

Tracking the Entry of Vocational Learners into Higher Education in a Rural Area of England

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Introduction

Increased entry to Higher Education for students with vocational qualifications has been an aspiration of the widening participation and skills agendas of recent years. The creation of Lifelong Learning Networks (LLNs) in 2004 was intended to increase the numbers of vocational learners progressing into Higher Education, by stimulating curriculum development, advice and guidance and progression agreements. Whilst the Higher Education Funding Council for England (HEFCE) monitors the success of LLNs in achieving these goals, it is more difficult to assess the impact within an area particularly where there are a number of providers. Thus the purpose of this research is to establish some baseline data and measure the impact of the Herefordshire & Worcestershire Lifelong Learning Network (HWLLN) over the five years of its operation.

The context and timescale of the research is pertinent. The area is predominantly rural with low population densities, low average incomes and limited access to Higher Education. Census data (ONS 2008) for 2001 shows the population density of Herefordshire as 82 people/km², and 320 people/km² in Worcestershire. This compares with a regional average of 405 people/km².

HEFCE data (2005) shows that participation rates in the two counties are around average for the region, but that in many places learners are geographically remote from Higher Education. UVAC (2010:18) states that nationally the percentage of students with Level 3 vocational qualifications only on entry to Higher Education courses in 2006 was 8.6% for Post '92 Universities and 13.1% for FE or HE colleges. By comparison the overall rate in Herefordshire and Worcestershire in 2006 was 34%.

The range of Higher Education providers is somewhat different from other regions with one Higher Education Institute (HEI), a Specialist Arts College and a number of Further Education Colleges serving a population of around 735,000 people in an area of 3915 km². This means that a considerable proportion of Higher Education delivery takes place within Further Education Colleges (FECs).

The timescale of the project coincides with improved HEFCE funding for curriculum development. Within this area this was distributed by the HWLLN which was set up in 2006-07 with the involvement of all FE and HE providers in the 2 counties. HWLLN has had a strong focus on facilitating curriculum development and collaborative working within Herefordshire and Worcestershire and, to a lesser degree, within the wider region. Given the timescale of curriculum development the impact of HWLLN is only apparent after 2007-08 with 56 courses developed with 13 institutions. This tracking project was initiated in 2006-07 to assess the impact of the Network and to monitor the changes in access to HE for vocational learners.

In consequence this research does not claim to map national trends; rather the research provides evidence of the progression of vocational learners in areas of low population density and low Higher Education provision – characteristically the rural areas of the UK.

Methodology

The research collected and considered student level data on 11,927 students from 5 Higher Education (HE) providers in Herefordshire & Worcestershire, and identified vocational learners that were progressing on to HE courses within the two counties. Given the complexity of such data

collection, the research did not include all registrations on to all HE courses in Herefordshire & Worcestershire; rather it focused on Undergraduate (UG) courses that fell within one of the HWLLN's themes which were:

- Health & Social Care
- Sport, Tourism, Heritage, Culture & Media
- Leadership & Management

To avoid double counting, students were assigned to the institution which held their student numbers. Therefore, the student may not necessarily be shown against the institution where the course is delivered. In addition several institutions had student numbers from other universities, and these students are not included in this research.

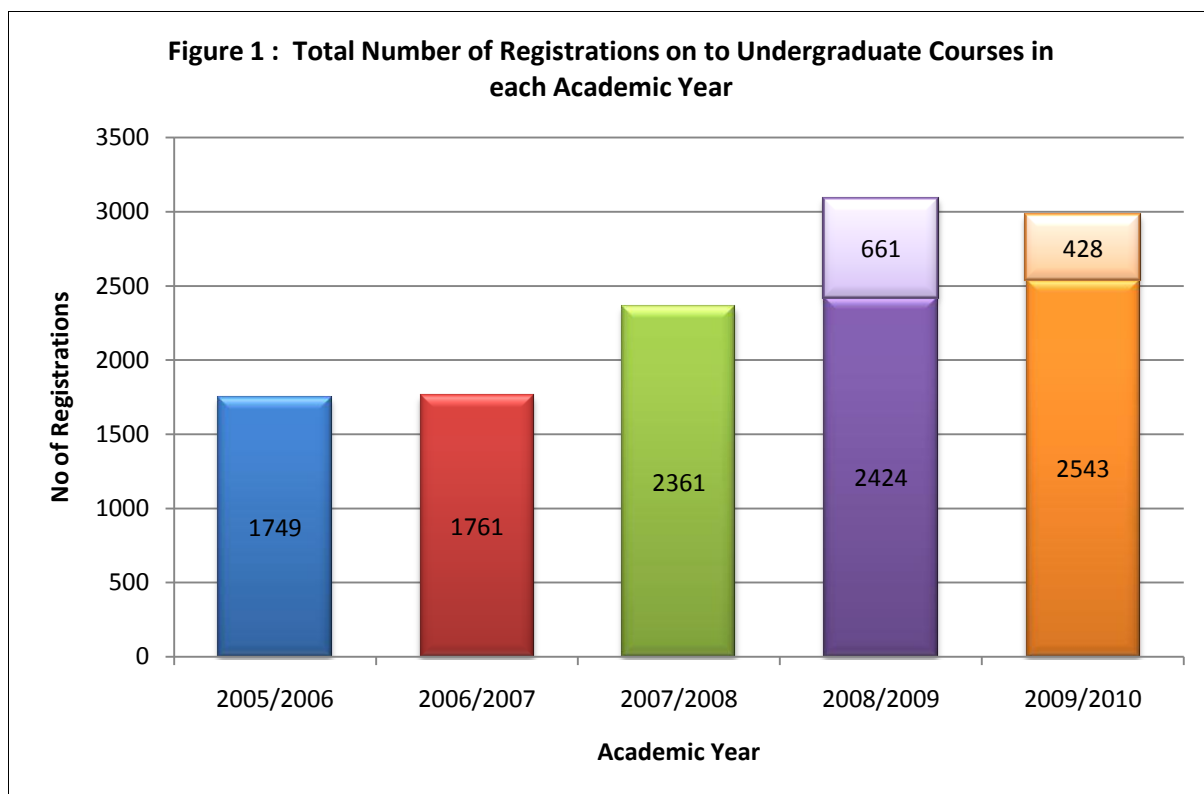
The data from participating institutions was incorporated into a single database and this was used to generate the data for this study.

A number of methodological difficulties were encountered in the collection and collation of data for this research.

- Firstly, although data was collected from five institutions, one institution was unable to provide all of the data required, therefore only Figure 1 contains data on all five institutions to give an overview of the total number of students registering on to Undergraduate courses in the two counties.
- Secondly, the two commonly used data sets were insufficiently detailed to provide the level of analysis required. The Higher Education Statistics Agency (HESA) data sets did not differentiate between vocational and non-vocational learners; and the University and Colleges Application System (UCAS) data did not include highest entry qualification and mode of study, and was not available for part-time learners.
- Thirdly, HEIs and FECs do not collect the same data from their HE students. Thus the initial data from providers was not comparable. In consequence, the study developed a single data set that was based on registration to the first year of an undergraduate course, but where data related to individual students. Whilst this provided good quality data the sample size was too large particularly where it was necessary to manually check student files. The sample size was therefore scaled down to focus on just those students who were registering for an Undergraduate course, and registering on an HE course within the subject area of one of the LLN's curriculum themes.
- Fourthly, it was not possible to obtain information regarding Highest Entry Qualification for the majority of the non-prescribed HE courses and therefore these qualifications are recorded as 'Not Known'.

Changes in the numbers of vocational students entering higher education

One of our first findings was that there has been consistent growth in the total number of student registrations on to UG courses in the three curriculum areas (Figure 1), with a 70% increase in registrations from 2005-06 to 2009-10 (1,749 students registered in 2005-06 compared with 2,971 students registered in 2009-10).

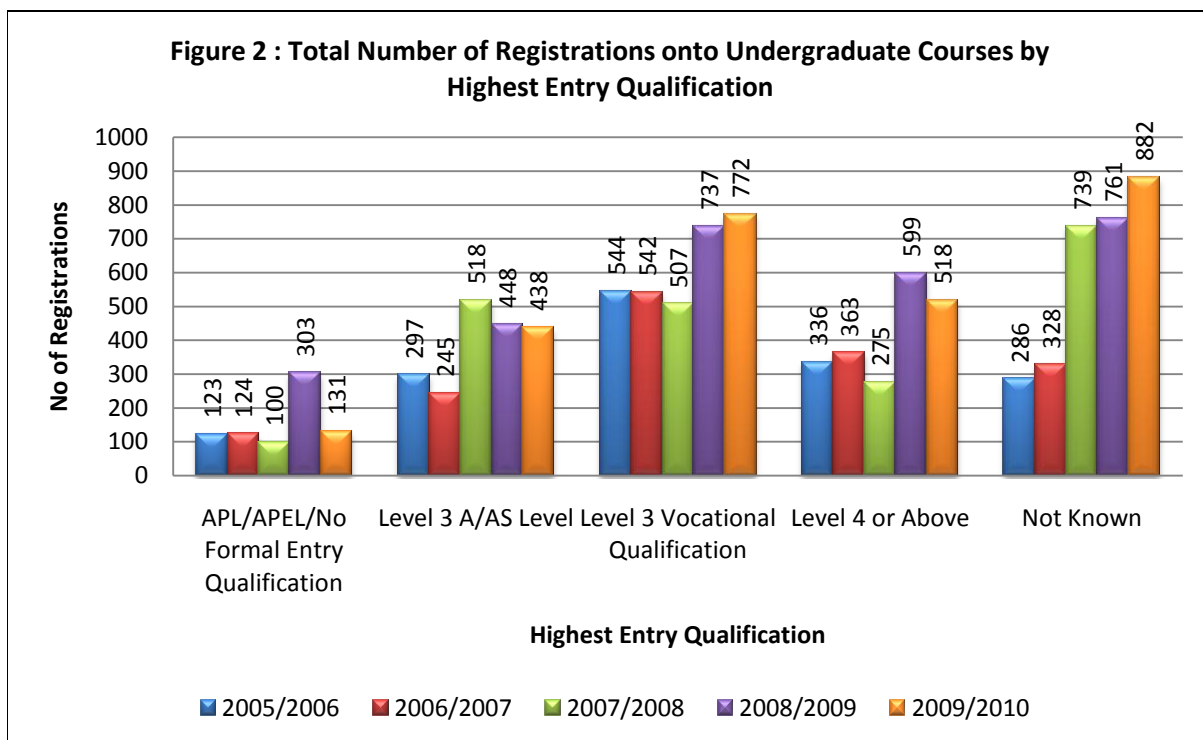


Although the overall rate of growth was 70%, the figures are inflated in 2008-09 and 2009-10 by a large Foundation Degree which boosted registrations (shown in the faded section of the charts) by 661 in 2008-09 and 428 in 2009-10. Whilst this Foundation Degree was part-funded by HWLLN and provided opportunities for a considerable number of vocational learners, the scale of this course somewhat obscures the underlying trend. Thus, if this Foundation Degree is removed from the total, then the research shows a 45% underlying increase in registrations from 2005-06 to 2009-10.

The study found that from 2005-06 to 2009-10, all participating institutions experienced an increase in registrations. University of Worcester had the greatest increase in student registrations with an additional 610 students representing a 57% increase over 5 years. There was also significant growth in two other institutions, with a 181% increase in student registrations at one FE College and 156% increase at another. However this data is based on Additional Student Numbers (ASNs) assigned to institutions rather than on the location of course delivery, thus the figures under-report the number of students for the Specialist Arts College and Further Education Colleges. This occurs where the University of Worcester validates courses in the colleges, where courses are delivered in partnership, and where courses are validated outside of the two counties.

It is notable that in the period 2005-06 to 2006-07, the number of registrations was fairly constant, with the period of greatest growth from 2007-08 to 2009-10. This reflects the time taken to establish the HWLLN and the timescale for curriculum development. Therefore, the data suggests a strong link between curriculum development activities and the number of registrations onto HE courses.

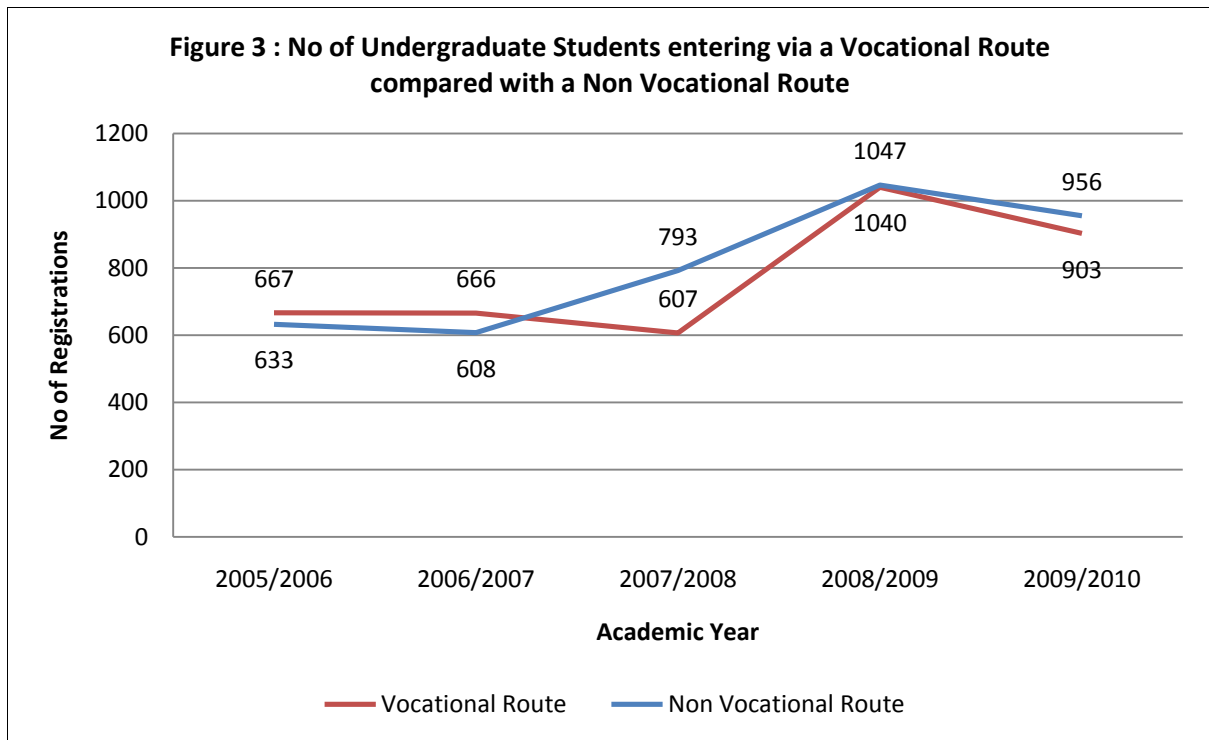
The study considered the highest entry qualifications of students registering onto UG courses in the three curriculum areas. Despite year on year variations and a high proportion of students whose entry qualifications were 'Not Known', it is clear that there has been a growth in the number of students with level 3 vocational qualifications. Over 5 years this equates to an increase of 42% (228 students). By comparison students entering with level 3 non-vocational qualifications (primarily A' levels) had increased by 47% (141 students) over the same period. It is worth noting that there had also been a 54% (182 students) increase in registrations to undergraduate courses where the student already has a level 4 qualification. Whilst commonly considered as non-vocational qualifications it seems probable that many of these students were returning to education and may have had a depth of vocational experience, or may be progressing from Foundation Degrees to Top Ups.



The growth in the number of students entering HE with vocational qualifications in part reflects national trends, but also reflects the strong linkage between vocational Level 3 and HE in this rural area. The majority of FE colleges in Herefordshire and Worcestershire have their own Higher Education provision; this is especially true in Herefordshire, where the travelling times to a Higher Education Institute can be in excess of 1 hour by car. In most cases, local Higher Education provision articulates with the Level 3 vocational provision, and in some cases it is delivered by the same teaching teams.

The provision of LLN funding to FE colleges has led to increased development of Foundation Degrees and HNDs, allowing the colleges to further enhance the progression opportunities for their vocational students. Depending on the nature of the courses, institutional strategy and the resources available, FE colleges have opted to develop validated programmes and collaborative provision. A number of FE colleges have also developed BA/BSc programmes and contribute to Masters courses in specialist areas.

A further finding was that the proportion of students following a vocational route to those following a non-vocational route has declined from 51.3% to 48.6% from 2005-06 to 2009-10. In Figure 3, student registrations on to undergraduate courses in the three curriculum areas are categorised as 'vocational route' and 'non-vocational route' by the highest qualification on entry (see appendix 3 for definitions). This excludes any students whose highest entry qualification was recorded as 'Not Known'.



The study found that the number of students entering through both routes has increased from 2005-06 to 2009-10, with a 35% increase in students following a vocational route, and a 51% increase in students following a non-vocational route. Whilst the increasing number of 'not known' qualifications makes exact conclusions impossible, it is clear that the proportion of students following the vocational and non-vocational routes has been broadly constant.

However the data does show a slight trend away from the vocational route, with a decline from 51.3% to 48.6% in the proportion of vocational to non-vocational students. This slight shift in favour of non-vocational qualifications needs to be seen in the context of the overall increase in numbers of students, and of the historic predominance of vocational qualifications within the participating institutions. It seems likely that this is indicative of increased reputation and specialisation of HE on provision at participating institutions. This analysis is supported by evidence presented later in this chapter which suggests that the proportion of students from outside of the region has increased over the period.

The findings of the study are closely related to the rural context. The region has few large employers, a large number of small and medium sized enterprises, and a predominance of semi-skilled workers (West Midlands Regional Observatory 2008). Consequently there are few apprenticeships and a large proportion of vocational education is provided through the FE colleges and the University of Worcester (HEFCE 2005). The West Midlands Regional Observatory (2008) Regional Skills Assessment Rural Profile also identifies significant skills gaps, particularly in higher level skills, and the findings of this study can be seen as evidence that the colleges are meeting this need through further developing their vocational provision.

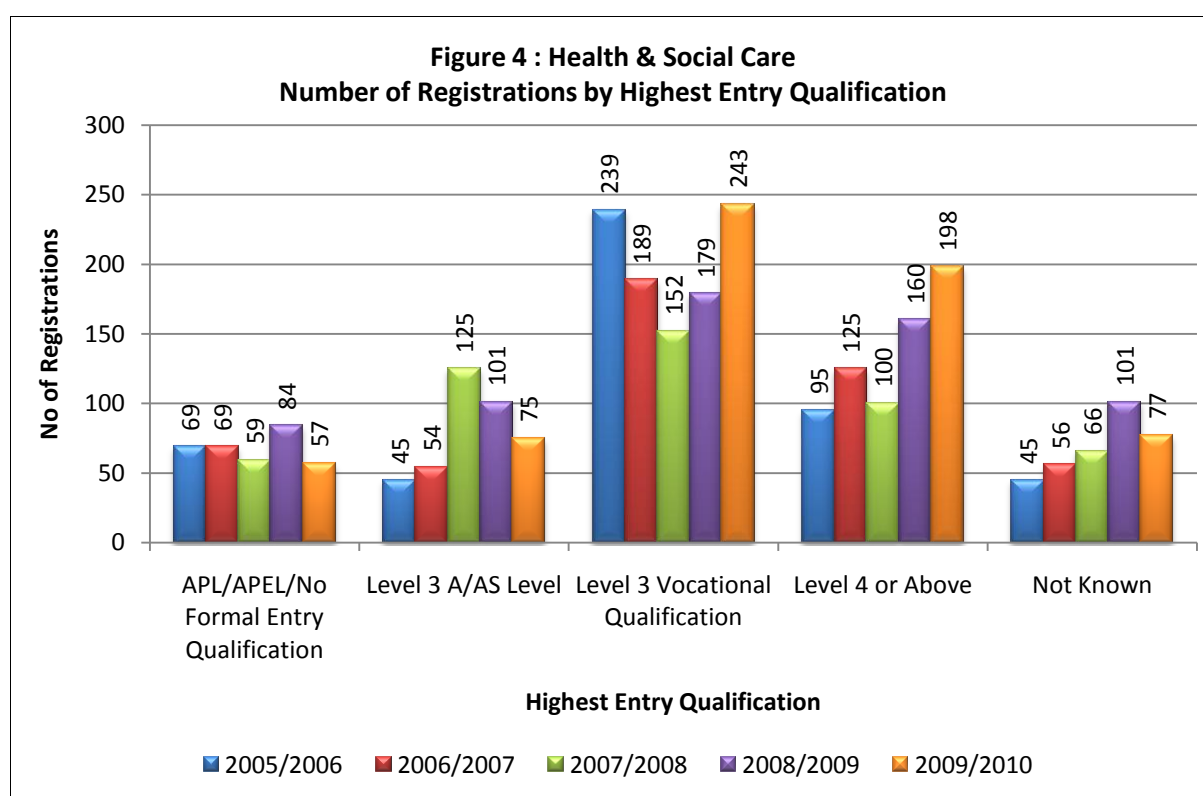
Changes in vocational learners entering higher education in three curriculum areas

The study also set out to consider the changes in the number and proportion of vocational learners entering Higher Education between 2005-06 and 2009-10 by curriculum areas. These curriculum areas relate to the work-strands within Herefordshire and Worcestershire Lifelong Learning Network (HWLLN), and are best considered as indicative of the range of provision across the region, rather than comparable to HEFCE or HESA data. However this classification allows the tracking to be used to provide evidence of the impact of curriculum development in each work-strand on the opportunities for vocational students. The three curriculum areas in question were:

- Health and social care
- Sport, tourism, heritage, culture and media
- Leadership and management

Each of these is discussed in more detail below.

Overall the study identified a 32% increase in undergraduate registrations in health and social care over the five years from 2005-06 to 2009-10, compared to the 70% increase across all three curriculum areas. In addition the research identifies a very different pattern of change in student registrations on to courses in health and social care compared to all three curriculum areas. Thus, whilst the findings from the three curriculum areas point to a 42% increase in students entering undergraduate courses with Level 3 vocational qualifications, the evidence from health and social care (Figure 4) shows an overall increase of just 2% over the five years – but within this there is a marked decline of 36% (87 students) from 2005-06 to 2007-08 and an increase of 60% (91 students) from 2007-08 to 2009-10. In contrast, the registrations of students with ‘Level 3 A/AS levels’ increased 176% (80 students) between 2005-06 and 2007-08 and then dropped by 40% (50 students) from 2007-08 to 2009-10. Interestingly the data also shows an increase of 108% (103 students) with Level 4 or above qualifications over the five years, with most of the increase between 2007-08 and 2009-10.



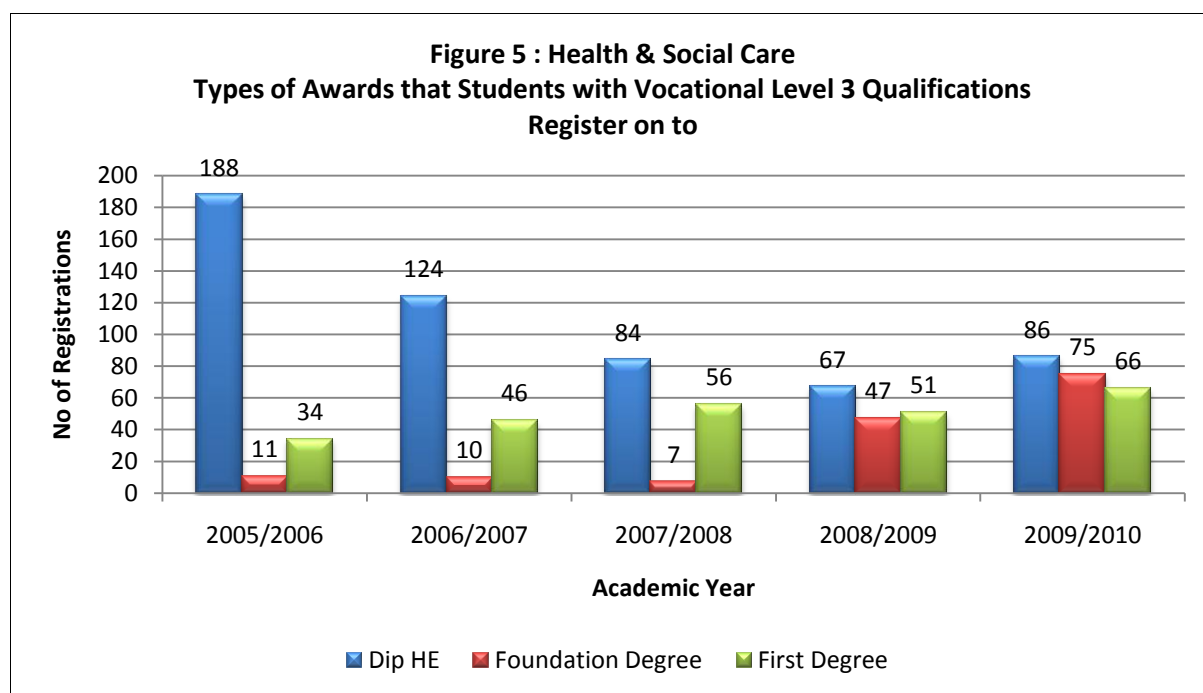
The large fluctuations in the types of qualifications held by students registering for undergraduate courses in health and social care suggest a significant change in provision or recruitment practice. When viewed as a proportion of all Level 3 qualifications, the Level 3 vocational qualifications swings from 84% to 55% and back to 76% over the five year period.

The proportional split between the Level 3 categories is as follows:

Summary of Entry Qual.	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	Grand Total
A/AS Level	16%	22%	45%	36%	24%	29%
Vocational Quals	84%	78%	55%	64%	76%	71%

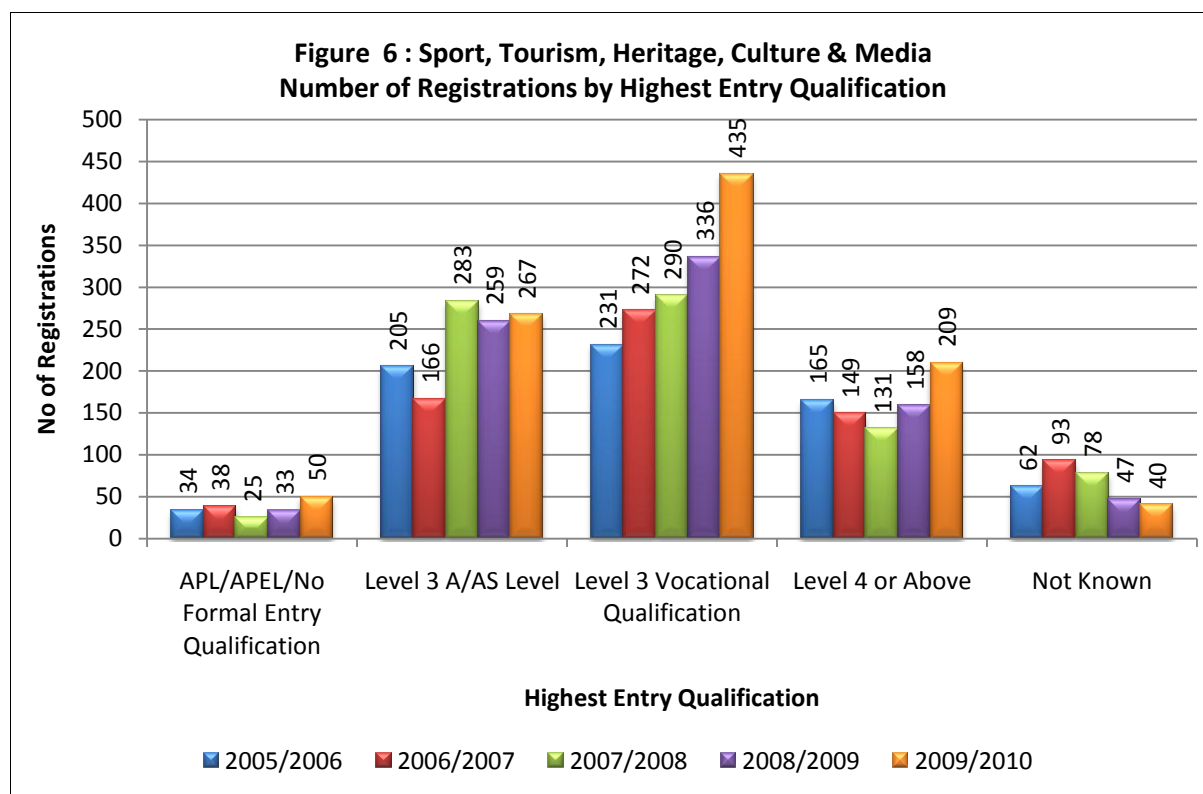
Given the large swing in these proportions, and the rapid change in student numbers it does not seem appropriate to consider the 5 year trend, and the study instead suggests that the period 2007-08 to 2009-10 is the most significant, as it coincides with new course development and reflects increasing need for degree level study in the fields of health and social care. Thus the tentative finding is that there has been a 60% growth in the number of student registrations on to undergraduate courses in health and social care with Level 3 vocational qualifications between 2007-08 and 2009-10.

Whilst the proportion of students holding vocational qualifications has swung widely over the 5 years, the data also provides evidence of a change in the types of courses that students with Level 3 vocational qualifications enrol onto (Figure 5). Thus in 2005-06, 81% of students with highest entry qualifications listed as Level 3 vocational qualifications registered on to a Dip HE, by 2007-08 this had reduced to 57% and by 2009-10 this had further reduced to 38%, with a corresponding increase in registrations to foundation degrees and first degrees



As foundation degrees and first degrees generally require higher entry grades than Dip HE, the data could indicate an increase in the level of achievement at Level 3 for students following a vocational route. However it is also possible that an increase in registrations on to foundation degrees and first degrees may reflect changes in health and social care provision, career structures in the sector and the wishes of the employers, who are involved in curriculum development. Indeed the research also shows a gentle movement away from Dip HE and onto first degree for students holding a level 3 A/AS level qualification, and a three-fold increase in registrations to first degrees by students with highest entry qualifications listed as Level 4. Consequently it seems likely that the increase in vocational students enrolling for longer courses reflects changes in provision and changes in career structure for graduates.

In relation to the sport, tourism, heritage, culture and media curriculum areas, the study found an 88% growth in students with Level 3 vocational qualifications registering for courses 2005-06 and 2009-10



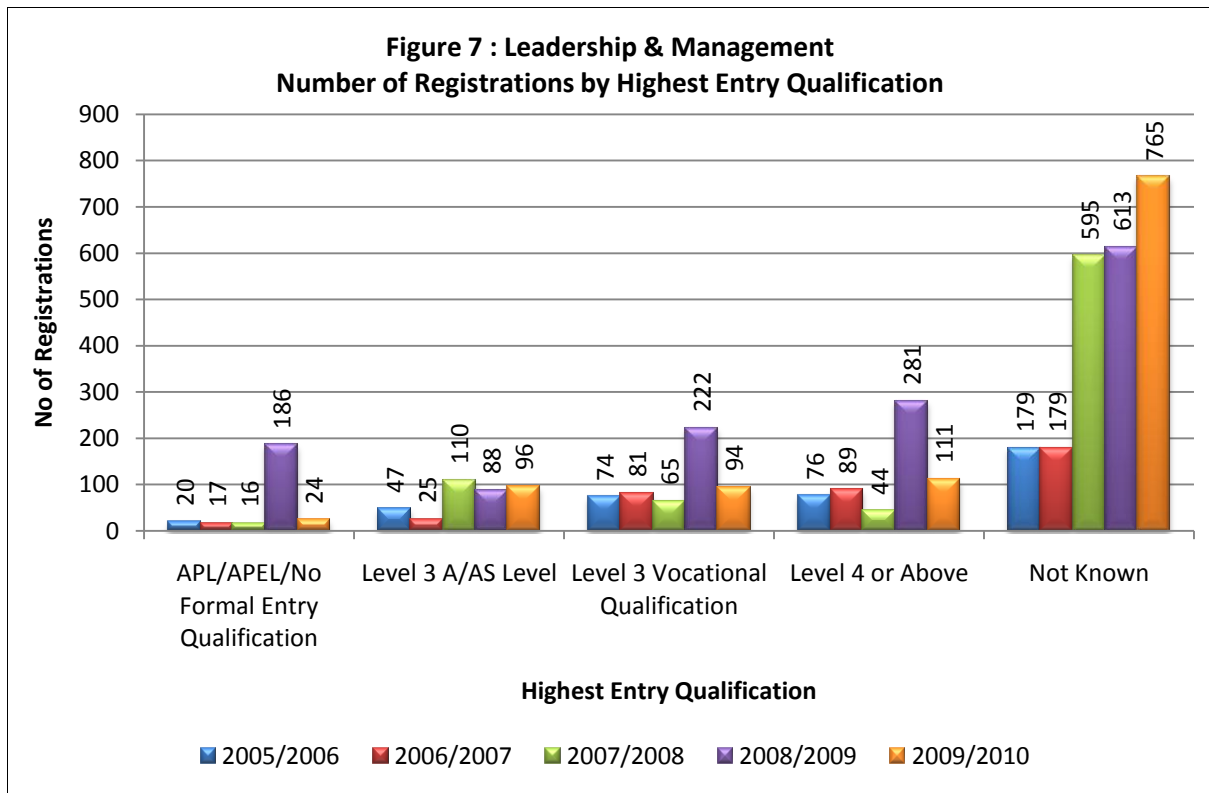
The study showed a 44% growth in the number of students registering onto undergraduate courses in this curriculum area. Within this it is clear that the category with the highest number of students entering courses in sport, tourism, heritage, culture and media each year was 'Level 3 Vocational Qualification', and that this category has increased by 88% (204 students) between 2005-06 and 2009-10. By contrast the number of students registering with 'Level 3 A/AS Level' qualifications has increased 30% (62 students) over the same period. A summary of the number and percentage increase within each category is shown below:

Summary of Entry Qualification	No Increase from 2005/06 - 2009/10	% Change from 2005/06 to 2009/10
APL/APEL/No Formal Entry Qualification	16	47%
Level 3 A/AS Level	62	30%
Level 3 Vocational Qualification	204	88%
Level 4 or Above	44	27%
Not Known	-22	-35%
Grand Total	304	44%

The number of Level 3 A/AS Level registrations stabilised over the last 3 years of the study, however the Level 3 vocational registrations continued to increase year on year. The proportional split between the Level 3 categories is as follows:

Summary of Entry Qual.	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	Grand Total
A/AS Level	47%	38%	49%	44%	38%	43%
Vocational Quals	53%	62%	51%	56%	62%	57%

The data on courses related to leadership and management is inconclusive. Whilst it is evident that there is significant growth in this curriculum area, it is difficult to assess the relevance of vocational and non-vocational qualifications, as there is a high (and increasing) proportion of students where the highest entry qualification is listed as 'not known'. In 2009-10 the data on highest entry qualifications was missing for 70% of registrations (765 students).



Whilst it is not possible to assess changes in vocational entry, it is possible to draw some tentative conclusions regarding the appropriateness of the current means of measuring entry qualifications. Two issues seem pertinent: the recording of student data on courses in this area that are not HEFCE funded, and the recording of professional qualifications against qualification frameworks.

Firstly, many of the leadership and management courses are not HEFCE funded courses and therefore highest entry qualifications are generally not recorded by the colleges. Secondly, students applying for courses in leadership and management often have a broad range of professional qualifications that do not comfortably fit into the classifications. In a separate research project funded by HWLLN (2009), the vocational qualifications in this area were mapped onto the qualification and credit framework but as yet this is not incorporated in the measurement of highest entry qualification.

There is a further issue with the data for leadership and management. The year 2008-09 shows a sudden growth of numbers. This relates to a single course where the collection of data did not include highest entry qualifications. As this course was run in conjunction with a professional institute the information supplied by students was collected in a non-standard format.

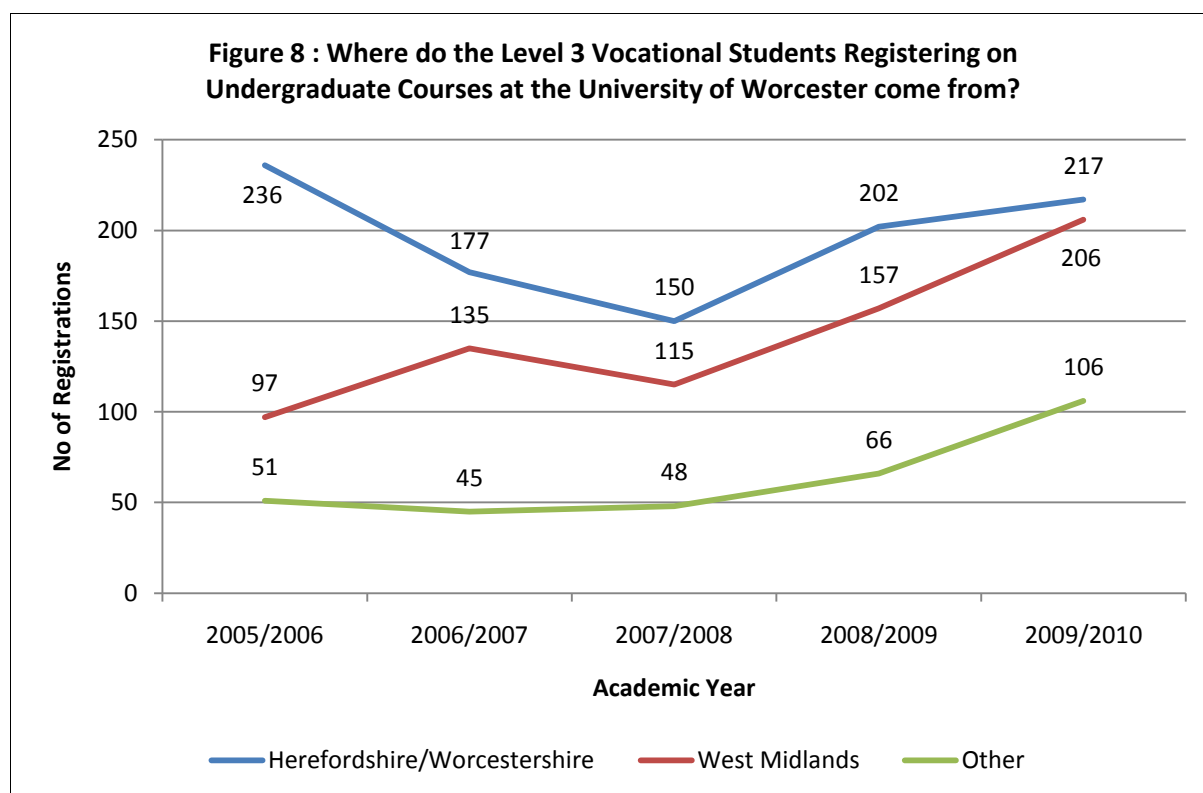
Progression of vocational learners into higher education – a case study

Due to the high level of detail within the data received from the University of Worcester, it was possible to consider the progression of learners, and particularly vocational learners, from colleges in the area to the University. The data provided information on last place of study for 6,621 students (of which 2,028 were Level 3 vocational students) over 5 academic years to identify the changing patterns of progression from FECs into HE within the 2 counties and the wider region, particularly for vocational learners over the years 2005-06 to 2009-10.

To this end, a subset of the original data was created for this case study, based on student level data on:

- Registrations on to year 1 of an undergraduate course (e.g. HND, FD, First Degree, Top Up) at the University of Worcester
- Within one of the subject areas of HWLLN's curriculum themes (H&SC, STHC&M, L&M), selected by their JACS coding (see appendix 2)

The study identified the last place of study for students registering on to undergraduate courses in all three curriculum areas. The data was then grouped into three categories (Herefordshire and Worcestershire, West Midlands and Other – see appendix 5 for a detailed classification of these categories). Any records where the regions were recorded as 'not known' were excluded from the analysis, however over the 5 year period, only 1% of the Level 3 vocational student records were classed as 'not known' (20 out of 2,028 records), so the data represents in excess of 99% of students.



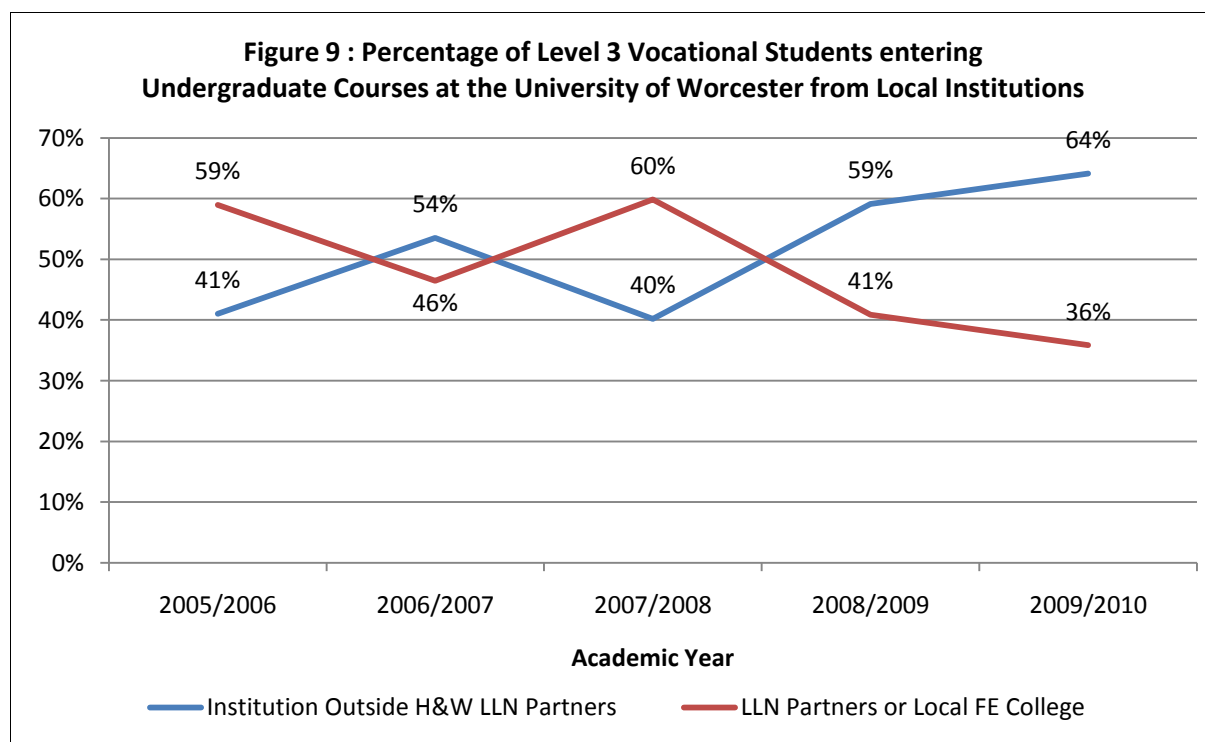
The study identified an overall 37% decline in student registrations from 384 in 2005-06 to 313 in 2007-08, but since then there has been a 69% increase in student numbers. 'West Midlands' and 'Other' categories show a gradual increase in registrations from 2005-06 to 2009-10 with the overall expansion of student registrations. The area with the highest number and percentage increase is the West Midlands at 112% (109 students), students from outside the West Midlands increased by 108% (55 students), and Herefordshire and Worcestershire show a slight decline of 8% (19 students) over the five academic years.

Whilst the numbers of students from Herefordshire and Worcestershire declined from 2005-06 to 2007-08, it has increased by 45% (67 students) between 2007-08 and 2009-10. However the proportion of the students whose last place of study was in Herefordshire and Worcestershire has declined from 61% of all registrations in 2005/06 to 41% in 2009/10. Over the same period, the proportion of students from the West Midlands has increased from 25% to 39%, and those from outside the region (or from overseas) has also increased from 13% to 20%.

The detail on the last place of study provides evidence of the relationship between local FECs and the University of Worcester, and particularly of vocational student progression. A subset was identified of students whose last place of study is recorded as a local college and whose highest entry qualification is 'Level 3 Vocational'. Local colleges were identified as HWLLN partner colleges and other FECs with partnership agreements to the University of Worcester (see appendix 6 for list of institutions).

The study identified that the number of local Level 3 vocational students progressing from local colleges in 2009/10 was 2% less than in 2005/06 but has risen in the last three years of the period, and that the proportion remains fairly high.

Figure 9 shows the proportion of students registering with a Level 3 vocational qualification as their highest entry qualification, whose last place of study was a local institution. This chart excludes those records where the previous institution was 'not known'. Over the 5 year period, 9% of records (178 out of 2,028) showed the previous institution as 'not known'.



The graph shows a high degree of variability in the proportion of vocational students progressing from local colleges, which may be a factor of the relatively small sample size (2,028 students). However the decrease in the proportion of students progressing from local colleges is largely explained by the big increase in the number of vocational students from outside the two counties, although it may also reflect the growth of HE provision in FECs over the period.

Conclusions

The tracking of student numbers across institutions is surprisingly difficult with numerous recording systems and different data sets. The issues of student confidentiality are also considerable. Despite this the participating institutions have worked hard to provide data that meets the needs of the study

and produces an overview of five years of registrations to undergraduate programmes, for which the authors are very grateful.

Such an overview can only provide a bare image of the complexity of HE in a rural area such as Herefordshire and Worcestershire. It illustrates in the most simple terms how provision and registrations have changed from 2005 to 2010. Yet such research produces more questions than it answers. What drives the increase in the numbers of vocational learners in the area? How much are vocational student choices constrained by the difficulties of living in an area of low HE provision? Or perhaps the opposite is true – that the prevalence of HE programmes taught in FECs provides clearer vocational pathways for students than might be found in an area with more choice and less clarity.

The study also suggested that the HWLLN funding for curriculum development in the last few years has increased the number of places and choices for vocational learners, and that since 2007-08 this effect has been very marked. The extent to which such increases might have occurred without this funding is unknowable. Nor is it clear whether the increased numbers of vocational learners reflects the *push* of economic imperative or the *pull* of improved educational opportunities and progression pathways. Certainly at a time when the cost of studying has increased rapidly, one could reasonably expect that there would be a reduction in student numbers, particularly in areas where the average income is low. Yet the evidence in this research appears to show an increase in the numbers of vocational students entering HE and maybe this is a reaffirmation that the value of higher level skills still exceeds the costs of studying.

Finally, the authors would like to extend their thanks to the Principals and Data Management Units at the participating colleges for their co-operation in this project over five years.

Appendices

Appendix 1 - Highest qualifications on entry:

APL/APEL/No Formal Qualification:

APL/APEL, GCSE O Level, GNVQ Level 2, NVQ Level 2, mature student with previous experience, no formal qualification, Professional Qualification

Level 3 A/AS Level:

A Level or AS Level

Level 3 Vocational Qualification:

A Level equivalent, Access to HE, Diploma in Foundation Studies, Foundation Course, GNVQ Level 3, NVQ Level 3, ONC or OND, Non Advanced Qualification

Level 4 or Above:

CertEd/DipEd, Dip HE, First Degree of UK Institution, Foundation Degree, GNVQ Level 4/5, Graduate Equivalent, Higher Degree of UK Institution, HNC or HND, NVQ Level 4/5, Other Credits from UK Institution, Overseas Graduate, PGCE, PGCert/PGDip, UG Qualification with QTS

Appendix 2 - Criteria for filtering courses into curriculum theme areas

The student data for the University of Worcester students was filtered in to curriculum themes by utilising the JACS Code which refers to the subject area of the course they are currently studying. The following JACS Codes were assigned to each curriculum theme, all other JACS Codes were excluded from this research:

Health & Social Care:

- B700 Nursing
- B900 Others in Subjects Allied to Medicine
- L500 Social Work

Leadership & Management:

- N100 Business studies
- N200 Management studies
- N400 Accounting
- N500 Marketing
- N600 Human Resource Management

Sport, Tourism, Heritage, Culture & Media:

- C600 Sports Science
- P300 Media studies
- W100 Fine Art
- W200 Design studies
- W300 Music
- W400 Drama
- W500 Dance

Appendix 3 - Classification of vocational and academic routes

The entry qualifications classified under 'Vocational Route' and 'Academic Route' are as follows:

Vocational Route: APL/APEL/No Formal Qualification, Level 3 Vocational Qualification

Academic Route: Level 3 A/AS Level, Level 4 or Above

In addition, where a student at the University of Worcester has an equivalent Vocational and A Level qualification, the vocational qualification has been recorded

Appendix 4 - Data issues relating to Health and Social Care

The UW data does not include students studying individual Health modules or the Return to Practice course

Appendix 5 - Last place studied – classification of regions

The Counties assigned to each category are as follows:

Herefordshire/Worcestershire:

Herefordshire, Worcestershire

West Midlands:

Black County, Gloucestershire, Shropshire, Staffordshire, Warwickshire and West Midlands

Other:

All other UK Counties and Overseas

Appendix 6 - Institutions included as 'LLN Partners or Local FE colleges'

The institutions included in the 'LLN Partners or Local FE College' category were:

- Gloucestershire College
- Halesowen College
- Hereford College of Arts
- Hereford Sixth Form College
- Herefordshire College of Technology
- Kidderminster College
- Ludlow College
- North East Worcestershire College
- Royal National College for the Blind
- South Worcestershire College (formerly Evesham & Malvern Hills College)
- Stourbridge College
- Warwickshire College (Persore) (formerly Persore Group of Colleges)
- Worcester College of Technology
- Worcester Sixth Form College

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