The SOMUL project is being undertaken by a research team from the Centre for Higher Education Research and Information and the Institute of Educational Technology at the Open University and the Centre for Research in Lifelong Learning at the University of Stirling.

The project is part of the Economic and Social Research Council’s Teaching and Learning Research Programme. It began in 2004 and will be completed at the end of 2007. It seeks to explore what students are learning in an increasingly diverse higher education system.

This is the first of a series of Working Papers published by the Higher Education Academy to disseminate information about the project to the wider academic community. In it, we set out the underlying ideas behind the project, summarise its main features, and report on some of the issues that have arisen in the project’s early stages.
**Project Aim and Summary**

The **aim** of the project is to:

- increase our understanding of the learning outcomes from an increasingly diverse higher education system
- investigate how these are socially and organisationally mediated. Social mediation refers primarily to the effects of the social mix of students and the characteristics of the student culture and lifestyle. Organisational mediation refers to the principles underlying the organisation of the curriculum and to linked organisational issues concerning staff, students, time and space.

**In summary** it will explore the relationships between:

conceptions of learning outcomes:
- as cognitive development
- as academic and professional identity
- as personal identity and conception of self

ways in which learning is mediated:
- by formal educational curricula and assessment
- by the principles of institutional organisation (curriculum, staff and students, space)
- by the social context of study

It will focus primarily on three subject fields, selected as representative of ‘science’, ‘social science’ and ‘broadly vocational’ courses:
- biochemistry
- sociology
- business studies

The **project team** is based at:

- The Open University (Centre for Higher Education Research and Information and Institute of Educational Technology)
- University of Stirling (Centre for Research in Lifelong Learning)

Relevance to **policy and practice** will be achieved through links with:

- The Higher Education Academy and the Subject Centres for:
  - Biosciences
  - Sociology, Anthropology and Politics
  - Business, Management and Accountancy
- The Quality Assurance Agency for Higher Education
- The Council for Industry and Higher Education

For more detailed information, including the project timetable and downloadable copies of papers in this series, please visit the SOMUL website:

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What is learned at university?

by John Brennan and David Jary

This is the central question being explored by the SOMUL project. The formal name of the project is the Social and Organisational Mediation of University Learning. But put more simply, the project is about diversity – of inputs, processes, structures and outcomes of higher education. Peter Scott commented ten years ago that Britain had acquired a ‘mass’ system of higher education but retained an ‘élite’ mentality for thinking about it (Scott, 1995). In posing fundamental questions of ‘what is learned’ and how this differs for different students in different places, the project seeks to provide a way of thinking about mass higher education in Britain which is empirically grounded and which may challenge conventional thinking about institutional, subject and student differences.

In this paper – the first of a series to be published by the Higher Education Academy – we set out the underlying ideas behind the project, summarise its main features, and report on some of the issues that have arisen in the project’s early stages.

**A major new research project on the student experience**

We are asking ‘what is learned at university’ at a time when higher education comprises many different kinds of universities, different kinds of courses, students from different backgrounds (both educational and social) studying in very different circumstances and at different stages in their lives. This is what we mean by ‘social and organisational mediation’ in the project’s title. How is learning affected by the way courses are organised, by the places in which it is happening, by the people one is learning alongside, by the reasons people have for studying, by the other things that are going on in their lives whilst they are studying?

Over the next three years the project will be asking these sorts of questions to students in 15 different higher education settings – in different universities and different subjects. For some students we’ll be asking these questions during the first years of their studies. For others we’ll be asking them towards the end of their studies and beyond graduation. With most students we’ll be keeping in touch with them and talking to them again. We’ll be speaking to their teachers and finding out what the students are meant to be learning – in relation to things like subject benchmarks and programme specifications. And we’ll be contrasting these ‘official’ statements about what is learned with what the students themselves tell us. Later on in the project we shall be testing out the generalisibility of findings from these 15 case studies through a wider student survey.

We shall be taking quite broad conceptions of learning. We shall be interested in whether students believe they are learning the things that their teachers tell us they are meant to be learning – both in relation to the substance of course content and more general aspects of cognitive development. But we are not assuming that ‘what is learned’ can simply be equated with what is taught. We shall also be interested in how university affects students’ attitudes and values, their ambitions and plans, their sense of who they are and who they want to become, in both professional and personal terms.

**The research literature**

The project draws on three broad areas of research literature: (i) theories of learning in higher education, (ii) studies of academic and disciplinary cultures and identities, (iii) sociologically-based studies of the effects of higher education on students, taking account of factors such as student culture and the ‘whole college’ experience.
(i) Theories of learning in higher education

Building on the work of people such as Perry (1970), Marton (1976 and 1984), Säljö (1979) and Marton and Booth (1997), an active research field has been established that has explored processes and outcomes of student learning in a wide range of contexts (Richardson, 2001). Different conceptions and levels of learning have been identified, building on earlier distinctions between ‘deep’ and ‘surface’ processing (Marton, 1976).

In the present study such theories of learning have a status both as intervening variables (i.e. as learning processes that might be related to the achievement of certain learning outcomes) and as potential learning outcomes themselves. With regard to the latter, the literature over the last 25 years shows an ongoing concern with promoting student development. The assumption is that students manifest increasingly sophisticated levels of development as they proceed through higher education, and that their development from one level to another arises as the result of both planned and fortuitous encounters.

These models accord with the kinds of conceptions of learning typically used by academics when considering the achievements and failings of their students. Concepts such as critical thinking and complexity (e.g. Barnett, 1997) are employed to indicate the intellectual goals of an undergraduate education and the assumption is that it is the experience of formal education (i.e. what happens in and around university classrooms) that drives student development (e.g. Pascarella and Terenzini, 1991). In this literature learning outcomes are regarded essentially as cognitive.

(ii) Studies of academic and disciplinary cultures and identities

Within the academic community, student learning is still frequently seen within the contexts of particular disciplines (a point reflected in the benchmarking exercise as well as in the structure of the former Learning and Teaching Support Network, now the new Higher Education Academy), notwithstanding the growth in recent years of multi- and inter-disciplinary courses. Relevant to this conception of student learning is a significant body of literature that examines academic disciplines as distinctive epistemological and social communities (Geertz, 1983, Becher, 1989, Becher and Trowler, 2001, Henkel, 2000, Maassen, 1996). However, these studies have focused virtually exclusively upon academic staff for whom academic disciplines are variously considered to be ‘ways of life’ (Maassen) or sources of ‘languages, conceptual structures, histories, tradition, myths, values, practices and achieved goods’ (Kogan, 2000). Bernstein has referred to the importance of ‘subject loyalty’ and to the capacities of academic subjects to create ‘new realities’, at least for the privileged few who gain access to the ‘ultimate mystery’ of the subject (Bernstein, 1975).

For teachers, academic identities are intimately linked to professional identities. For students, embarking to a greater or lesser degree on a process of academic and professional socialisation, the existence of distinctive disciplinary cultures is an important part of their experience – even when taking multi-disciplinary courses. Becher and Trowler note that ‘for a would-be academic the process of developing that identity and commitment may well begin as an undergraduate’. But what of students who do not see themselves as ‘would-be academics’? How, if at all, do these students’ identities relate to disciplinary cultures and academic identities? What of students whose studies encompass several disciplines? Do these students compartmentalise or integrate their learning?

The strength of the disciplinary academic culture experienced by undergraduates will, in part, be influenced by the form of curriculum organisation through which it is transmitted. Here the work of Bernstein is relevant. In a classic 1975 paper, he introduces his concepts of classification and framing and his theory of educational knowledge codes by distinguishing between educational curricula that stand in ‘open’ or ‘closed’ relationships to each other. He goes on to consider how educational curricula relate to ‘commonsense knowledge’ or ‘everyday community knowledge’ and suggests how different types of classification may impact differently on different types of student (Bernstein, 1975).
(iii) Sociologically-based studies of the effects of higher education on students, taking account of factors such as student culture and the ‘whole college’ experience

Popular in the United States from the late 1960s onwards, this work includes the interactionist studies of Howard Becker and colleagues (1961 and 1968) as well as more quantitative studies carried out by researchers like Feldman (1969). Alongside this work, one might also refer to the various contributions of Pierre Bourdieu (1990, 1996) which have linked the experience of attending higher education to broader social processes of élite reproduction and change. A number of substantial reviews of the US literature in this field exist (e.g. Feldman and Newcombe, 1969, and Pascarella and Terenzini, 1991 and 2005).

Although there is considerable diversity of approach in this part of the literature, what these studies tend to share is a refusal necessarily to equate what is learned in higher education with what is taught. This is frequently linked to an interest in the role of higher education institutions in ‘shaping’ identities and cultures (Becker, 1968, Dubet, 1994). More generally, it extends our notion of learning outcomes to areas such as attitudes, values, confidence, personal autonomy, self-esteem and moral development (Pascarella and Terenzini, 1991 and 2005).

Another general feature of this body of work is the suggestion that student learning is in part determined by students’ contacts with their teachers and their peers outside formal educational settings and by their extracurricular activities (including work experience and other part-time employment) more generally (e.g. Terenzini et al, 1996). This is the point developed by the classic studies of student life by Howard Becker and his colleagues (Becker et al, 1961 and 1968) and which in many ways foreshadowed more recent constructivist approaches emphasising ‘the role of individual agency in identity and cultural construction’ and ‘communities of practice’ (Becher and Trowler, 2001). For Becker and his colleagues, an overall disjuncture between faculty objectives and student strategic behaviour in the pursuit of ‘the grade’ exerts a major influence on what is learned.

The project will draw selectively from these three areas of the research literature. Key concepts will be the social construction of learning outcomes, disciplinary cultures, levels of learning, and student identity. These will be explored empirically through an investigation of student learning largely from the perspectives of the students themselves in three academic disciplines – biology/biochemistry, business studies and sociology – and in a range of social and organisational contexts. The conclusions to be drawn from the studies of the three disciplines will be the basis of the wider student survey towards the end of the project.

Research questions and project design

The project’s seven research questions are as follows:

(i) What are the various conceptions of student learning that underpin subject benchmark statements, associated programme specifications and methods of student assessment?

(ii) What is their relationship to conceptions of student learning held by students and graduates and to the changes effected in them?

(iii) How do student identities and conceptions of self impact on or otherwise relate to formal learning outcomes?

(iv) How and to what extent are student identities and conceptions of self formed by the interactions of disciplinary cultures and student experiences, both inside and outside higher education?

(v) How and to what extent are student learning outcomes mediated by social and organisational factors?

(vi) To what extent and under what circumstances are student identities and other learning outcomes maintained after leaving higher education?

(vii) How might ‘official’ conceptions of learning outcomes (formal assessments
of learning, programme specifications, benchmark statements) be adapted to take greater account of research into student learning and be used to shape and improve learning experiences and outcomes?

The project has three phases:

(i) Phase One: literature review, contextualising subject cultures and contexts (including benchmark statements), selection of cases, negotiating access and development of research instruments (Jan – Dec 2004)

(ii) Phase Two: empirical investigation of learning outcomes and their social and organisational mediation (Oct 2004 – May 2007)

(iii) Phase Three: assessment of the implications for policy and practice at national, institutional and departmental levels (April – Dec 2007)

Data collection will involve:

(i) five case studies in each of the three subjects, using surveys, focus groups and individual interviews to follow up ‘entering’ and ‘exiting’ cohorts over a period of approximately two years, plus interviews with teaching staff

(ii) a wider survey of students from eight subject areas.

Some issues arising in the early stages of the research

The project is currently engaged in its first main fieldwork stage. It is too early to report on the emerging data, but a number of issues have already arisen during the project’s first months. These concern: (i) the selection of case studies, (ii) the implications of an interdisciplinary research team and a diversity of methods, (iii) the involvement of users.

(i) The selection of cases

In each subject, it was intended to select programmes of study to provide cases of both specialist (closed) and combined/modular (open) curriculum organisation and of different modes of study (full-time and part-time). Cases were also selected according to whether their student cohorts were broadly homogeneous (e.g. young, well-qualified, white, middle class) or heterogeneous (e.g. including mature students, racially mixed and students from working class origins). These variables are emphasised because they imply differences in the classification and framing of knowledge (using Bernstein’s terms), differences in the levels of engagement in the subject (using Dubet’s notion) and differences in the strength and nature of student culture. Thus, for each subject, it was the intention to select five cases as follows:

(i) single honours specialist homogeneous

(ii) single honours specialist heterogeneous

(iii) combined/modular homogeneous

(iv) combined/modular heterogeneous

(v) part-time

This classification encountered some difficulties in application. First, rapidly shifting patterns of disciplinary knowledge and changing principles of course organisation appear to be creating more complex and often looser curricular offerings within institutions. Boundaries still exist (i.e. constraints and rules about what can be studied) but they are no longer clear-cut and coterminous with previous disciplinary and organisational structures. Second, there appears to exist some degree of correlation between the principles of course organisation and the social mix of the student intakes.

For example, faced with the several kinds of biology/bioscience, and advised by the Higher Education Academy’s Subject Centre for Bioscience about the pre-eminence of ‘biochemistry’, we decided to shift our focus from biology to biochemistry as our ‘bounded’ specialist discipline in the biosciences. In fact, we have been finding relatively weak programme boundaries between the constituent elements of ‘bioscience’ as a field but rather strong boundaries between the field and other parts of the university curriculum. There is also some correlation between the social homogeneity of student
intakes and the disciplinary boundedness of courses.

Sociology is to some extent in decline as a single honours subject outside the most prestigious institutions. In this study the single honours variant will be compared with a range of combined programmes, many of recent origin, for example those including criminology. Here again, the homogeneity/heterogeneity of student intakes is likely to correlate to some extent with the boundedness of programmes, with the strongest examples of single honours programmes existing in older universities and mainly recruiting well-qualified school leavers. But contrasting cases can also be identified, with single honours and combined/modular programmes existing side by side in many institutions.

For business studies a different configuration of disciplinary patterns exists. Historically, business studies emerged as a distinctive programme of study in the polytechnics. It involved at first a combination of disciplinary inputs relevant to business (e.g. economics, sociology/organisation theory, accountancy) which evolved over time into – in Bernstein’s terms – an ‘integrated’ programme committed to an overarching ‘ideology’ of study for business within which the original contributory disciplines became submerged (see Macfarlane, 1997). In older universities, business courses at undergraduate level came later and often remained a ‘collection’ of still recognisably disciplinary parts. Thus, the more usual situation of disciplinary specialist programmes being located in more prestigious universities with a more ‘homogeneous’ intake may be reversed in the case of business studies.

For business studies it is also possible to identify a case under (v) – the dedicated part-time course. But for biochemistry and sociology such courses have not been found to exist as a separate programme category. In these subjects, part-time students will be identified only within programmes designed primarily for full-time students.

(ii) Implications of the project’s interdisciplinary approach

The importance of project team members being prepared to cross subject boundaries – sociology, psychology, cognitive learning and teaching theory, etc – is evident. Yet, the very subject matter of our project – accounts of academic socialisation – suggests that ‘what the project team members learned at university’ may have shaped their cognitive structures, and their professional and personal identities, in ways that lead them to see the project in different ways. Thus, even within the project, we have to face up to different traditions of ‘doing research’.

An example is in the design of research instruments and the overall balance of research methods. For example, in designing the initial questionnaire, pre-tested scalable items deriving from psychologically based theories of learning and teaching must compete, and may sit oddly, with more loosely structured sociologically influenced questions, some of them open-ended and aimed at capturing students as culturally-wise individual agents in relation to their own lives and as expert commentators on their various learning environments.

Is it possible to reconcile these different approaches? Part of the solution adopted in this project has been to be always clear about the job being done by each question, and each fieldwork instrument, and its link to research questions and research concepts. In addition, for each question it must be possible to explain to students why we are asking it. This is vital in order to engage the interest of students. And while comparability with previous research, including in some cases standardised ‘measures’, is important, it has to be balanced against the above criteria and the importance of being innovatory, of employing a variety of quantitative and qualitative methods and, above all, of remaining true to the project’s original conceptualisation and research questions.

(iii) The involvement of users

The project is intended to be relevant to practice and policy at national, institutional and subject levels. And an important way of achieving this is through user involvement. However, this necessitates a careful and somewhat tricky identification of the research in terms of what it is and what it is not.

Although our focus is primarily on students, our concern with ‘organisational mediations’
will inevitably lead us to explore the relationship between the different ‘worlds’ of academics and students. It is in relation to questions about the interface between students and staff that it is crucial for us to distinguish our research from the currently pervasive ‘evaluation’ activities in universities. Evaluation is carried out primarily with reference to a prescriptive checklist of outcomes and a judgement made about the fulfilment or otherwise of these. Our research will not be judgemental about whether the views of staff or the views of students are the ‘right’ ones. It differs from evaluation in that similarities and differences of view between staff and students will be described and explicated and their implications explored, but the question of what should then be done will not be a matter of seeking a better fit with ‘official’ accounts of learning and teaching (national descriptors, subject benchmarks, institutional and programme specifications, etc). Data will be collected about the role of benchmarks, programme specifications and the like but as only a part of a much fuller account of institutional and staff perspectives. These will then be explored in relation to the ‘mediations’ of student learning, on which our central concerns lie. Rather than upholding QAA descriptors or subject benchmarks – or even more general staff ‘accounts’ – as a prescriptive model, our results may challenge these.

It will thus be essential in gaining support for our research to ensure that it is not mistaken by students or staff as some form of evaluation or assessment activity. This said, the involvement of users in the project and the planned arrangements for dissemination and enhancement of learning and teaching are a central aspect of the research design. We are interested in how ‘official’ conceptions of learning outcomes (formal assessments of learning, programme specifications, benchmark statements, etc) might be adapted to take greater account of research into student learning, and how the research might be used to shape and improve learning experiences and outcomes. This might, for example, include giving recognition to learning outcomes beyond those announced in official statements, outcomes that might be of great value to learners.

We are interested primarily in the generality of the ‘mediations’ of student learning within subjects and more generically. The investigation of individual subject/departmental cases is a means to that end. But it is vital that we understand the subject and institutional contexts in which learning is taking place. Three Higher Education Academy Subject Centres have already contributed to overview reviews of learning and teaching in their subjects as part of the project. Our dissemination plans include working with Academy Subject Centres and the Academy more generally in regional and national events. These events will be discursive and certainly not about promoting a particular model or models.

Our engagement with the departments and subject groups that provide our research sites will be at three levels:

(i) We have promised feedback to, and discussion of, our preliminary findings – we see this as a vital part of the research process in that it will allow a dialogue about our findings and their potential refinement.

(ii) Potentially as a contribution to enhancing research capacity, we will encourage any members of staff (and perhaps students) who wish to participate as associates of the research to engage in ancillary projects relevant to the research.

(iii) Notwithstanding the need to distance our research from evaluation, a variety of potentially developmental/enhancement engagements with the individual departments we research are also planned. Once again, however, the format for these will be discursive and dialogical.

In addition, we hope that it will be possible to promote discussion of the implications of the study more widely within the participating institutions.

A final aspect of involvement with users concerns the potential impact on national policy. Our contribution to QAA debate and review of subject benchmarks is relevant here. In general terms, the potential for policy impact exists in large part through the capacity of the project to challenge and extend conventional notions of what is learned. Subject benchmarks, conceptions of ‘graduateness’, doctrines of personal
development planning, quality assurance policies, arrangements for student support, and employers' recruitment strategies may all come to be challenged.

**Conclusion**

It is an ambitious project. It focuses primarily on what is learnt in universities rather than how it is learnt. It is aimed at extending discussion of learning outcomes beyond notions of competence, skill and particular bodies of knowledge towards questions of personal identity, confidence, citizenship and social value. It will attempt to discover how these outcomes differ across an increasingly diverse system of higher education institutions offering diverse educational experiences to diverse groups of students.

In a new book that summarises the recent American literature on the effects of higher education on students, Pascarella and Terenzini (2005) reach some interesting conclusions about the kinds of factors that influence learning:

- **Diversity is a factor.** A diverse student body is positively associated with cognitive and affective learning outcomes. (Thus, widening participation isn’t just about social justice, all students stand to benefit.)

- **Duration of courses may not be quite the factor often assumed.** Two-year programmes may provide equivalent learning outcomes to longer programmes.

- **The amount of learning is not related to ‘quality rankings’ of institutions.** (You won’t necessarily learn more if you go to a posh place.)

- **Out-of-class experiences may be as important for learning as in-class experiences.**

They conclude (Pascarella and Terenzini, 2005):

‘The research consistently shows that learning is bound neither by time nor by place, that it occurs continuously in a variety of locations, often unpredictably, and that it is maximised when both the activities and outcomes have meaning for the learner. Finally, learning is not a solitary activity, but is more likely to be relational and social, taking place when students engage in a task with others...’

It is within these sorts of debates that we would wish to locate the present project.

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