of the learner, the role of the instructor,
the role of peers, evaluation of learning, and the nature of knowledge,
truth or reality. An analysis of the responses given by campus-based students
identified four different developmental stages, which are summarized in
Box 3.3. This classification of students demonstrated a high level of reliabil-
ity and, in subsequent studies, it was found to be highly correlated with
findings obtained from semi-structured interviews (Baxter Magolda, 1987,
1988). Baxter Magolda (1992) carried out interviews with 101 students at a
campus-based university in the US over 5 years, and she found clear evid-
ence for development through the scheme shown in Box 3.3.

This developmental scheme appeared to fit the accounts produced by
both women and men, although they tended to use different patterns of
reasoning at each of the first three developmental stages, at least; that is,
there are ‘qualitative differences in how students justify epistemic assump-
tions within the same way of knowing and, thus, different but equally valid
approaches to knowing’ (Baxter Magolda 1992: 37). At the absolute know-
ing stage, women tended to use a ‘receiving’ pattern based on a private
approach to acquiring knowledge, whereas men tended to use a ‘mastery’
pattern based on a public approach. At the transitional knowing stage,
women tended to use an ‘interpersonal’ approach based on sharing the
views of others, whereas men tended to use an ‘impersonal’ approach based
on challenging the views of others. At the independent knowing stage,
women tended to use an ‘interindividual’ approach based on sharing one’s
views with others, whereas men tended to use an ‘individual’ approach based
on independent thinking. Different patterns of reasoning were not
identified at the contextual knowing stage because of the small numbers of
students who were classified as being at this stage.

In short, Baxter Magolda identified the same four ‘ways of knowing’ in
both male and female students, and to that extent there do not appear to
### Baxter Magolda’s Epistemological Reflection Model

<table>
<thead>
<tr>
<th>Domains</th>
<th>Absolute knowing</th>
<th>Transitional knowing</th>
<th>Independent knowing</th>
<th>Contextual knowing</th>
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<tbody>
<tr>
<td>Role of learner</td>
<td>Obtains knowledge from instructor</td>
<td>Understands knowledge</td>
<td>Thinks for self</td>
<td>Exchanges and compares perspectives</td>
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<td>Shares views with others</td>
<td>Thinks through problems</td>
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<td>Creates own perspective</td>
<td>Integrates and applies knowledge</td>
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<tr>
<td>Role of peers</td>
<td>Share materials</td>
<td>Provide active exchanges</td>
<td>Share views</td>
<td>Enhance learning via quality</td>
</tr>
<tr>
<td></td>
<td>Explain what they have learned to each</td>
<td></td>
<td>Serve as a source of knowledge</td>
<td>contributions</td>
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<td></td>
<td>other</td>
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<tr>
<td>Role of instructor</td>
<td>Communicates knowledge appropriately</td>
<td>Uses methods aimed at understanding</td>
<td>Promotes independent thinking</td>
<td>Promotes application of knowledge in context</td>
</tr>
<tr>
<td></td>
<td>Ensures that students understand knowledge</td>
<td>Employs methods that help apply knowledge</td>
<td>Promotes exchange of opinions</td>
<td>Promotes evaluative discussion of perspectives</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Provides vehicle to show instructor what</td>
<td>Measures students’ understanding of the</td>
<td>Rewards independent thinking</td>
<td>Student and teacher critique each other</td>
</tr>
<tr>
<td></td>
<td>was learned</td>
<td>material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature of</td>
<td>Is certain or absolute</td>
<td>Is partially certain and partially uncertain</td>
<td>Is uncertain – everyone has own beliefs</td>
<td>Is contextual; judge on basis of evidence in</td>
</tr>
<tr>
<td>knowledge</td>
<td></td>
<td></td>
<td></td>
<td>context</td>
</tr>
</tbody>
</table>

Source: Baxter Magolda 1992: 30
be qualitative differences in the conceptions of learning and knowledge that are held by men and women in higher education. She did find qualitative differences in students' patterns of reasoning at three of these development stages, but she argued that these patterns were 'related to, but not dictated by, gender', and that they had been socially constructed on the basis of the students' differential experiences of learning (Baxter Magolda 1992: 20–2). Severiens and ten Dam (1998) confirmed Baxter Magolda's scheme through open-ended interviews with 53 students of 'adult secondary education' in the Netherlands, except that none was assessed as exhibiting a stage beyond independent knowing. (This is probably not surprising, given that these students had yet to achieve the qualifications required for admission to higher education.)

A different point is that students who pursue courses by distance learning are often much older than campus-based students. For instance, the mean age of students registered for courses with the Open University in the UK is typically around 40 years. This observation suggests the possibility that the conception of learning as changing as a person is distinctive of older students, possibly as a result of their greater lifetime experience. Once again, the results obtained by Beaty et al. (1997) do not allow one to address this issue because they had not interviewed any comparison group of younger people taking courses with the Open University. It will be noted in a moment that conceptions of learning seem to vary directly with students' ages, even within the same year of study.

Most crucially, the results obtained by Beaty et al. are unclear as to whether the conception of learning as changing as a person was distinctive of students taking courses by distance learning because they had not interviewed a comparison group of campus-based students. Nevertheless, Marton et al. (1993) commented that an 'identical' conception of learning had previously been found in an investigation of students at a campus-based university in the Netherlands conducted by van Rossum and Taylor (1987). These researchers had interviewed 91 first-year arts students (22 men and 69 women aged between 17 and 41 years) and broadly confirmed the classification of conceptions of learning presented by Säljö (1979b). However, in five students they found a sixth conception that they characterized as 'a conscious process, fuelled by personal interests and directed at obtaining harmony and happiness or changing society' (van Rossum and Taylor 1987: 19). Unfortunately, they provided no demographic information about these five students. There was no significant gender difference in the distribution of the 91 students across the six learning conceptions, but conceptions of learning varied with age, such that younger students were disproportionately represented within Säljö's conceptions 1–3.

In a subsequent investigation, Figueroa (1992) interviewed two groups of 20 students who were taking second-, third- or fourth-year courses in modern languages and literature with a Mexican university. One of the groups (consisting of students aged between 19 and 32 years) was taking courses by distance learning, while the other group (consisting of students aged
between 18 and 26 years) was campus-based. In general, the former stu-
dents appeared to be more interested and involved in their own learning
than the latter students. Nevertheless, in response to the question, 'What
does learning mean to you?', eight students in both of these groups gave
accounts that implied that learning was a personally meaningful experience
and, in response to the question, 'How would you explain quantity and
quality in learning?', five distance-learning students and four campus-based
students gave accounts that identified 'quality in learning' with personal
and meaningful experiences.

Watkins and Regmi (1992) asked 333 students who were taking courses at
one of the campuses of Tribhuvan University in Nepal to write down answers
to the question: 'What do you mean by learning?'. They carried out a con-
tent analysis of the students' responses and identified the learning concep-
tions described by Marton et al. (1993) with just two exceptions. First, Watkins
and Regmi found no evidence to support Marton et al.'s second conception:
that is, learning as 'memorizing and reproducing'. Watkins and Regmi con-
cluded that reproductive conceptions of learning were not common in Nepal.
However, this conclusion subsequently had to be amended in the light of
the results of a study by Dahlin and Regmi (1997), who found that campus-
based students in Nepal repudiated rote learning as trivial and essentially
useless but that they valued memorization as a way of keeping in mind
material that one is in the process of understanding. Dahlin and Regmi sug-
gested that this was very much akin to the 'narrow' approach to studying
that Kember and Gow (1990) had identified among students in Hong Kong
(see Chapter 2). It is also very close to the conception of 'memorization with
understanding' identified by Marton et al. (1996) among Chinese learners
in a study that was mentioned earlier in the present chapter.

The second discrepancy in the learning conceptions identified by Watkins
and Regmi (1992) had to do with the conception of learning as 'changing
as a person', which was found in 13.6 per cent of their respondents. In
some students, this could be regarded as a more sophisticated conception
that built upon the view of learning as 'seeing something in a different way':

'Learning means to broaden our mind, to be able to face any situations
in life... I get full satisfaction out of learning.'

'Learning means to acquire knowledge, to be able to communicate
with appropriate ideas, with good understanding. After having learned
one is able to face the world boldly.'

However, in other students, the personal change in question did not appear
to be dependent on a more sophisticated conception of learning:

'Learning is a process by which one can have knowledge of unknown
things leading towards self-satisfaction.'

'The process which changes our behaviour is learning. Changes should
come in our knowledge, attitude, and behaviour.'

(Watkins and Regmi 1992: 107)
In these students, Watkins and Regmi concluded that the conception of learning as changing as a person did not represent the most sophisticated level in a developmental hierarchy but instead had been induced by exposure to the religious and philosophical traditions prevalent in Nepal. As Dahlin and Regmi (1997) commented, "changing as a person" seems to reflect the impact of an individual existentialism in the West but the prevalence of a collective moralism in Nepal.

Landbeck and Mugler (1994) carried out interviews with 16 second- and third-year students who were taking a course in linguistics on campus at the University of the South Pacific. Two of these students described learning in a way that appeared to the researchers to correspond to the sixth conception of learning postulated by Marton et al. (1993):

'My opinion is, when one learns, one is being enlightened. Learning is for improvement, change for the better... One learns in order to accommodate the change in the demands of life... In fact to be able to adjust to society one has no option, no other alternative but to learn... But learning, unfortunately, we also learn bad things.'

'Learning is when changes occur, happen to you, either changes your life to be more negative or positive, or changes how you think, look at people and things around you.'

(Landbeck and Mugler 1994: 46)

Elsewhere in their report, Landbeck and Mugler identified the first of the students as male and the second as female, which clearly implies that this sixth conception of learning can be found both in men and in women. However, for present purposes, the more important implication of all these studies is that the conception of learning as changing as a person can be found among students taking campus-based courses as well as among those studying by distance learning.

Concluding summary

- Students at campus-based institutions of higher education in Sweden, the Netherlands and the UK display a limited number of conceptions of learning that are described by the scheme that was originally presented by Säljö (1979b). However, the same scheme may well not apply to learners from Chinese cultures or to students in Western cultures who are taking courses with less of an academic focus.
- These conceptions of learning are directly associated with the students' levels of processing when they engage in reading academic texts under neutral learning conditions, and also with their subsequent performance in academic assessments.
- Similar conceptions of learning have been identified in students taking courses by distance learning in both the Netherlands and the UK and there is fairly good evidence that they constitute a developmental
sequence or hierarchy through which students proceed during the course of a degree programme.

- The same studies of distance-learning students suggested the existence of a sixth conception of learning as ‘changing as a person’. Although, initially, this appeared to be distinctive of students in distance education, it has subsequently been identified in students taking courses at campus-based institutions in Nepal, the Netherlands, Mexico and the South Pacific. This does appear in some cases to represent a developmentally more sophisticated conception of learning. However, it has been argued that this conception of learning can also be induced by exposure to local cultural traditions in the absence of any genuine intellectual development.

- In short, there is no evidence that delivering courses by means of distance education leads to any qualitative differences in the general pattern of students’ intellectual development; any quantitative differences between conceptions of learning in campus-based students and distance-learning students are likely to be due to differences in their ages.