1 Background

The sociological background to this study is the well documented under representation of certain groups in Higher Education as whole and the uneven distribution of individuals from such groups across Higher Education Institutions (see inter alia Archer et al. 2003; Ball, 2003; Reay et al. 2005; Boliver , 2008). The policy background is the ongoing attempts to widen participation and enable fair access. In particular, this research focuses on the use of vocational education and training (VET) provision for 16-19 year olds to both increase and widen participation in HE. Certainly such pathways have played a role in helping to increase participation in post-compulsory secondary education (Hayward et al., 2005) Such expansion was seen as a decisive pre-condition for widening participation in HE (see for instance Education and Employment Committee, 2001, p. 33 and HEFCE, 2000). However, international studies have shown that this connection is not necessarily valid. (Blossfeld and Shavit 1991). In terms of access to HE in the UK, despite the overall expansion of the sector, the incremental growth in student numbers remains greatest for middle class students holding traditional GCE A-level qualifications (Ball, 2003; cf. also Sutton Trust, 2005). Further, while there is within current UK policy discourse continual affirmation that vocational qualifications (VQs) both American and British research questions this (Arum and Shavit, 1993; Leathwood and Hutchings, 2003; Pugsley 2004)

The educational background is how little is known about the current transition into, and progression within, HE of those holding Level 3 VQs. Existing studies in this area (cf. for instance, Gokulsing, Ainley et al., 1996; Bynner and Roberts, 1991; Ainley, 1999) are too old to provide an overview of the current situation, as the 16-19 education and training system has been subject to major reform, such as Curriculum 2000. Therefore this project has investigated whether growing participation in VET has resulted in increasing participation of people with a vocational background in HE in the UK, the nature of that participation, and whether this has, in turn, contributed to widening participation in terms of people from socio-economic backgrounds who have historically tended not to participate in HE. In addition, the project has sought to understand the nature of the experience of young people holding VQs once they enter HE, and by working with a variety of stakeholders to think through the practical consequences of the research findings.

Transition from VET into HE is hard to conceptualise because it involves many complexities, not least the definitional problems of deciding what counts as vocational and general education (see Brown et al., 2004; Stasz et al., 2005). The overarching framework guiding the research was that of the learning career which allows for the incorporation of both ‘objectively and subjectively defined experience [and] has the capacity for describing, in both objective and subjective senses, continuity and transformation (…))’ (Bloomer, 1997, p. 149). We were interested in exploring not only the objective form of the transitional terrain between VET and HE as revealed by the analysis of quantitative data, but also the ways in which, and the extent to which, learners’ dispositions to knowledge and learning change as they make the transition from
VET into HE. This is important because widening participation cannot be just about ensuring more people from non-traditional HE backgrounds gain access to HE but is equally concerned with ensuring that they are successful in HE. To understand the factors that operate to promote and inhibit such success, we need to know more about how the horizons of action and dispositions towards knowledge and learning of learners with a vocational background change and develop as they move through HE.

Within this overall framework the transition from VET into HE was conceptualised as involving a movement from a number of different types of VET activity systems into a number of different types of HE activity systems through a more or less permeable interface (Guile and Young 2003). Within this broadly sociocultural perspective on transition, we envisaged the use of a number of types of boundary objects (Star, 1989) – most notably qualifications – as forming sites of negotiation and common points of reference through which transition friction – the conditional probability of making the transition to different types of HE provision - is enhanced or reduced. Understanding the multiple origins of such transition friction, and how to deal with them, is crucial to widening access and participation in the future.

2 Objectives

There are three immediate and one overarching aims of this project:

A1. to develop a detailed map of the transition probabilities, and the factors affecting those probabilities, between vocational and higher education

A2. to develop an understanding of the learning experience people with a background in vocational education have at colleges and universities and how this affects their progress and success in HE

A3. to develop ways of reducing the frictions people face in the transition between the two sectors and of improving the learning experience of students with a vocational background

A4. to reassess and further develop the body of theory on educational transitions and participation in HE (overarching aim)

These aims were then operationalised into ten finer-grained objectives which were met in the following way:

O1 Utilising data for 1995/96, 2003/04 and 2004/05 supplied by UCAS (entry data) and 2004/05 and 2005/06 by HESA (progression into HE) we developed an initial series of descriptive accounts of the likelihood of individuals with different pre-HE learning careers making the transition into Higher Education, and how this had changed over time. See nominated output A. The challenge of obtaining and utilising such data must not be under estimated (see methodology).

O2 Subsequently we matched UCAS and HESA data to produce combined data sets for more sophisticated analysis using various forms of regression analysis, structural equation and multi-level modelling to examine the factors affecting transition probabilities and success once in HEIs. This analysis is ongoing because of the challenges associated with obtaining adequate data and producing matched data sets.
3 Methods

Figure 1 shows the project as consisting of three interlinked parts – systemic perspective, pedagogical perspective and reform perspective - summarised in terms of their focus, guiding questions and main sources of data. The User Forums provided the feedback mechanisms shown in the diagram.
Part 1: Transition Landscapes
How and to what extent do transitions happen?
UCAS, HESA, ILR, Youth Cohort Study

Part 2: Learning Experiences
What do learning processes and experiences look like?
Questionnaires and interviews with students and staff at 5 HEIs

Part 3: Transitional Frictions
How can transition processes be improved?
User forum discussions with stakeholders in HE and VET

REFERENCE No.

To cite this output:

Figure 1: Perspectives and research areas of the project

Part 1 analysed large-scale datasets in order to both map the transitional terrain between VET provision and HE: a) the Individual Learner Record (ILR) and the Pupil Level Annual School Census (PLASC); b) applicant/admission data from UCAS; and c) HESA-data on students in HE. All these administrative datasets hold the full population of the specific groups, which enabled drawing reliable transition landscapes between different educational stages and pathways. Questions were primarily answered using UCAS applicant data from 1995, 2002/03 and 2003/04, and HESA data from 2003/04, 2004/05. UCAS/HESA matched data sets for 2003/04/05 were constructed to follow students from the point of application to HE, through the selection and entry processes and their retention during the first year of their HE. In addition, UCAS data on non-placed applicants were analysed to determine the extent to which VET students were over- or under-represented in this sub-population. Some analysis of the Youth Cohort survey (YCS) was also undertaken but little use was made of this data set as small sample sizes do not produce sufficiently large numbers of students with VET backgrounds in the later sweeps.

The analysis is inevitably limited by data considerations and the success of the matching procedures. Only English (based on postcode areas), full-time, first year students, under 21 that were successfully matched are tracked in the combined data sets. Tracking the transition of those entering part-time degrees via direct entry was not methodologically tractable at the time of the research using existing administrative data sets, though such data may be available in the future (see future research priorities).

Using data on prior qualification five pathways to HE were defined:
- General academic
- Vocational
- General academic and vocational
- Foundation and Access-courses
- Not level 3/not known
Analysis of the quantitative data proceeded in three phases: cleaning, orientation and the production of derived variables, such as the qualification pathways; descriptive analysis (see nominated output A); ongoing multivariate analysis employing multinomial logistic regression and multilevel modelling.

The challenges of working with these administrative data to answer substantive research questions of interest should not be under-estimated. The data sets are commercially confidential and needed to be purchased; ongoing iterative negotiations were needed to ensure best quality data was obtained; data are not collected for research purposes; and so on. The way in which variables of interest, such as qualifications obtained prior to HE entry, are collected and coded also changes over time, making longitudinal comparisons problematic.

In order to follow up issues that cannot be resolved by secondary data analysis alone, Part 2 has compared and contrasted the background of students with vocationally and more academically-oriented entry qualifications, and their respective experiences of the learning environments provided by HEIs.

The project built on previous studies in the area of research on the student learning experience in terms of both concepts used to describe the student learning experience and methods used to investigate it (for an overview see Ertl et al., 2008). The first research instrument in part 2 of the project were two questionnaire surveys with the entire intake of students in three subject areas (Business, Computing and Nursing) at five UK HEIs for the 2006/07 academic year. The first questionnaire aimed at exploring students’ transition into Higher Education, the second looked at the ways in which students describe their experience during their first year of studies. Both questionnaires were administered during a core lecture or in large seminar groups by the research team and/or our project contacts. The second research instrument was semi-structured interviews with students, lecturers and admissions staff which generated qualitative data that could be combined with quantitative data sources (see Part 1 and questionnaires in Part 2).

Following Richardson’s (1996, pp 167f.) three notions of combining quantitative and qualitative methods (facilitation, triangulation, complementarity), the preliminary analysis of administrative datasets facilitated the selection of HEIs and subject areas for the in-depth investigations of the second part of the project and the findings from the two parts were triangulated against each other. Within Part 2, the questionnaires were used as a means to produce relevant interview questions for students and lecturers. The interviews were primarily aimed at gaining a deeper understanding of the motivations of different student groups for entering HE, their rationale for choosing a subject and an institution (see Cohen and Manion, 1994, p. 273). At the same time, the first questionnaire was used to identify ‘illuminating cases’, i.e. students that came into HE with a vocational background and/or demonstrated a certain degree of reflectiveness regarding their educational pathway. By interviewing students as well as lecturers and admissions staff, complementary data on the transition into, and experience of, different students in HE was produced. The research methods and findings developed in Parts 1 and 2 of the project were triangulated in User Forum discussions with experts and practitioners in the field in Part 3.

Part 3 of the project initiated a continuous discourse with the VET and HE communities, in order to discuss the findings of the first two parts of the study and to make them
Furthermore, the discussions ensuing from Part 3 of the project were used to amend and further develop the investigations in the first two parts of the research design (Hoelscher et al., 2008a).

Three user forums were held (two in Oxford and one in Glasgow), bringing together practitioners from VET and HE, including participants from UCAS, QCA, City & Guilds, the Sector Skills Development Agency, the Scottish Qualifications Agency, the Scottish Further Education Unit, Universities Scotland, the Higher Education Academy, local FE colleges and universities, as well as our contacts in the institutions that took part in the project.

The forums were organised in a way that allowed the project team to present preliminary research questions and findings to the participants who then provided feedback. This feedback was generated through various different techniques, including thematic working groups on selected questions and/or findings, workshops on implementing changes in admissions procedures, open discussions, and email responses after the user forums (see Appendix 4).

4 Results

The results from the project are organised by theme. It is important to recognise that the research questions in each theme were developed further and added to through the work in the User Forums, as was our intention. Some of the research questions remain only partially answered at this stage requiring both further analysis of existing data to provide a more comprehensive account.

**Part 1: Transition landscapes (systemic perspective)**

The majority of those applying to Higher Education (70.7\% in 1995 and 75.7\% in 2004) held general academic qualifications but the proportion applying with vocational qualifications increased from 18 per cent (1995) to 25 per cent (2004). However, this growth was due to an increase in those combining vocational and general academic qualifications, up from 4 per cent to 14 per cent over this time period, while the proportion with vocational qualifications only decreased from 14 per cent to 10 per cent. (Hoelscher et al. 2008b; Hoelscher and Hayward, 2008c).

Vocational routes do open access to HE for non-traditional students. Applicants with a vocational background come from lower socio-economic groups, are more often male, older, are more likely to come from a non-white ethnic background, and are more often disabled, than those from the traditional academic route.

Unsurprisingly, those with “Academic” qualifications mainly come from State school sixth forms, Sixth Form colleges, Independent and Grammar schools. Most applicants from the “Vocational” pathways obtained their most recent qualification within the Further Education sector. A high proportion of those with combined academic and vocational qualifications gained their qualifications in state-school sixth forms and they are more similar to the traditional general academic applicants from such schools. Consequently, the increasing proportion of students applying to HE with a combination of academic and vocational qualifications may be leading to some increase in widening participation but this effect is not substantial.
Those with vocational backgrounds are much more likely to apply for courses in post-92 HEIs, and FE colleges offering HE provision than those with purely academic backgrounds. Those who combine academic and vocational qualifications are less likely to apply to at least one pre-92 institutions than those with just general academic qualifications, but more likely than those with just vocational qualifications. However, the application rate to post-92 HEIs is similar for those with just vocational and those combining vocational and academic qualifications.

Students with a vocational background are over represented in ‘less prestigious’ HEIs. VET students are over-represented in applied fields such as creative arts and design and computer science and under-represented in areas such as medicine, dentistry, law, languages, history and philosophy. It could be that the more applied subjects chosen by VET students are over-represented in Post-1992 universities and other HEIs. Controlling for the distribution of subjects across institutions it becomes clear, however, that students with an academic background were much more likely to study at pre-1992 universities than their counterparts with vocational qualifications. Their over-representation was especially visible in those subjects in which they were normally under-represented. If someone with an academic qualification was studying “Agriculture”, “Computer Science” or “Creative Arts” at all, then they were studying at a Pre-1992 institution.

Controlling for socio-economic background, other demographic factors and the type of educational institution attended prior to entry to HE, compared to traditional A level students those with VET qualifications have a much higher risk of not obtaining a place in HE, and of dropping out after their first year (Figure 2). But the picture is much more favourable for those combining the two pathways, who are nearly as successful at entering and completing the first year of HE than those with only general academic qualifications. However, multi-level models suggest that the situation is more complicated with the influence of VET background on dropping out varying significantly between institutions: those institutions with high drop out rates in general are where vocational students are most at risk of dropping out irrespective of the subject being studied. Furthermore, the risk of dropping out is less in HEIs which have more VET students.

Figure 2 Attrition in different pathways

Of 100 English students applying for a full-time degree programme in HE from one of the following educational pathways …

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Not accepted</th>
<th>Leave institution after first year</th>
<th>Continue at institution after first year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only general academic</td>
<td>11</td>
<td>57</td>
<td>32.4</td>
</tr>
<tr>
<td>Academic and vocational</td>
<td>13</td>
<td>9.3</td>
<td>77.4</td>
</tr>
<tr>
<td>Only vocational</td>
<td>21</td>
<td>12.4</td>
<td>66.5</td>
</tr>
</tbody>
</table>
While students from a VET background contribute to a widening in access, it remains a question whether their distribution across HEIs represents fair access for them. Of particular concern is the extent to which students from VET backgrounds find themselves primarily in less well-resourced HEIs (Boliver, 2008). In addition, studying at a pre-1992 HEI brings extra economic benefits: students with an academic background have an advantage on the labour market. Clearly, as boundary objects VQs signify different attributes to academic qualifications, confirm status hierarchies (Scott, 1996) and are interpreted, rightly or wrongly, as preparing students less well for HE study. HE remains a highly segmented market from the perspective of both VET applicants and from the perspective of HE admissions staff and tutors.

Part 2: Learning experience (didactic perspective)

First year students with VET backgrounds, describe their transition into HE as complex and often difficult. Three perceived difficulties were reported with a high degree of consistency:

- lack of preparation within VET contexts for what is expected of them in HE, with the former emphasising the importance of practical knowledge, the latter theoretical
- demands posed by specific study areas (for instance, mathematics) and/or assessment tools (such as essays and portfolios)
- finding a balance between their studies, family commitments and the jobs they needed to pursue to finance their studies, linked to the age and SES of students with a VET background

Difficulties in the transition from VET to HE less consistently mentioned included lack of support from lecturers and other HE staff, poor preparation for engaging in theoretical argumentations in their subject, and general problems of orientation in the new learning environment. Many students report an ‘initial shock’, ‘early problems’, or a ‘feeling of overwhelming challenges’ that they needed to overcome. These perceptions indicate that VET students face different patterns of transitional frictions than other groups.

Student interviews revealed that students with a VET background are often highly strategic in their decisions regarding progression into HE, choice of institutions and programmes, and utilisation of their HE studies in their future career. Learners who come to HE with a VET background seem to be particularly motivated by a combination of intrinsic interest in their subject and the opportunity to improve their career prospects by gaining a degree. However, there are important differences between students in the three different subjects we looked at (Ertl & Dunbar-Goddet, 2008).

Students with VET backgrounds overall report similar levels of preparation for HE studies to other student groups but the sources for preparation are perceived in different ways. In particular, there is a stark difference between the academic and vocational students in what they report makes them feel prepared. For students with an academic background it is academic preparatory work and prior academic qualifications whereas for those with a vocational background it is time and activity organisation as well as appropriate information and guidance— a view that is broadly shared by lecturers.

Consequently, students with a VET background require different support mechanisms to minimise transitional frictions. This is confirmed by our data which shows that targeted
information and guidance, as well as individual academic help and advice provided by lecturers and academic supervisors, are the most important elements of the support structure VET students in HE regard as essential for their success (Ertl & Dunbar-Goddet, 2008).

Most of the lecturers and admission staff interviewed expressed a strong interest in the question of how students with a VET background fare in and upon entering HE. Admission staff (who are not necessarily lecturers) had a more or less clear picture of the kind of qualifications with which students apply. In most institutions there seems to be some formalised mechanisms for judging the quality of applicants applying with vocational backgrounds/qualifications. However, these mechanisms are often not very transparent and a member of staff in many cases individually interviews applicants with a vocational background. This indicates a difference in the role of qualifications as boundary objects (Star, 1989) in the transition of different groups of students into HE.

Despite their interest in the subject, HE lecturers often have limited knowledge about vocational qualifications in their field. While they are aware of specific programmes offered by local FE Colleges and other providers (in some cases there is even co-operation with local VET providers), some lecturers indicate a lack of time to really get to grips with some work-based qualifications (for instance NVQs). These lecturers tend not to consider the background of students who come to HE with a VET background in an explicit way. This approach contrasts with that taken by lecturers in our sample who demonstrated a high degree of awareness towards the strengths and potential problems of VET students. These lecturers are often actively involved in admissions processes and have a repertoire of teaching and supervision approaches which take account of VET students’ needs. Large student groups and a general lack of time are the most important obstacles for lecturers to provide targeted support to VET students (see Ertl & Schnell, 2008).

A major barrier to progression from VET provision into at least some HEIs may be the significant cost associated with gathering and interpreting the information needed to understand what competences and capabilities are being signalled by the vocational qualification system in the UK. This could lead HE admissions staff to rely on information that they can obtain easily – such as qualifications and cultural markers of success gleaned from personal statements and references – and apply what they have learnt from past experience to infer an individual’s “conditional probability of competence” (Blaug, 1976, p. 846).

**Part 3: Reducing transitional frictions (reform perspective)**

In the User Forums preliminary findings were discussed, additional research questions were generated and underlying assumptions were tested. Outcomes of these User Forums include the following (Hoelscher et al. 2008a):

- **Increased exchange and collaboration:**
  The interest of Forum participants has resulted in continuous exchange of ideas via project newsletters and a project discussion area. New ways of co-operation between HE and VET representatives via existing and new UCAS working groups were discussed.

- **Models of transition processes:**
  More multi-dimensional models were needed to illustrate transition processes between...
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VET, HE and the labour market, to model diverse pathways of learners within and between the sectors. It is important to capture the complexity of transition decisions and choices, particularly of non-traditional students.

- Changing role of sectors:
  Foundation degrees, HNCs and HNDs and other qualifications have contributed to the weakening of the traditional demarcation lines between HE and FE. This could lead to increased competition between institutions in the two sectors, but it creates more scope for collaboration between the sectors which can, in turn, have a positive impact on students’ transition from one sector to another. A further consequence of the changing roles in the two sectors is a changing understanding of what constitutes ‘vocational’ as opposed to ‘higher’ education. Growing overlaps might be used to reduce transitional frictions for individual learners for example through entry profiling and curriculum mapping between HE and VET provision. However, the way different sorts of knowledge are valued in VET and HE activity systems, and the continuing status inequality between VQs and traditional academic qualifications (which map to unequal access by different social groups to HE), will prove to be challenging obstacles to overcome if increased VET participation is to lead to both widening HE participation and fairer access.

5 Activities

Knowledge building and communication

Project website on TLRP server
(http://www.tlrp.org/project%20sites/degrees/index.html)

Linked projects
- Literature Review on the student learning experience in HE (funded by the Higher Education Academy, 2006-2007)
- Nuffield Review of 14-19 Education
- UCAS project on non-placed applicants (2006-2007)
- Evaluation of Diploma Development Processes (funded by DCSF and QCA, 2007-2008), in particular regarding questions of perception of Diplomas by HE representatives.

Research capacity building
- Development of strategies for working with large scale administrative data sets
- Ongoing contributions to TLRP publications (Policy Commentary, Improving Learning Series) and events (TLRP conferences and events with policy-makers)
- Development of post-doc researchers and two doctoral students
- Internships for three students on the Departmental Education Research Methods Masters course

Links with practitioners and policy communities
- UCAS (through work on admissions data and groups such as UCAS Curriculum Development Group, HEI Admissions Group)
- HEFCE (through work on HE student level datasets)
- User Forums (with HE and VET practitioners) (see Appendix 3)
- TLRP policy events (for instance with members of Funding Councils)
Work with academic communities

- To date: Two papers in refereed journals, six working papers, 15 contributions at national and international conferences, including two conference symposia (see Supplementary Materials)
- Research Seminar Series (Department of Education, Oxford, January – March 2008 see Appendix 2)
- End of Project Seminar (Nuffield Foundation, June 2008 see Appendix 1)

6 Outputs

Papers


Book chapters


Reports and TLRP Materials


Working Papers


All working papers on: 

For commercial reasons datasets employed in this project were used under licence and cannot be made public.

7 Impacts

- Presentation to Seminar on ‘Diversity and Widening Participation to HE: policy implications’ organised jointly by Hefce and TLRP
- Ongoing strategic partnership with UCAS through existing groups and future research
- Research Seminar Series, Department of Education, University of Oxford (see Appendix 2)
- User Forums have indicated impact of our research questions and findings on institutional practice in HE and VET (see Appendix 3 and WP6).

8 Future Research Priorities

The following research priorities have emerged from the project:

- Further work on supporting students with VET background into HE. A proposal is currently being developed in conjunction with UCAS and the Institute of Education, University of London.
- Relative costs and benefits of HE participation for VET students in comparison to other progression pathways, such as apprenticeships.
- International comparison of widening participation issues and the transition of VET students into HE with partners in Germany (University of Heidelberg).