Paper 3: Students’ Conceptions of Learning

Here in Paper 3: Students’ conceptions of learning we look at how students’ conceptions of learning affect the way they approach their studies.

In Paper 4: Intellectual and Ethical Development in the College Years we examine a developmental model of students’ conceptions of higher learning.

Paper 5: Research informed teaching explores the implications of this research for teaching in higher education.

Introduction

In Paper 2: Student approaches to learning we examined the claim that students deploy deep or surface approaches to their studies. They do so partly in response to their perceived environment, but another factor related to students’ approaches to academic work appears to be their conception of what learning is.

The nature of students’ conceptions of learning, and how they relate to students’ approaches to learning are discussed in this paper. We look at a Swedish study conducted by Roger Säljö who investigated the conceptions of learning held by a range of different student subjects. The outcome of his study was a proposed hierarchy of different conceptions, drawn out from students who were at different stages of understanding. Säljö did not, however, look at how his student subjects had developed their conceptions, nor at how their conceptions changed over time.

In Paper 4: Intellectual and Ethical Development in the College Years we look at a complementary account of student conceptions of knowledge and their related conceptions of learning. This account is derived from a developmental study of students in higher education. Carried out at Harvard University during the nineteen-fifties and sixties William Perry’s seminal study followed a cohort of students through their courses. He found that their conceptions did indeed change over time, providing evidence of a trajectory of intellectual development.

Conceptions of the learning process

From a study of a group of Swedish adult learners, Säljö described five qualitatively different ways in which the group conceived of learning.

The process of learning is:

- Conception i) increasing the quantity of information of which the individual is aware;
- Conception ii) memorising;
- Conception iii) the acquisition of facts, methods, etc., which can be retained and used when necessary;
- Conception iv) the abstraction of meaning;
- Conception v) an interpretative process aimed at understanding reality.

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Several studies since have found a similar range of conceptions in other adult groups. One of them described a sixth conception:

- **Conception vi) learning as changing as a person.**

These six conceptions of learning have been described as a “nested hierarchy”. An expression of the sixth conception of learning may also include elements of the other five. Similarly an expression of the third conception may include conceptions (i) and (ii).

If the third conception is the highest conception expressed by a student, this student is unlikely to see learning as the abstraction of meaning, as an interpretative process aimed at understanding reality or as changing as a person. An illustration of this nested hierarchy is given in the following figure in which the outer boxes contain the inner boxes, but not vice versa.

Conceptions of Learning

vi: Changing as a person
v: An interpretative process aimed at understanding reality
iv: The abstraction of meaning
iii: The acquisition of facts, methods, etc.
ii: Memorising
i: Increasing the quantity of information

Conceptions of learning and approaches to learning

Students’ conceptions of learning are found to be correlated with two qualitatively different approaches to learning. These approaches, explored in Paper 2, may be either “surface” or “deep”.

The first three conceptions of learning correlate positively with surface approaches to study. Students who believe that learning is no more than the absorption of facts are more likely to adopt a surface approach to study as a way of absorbing those facts.
Likewise, students who express a view that learning involves no higher conception than memorisation, or that it is mastering techniques or formulae to be applied, are also more likely to adopt surface approaches to higher learning.

On the other hand, the fourth, fifth and sixth conceptions of learning correlate positively with deep approaches to study. Students who believe that learning is about the creation of new structures of meaning, or about developing ways of interpreting reality, will be more likely to adopt a deep approach. These relations are clear in the results below from the 1984 study of 69 students by van Rossum and Schenk.

<table>
<thead>
<tr>
<th>Conceptions</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Surface</td>
</tr>
<tr>
<td>1. Increase in knowledge</td>
<td>6</td>
</tr>
<tr>
<td>2. Memorisation</td>
<td>19</td>
</tr>
<tr>
<td>3. Fact acquisition for utilisation</td>
<td>8</td>
</tr>
<tr>
<td>4. Abstraction of meaning</td>
<td>1</td>
</tr>
<tr>
<td>5. Understanding reality</td>
<td>1</td>
</tr>
</tbody>
</table>

Does it help to know what conception of learning a student is working with?

As we saw in Paper 2, students are not rigidly programmed to work only according to a surface approach or a deep approach. They can, and do, switch between different approaches according to their perceived circumstances. In a similar way, students who may be aware of a range of views of learning, may apply, in any particular context, the view that they think fits that context.

So students who hold the first, second or third conception are more closely bound to surface or reproductive approaches to learning because they cannot imagine that learning demands anything more of them. On the other hand, students who are aware of the fourth, fifth or sixth conceptions of learning are capable of adopting a deep approach to learning, and will do so where they think it is appropriate.

If they are to adopt deep approaches to their studies, these two groups of students need to be persuaded of different things.

The first group – those students who hold the first, second or third conception - must somehow apprehend the ways in which the higher learning they are engaged in is qualitatively different from learning as they have previously understood it. Paper 6 discusses how teachers can help this process of apprehension.

The second group of students – those holding the fourth to sixth conceptions of learning – are capable of adopting approaches consistent with these higher level conceptions. However, these students will only adopt a deep approach if they are convinced that the learning tasks they are undertaking warrant it. Their calculation is one which may include many elements, including the nature of the task itself, their own understanding of the nature of the task, their interest in the subject, their study motivation. As Ramsden has outlined, students' perceptions of teaching, their workload, the assessment process, the clarity of their goals for learning, and the degree of choice they have over what they learn all play a part in orientating students towards one or other approach. Again, how
this research is related to teaching is the subject of Paper 5 - Research-informed Teaching.

Students’ conceptions of learning can and do change during higher education, through the teaching they receive and possibly as a consequence of intellectual maturation. In the Paper 4, we look at William Perry’s account of student intellectual development and how their conceptions of what it is that they are learning change.

Further reading


This book documents the research on relations between approaches to learning, conceptions of learning and the quality of what students learn.


The early chapters of this book are written by members of the groups that conducted the original research into approaches to learning and conceptions of learning.

Footnotes

i For an accessible report, see Marton, F. and Säljö, R. Approaches to Learning, Chapter 3 in F. Marton, D. Hounsell, and N. Entwistle, The Experience of Learning: Implications for Teaching and Studying in Higher Education (Edinburgh, Scottish Academic Press 1997).
