# Impact and Effectiveness of Widening Access to HE in Wales

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## *Overview of the Widening Access Database*

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# Foreword

The Wales Institute of Social and Economic Research, Data and Methods (WISERD) is currently evaluating the impact and effectiveness of Widening Access to higher education (HE) in Wales. This project is funded through the Economic and Social Research Council's (ESRC) Secondary Data Analysis Initiative (ES/K004247/1); and by the Higher Education Funding Council for Wales (HEFCW). It will be completed by December 2014.

Access to higher education has become an extremely controversial area of policy, as successive UK administrations have sought to balance increasing student fees with ensuring that HE is open to individuals from as wide a range of social backgrounds as possible. Moreover, relatively distinctive approaches have been adopted in the different devolved administrations of the UK. For example, currently, the Welsh Government has undertaken to pay the increased costs to students arising from the abolition of the fees cap. However, the evidence-base for evaluating different approaches to widening access is relatively weak. Accordingly, WISERD, the HEFCW and the Welsh Government (WG) are collaborating on this innovative research study.

The research analyses how individuals who are resident in Wales progress through secondary school, into sixth forms and further education colleges for post-16 education and on to HE. It also explores what are the key factors here in determining whether individuals progress through the education system to HE or not. What are the relative impacts of the social characteristics of individuals, their previous educational attainment and their progression through the education system? What does this imply for the effects of barriers at the point of entry to HE, such as fees levels, entry processes and so forth? Answers to these questions are known for England, but not for other parts of the UK.

The analysis is based on the innovative use of three linked sources of information, the data for each of which are collected initially for administrative purposes. These are: the National Pupil Database (NPD) for Wales; the Lifelong Learning Wales Record (LLWR); and Higher Education Statistics Agency (HESA) data. By linking these together, it is possible to trace individual trajectories through the education system to entry to HE. It is also possible to compare systematically the trajectories of those who do participate in HE with those who do not. Moreover, using sophisticated statistical techniques, it is possible to determine which are the most influential factors in shaping patterns of HE participation. Results here will be compared with those that have been produced by similar analyses in England.

A second part of the proposed study (funded by additional resources made available by the HEFCW) investigates the development of distinctive approaches to widening access to HE by successive Welsh administrations since devolution in 1999. Of key significance here is to establish the rationales that underpin the approaches adopted in Wales; and to compare these with those that have informed policy approaches in the other countries of the UK and England, in particular. In addition, the study examines the ways in which national policies have been implemented by the Welsh universities, paying special attention to the assumptions about the determinants of HE participation that are in play here. This part of the study is based on fieldwork, comprising the analysis of official and semi-official documents and interviews with politicians and senior officials responsible for widening access policies; and with the professionals inside the universities responsible for implementing these policies. The results of the research will be fed directly into the deliberations of the WG and the HEFCW on the future development of policies on widening access to HE, which will be especially intensive over the next few years. Moreover, they will also provide the basis for working with the professionals in the universities with responsibility for implementing widening access policies, to integrate the use of analyses of administrative data more firmly into their day-to-day practices.

# 1. Introduction

The quantitative strand of the project will use a linked database of school and student records that has already been prepared by the Welsh Government. This database (subsequently referred to as the Widening Access Database) is based upon four linked administrative data-sets: the National Pupil Database (NPD) for Wales (including Pupil Level Annual Schools Census data); individual learner records from the Lifelong Learning Wales Record (LLWR) for young people who are registered at post-compulsory educational institutions (not including school sixth forms); examination records for those attending sixth form from the Welsh Examinations Database (WED); and individual student records from the Higher Education Statistics Agency (HESA).

At its core, the database follows the educational trajectories of 3 cohorts of young people who were in Year 11 (the final year of compulsory schooling, referred to as Key Stage 4) during 2004/5, 2005/6 and 2006/7. The Welsh Government procured the matching of attainment data from school (NPD) and further education (LLWR) individual learner records for Wales from 2002-3 to 2008-9. In addition, these data have been matched to HE participation data (HESA) for 2007-8 and 2008-9, each with all three year-cohorts of undergraduate students included. Thus, data are available for four years of first-year entrants to HE from 2006-7 to 2009-10. Look-up tables of individual identifiers are available, permitting further linking and analysis of the data-sets. These data sources provide the basis for the analysis of individual trajectories through the compulsory education sector (from the age of 11), to post-16 education and on to HE.

The accompanying meta-data (where available) has been used to construct value and variable labels so that the meaning of various data items can be understood. Methods have also been developed to compress those data sets that provide multiple entries of data relating to a specific individual in any given year (e.g. the multiple Programmes of Learning and Learning Activities that can be recorded in LLWR for a particular person or the multiple examinations undertaken by sixth form pupils) so that any analysis can utilise individuals as the unit of analysis.

The aims of this working paper are twofold. First, the analysis aims to provide better understanding of the population(s) of interest, through a description of the methods used to link the constituent administrative data base and descriptive analysis of the derived Widening Access Database. The descriptive analysis also aims to verify the robustness of the data-sets being used in the project, and where appropriate to highlight anomalous findings that require further investigation.

Secondly, the working paper aims to serve as a reference manual for the WA database. In Wales, research access to these data sets is much less developed than it is in England, where DfES and HESA already provides access to series of linked pupil data sets for the purposes of research use[2]. These researchers have also been supported by the PLASC/NPD User's Group (PLUG) based at the Centre for Management of Public Organisations (CMPO) at Bristol University[3]. PLUG aims to promote and support the use of the National Pupil Database (NPD) in educational research through the hosting of workshops and the development of meta-data. In terms of Further Education data, once again the resources available to researchers in Wales wishing to use the LLWR data are relative limited. The guide available for LLWR[4] is aimed at learning providers to support their submission of LLWR data to the Welsh Government and is therefore not concerned with the statistical properties of the database. This is in contrast to the range of documentation available in England that are explicitly aimed at supporting research use of the equivalent Individual Learning Record[5]. Whilst the Welsh Government do use the LLWR data for the purposes of producing a range of statistical publications on learners in post-16 education and training[6], these aggregate statistics are less useful in terms of supporting research use of these datasets where researchers are particularly interested in the integrity and consistency of the data at the individual level.

This document therefore represents a first embryonic attempt to provide support for researchers wishing to use linked administrative educational data in Wales. It is envisaged that supporting research use of educational data in Wales will form an important part of the work of the Wales Administrative Data Research Centre and that this work will include the development of new linked databases and the development of meta-data and user-guides that support the needs of educational researchers.

## 2. The Three Widening Access Cohorts

As already mentioned, the Widening Access Database is based upon four linked administrative data-sets. At its core, the National Pupil Database (NPD) for Wales (including Pupil Level Annual Schools Census (PLASC) data) provides demographic information regarding the students

[2] See http://www.hesa.ac.uk/content/view/2832/209/
[3] See http://www.bristol.ac.uk/cmpo/plug/
[4] See http://wales.gov.uk/topics/educationandskills/learningproviders/datacollection/llwr09/llwrmanuals/?lang=en
[5] See https://www.gov.uk/government/publications/ilr-guides-e-learning-modules-and-templates-for-2013-to-2014
[6] See https://statswales.wales.gov.uk/Catalogue/Education-and-Skills/Post-16-Education-and-Training/Further-Education-and-Work-Based-Learning/Lifelong-Learning-Wales-Record

in the sample, for example, date of birth, gender, ethnicity, Free School Meal (FSM) status, Special Educational Needs (SEN) etc. as well as records about young people's attainment at school and the school they attended. Table 1 provides descriptive statistics for each of the NPD Year 11 cohorts, for 2005, 2006 and 2007. Collectively, we subsequently refer to these 3 groups of students as the Widening Access (WA) Cohorts. On average, there are approximately 37 thousand pupils in each cohort. As would be expected, it can be seen that there is a relatively even gender split. Those pupils classified as SEN make up 16% across all cohorts. It is noted that more detailed information on the nature of SEN is available in the database.

Young people receiving free school meals (FSM) constitute 14% of the student population, across all cohorts. There is a noticeable fall in the number of pupils receiving FSM between cohort 1 and 2 (and 3 to a lesser extent). It is noted that this pattern is consistent with published estimates which reveal that the proportion of pupils who were in receipt of FSM fell steadily during the last decade up until the onset of the economic crisis during 2008[7]. The WA database also contains information about the FSM status of pupils during Year 10, enabling information about the dynamic characteristics of FSM entitlement to be derived where information about that pupil is held on the NPD during both Year 10 and Year 11. This data has been used to identify those pupils who received FSM in both Year 10 and Year 11 (referred to as 'persistent FSM'), those pupils who received FSM during one of those years (referred to as 'partial FSM') and those pupils who were not in receipt of FSM during either year. It is noted that among those pupils in receipt of FSM, a majority (72%) were in receipt of FSM during both years.

The base of Table 1 provides information on the GCSE attainment of pupils, expressed in terms of their GCSE points. This figure refers to all GCSEs (allocating 10 points for an A, 9 points for a B and so on) and is therefore not consistent with the capped points score relating to the 8 best GCSEs and which forms an important component of the publication of examination statistics by the Welsh Government[8]. It can be seen that approximately 1 in 10 pupils achieve less than 10 GCSE points. However, it is noted that there are substantially more (almost double) students with 0 GCSE points in 2005, than in the latter two cohorts, suggesting that there may be a discontinuity in the data between 2005 and 2006. The reasons for this are not clear and could, for example, relate to the treatment of missing data in the database at this time.

[7] See https://statswales.wales.gov.uk/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census/Pupil-Level-Annual-School-Census/Provision-of-Meals-and-Milk/PupilsEligibleForFreeSchoolMeals-by-LocalAuthorityRegion-Year

[8] See http://wales.gov.uk/statistics-and-research/examination-results/?lang=en

**Table 1: Overview of the Widening Access Cohorts**

| | NPS Year 11 Cohort | | | |
|---|---|---|---|---|
| | **2005** | **2006** | **2007** | **All** |
| **Gender** | | | | |
| Male | 19,038 | 18,395 | 18,562 | 55,995 |
| Female | 18,333 | 17,971 | 18,236 | 54,540 |
| | | | | |
| **Free School Meals** | | | | |
| No | 31,629 | 31,512 | 31,854 | 94,995 |
| Yes | 5,742 | 4,854 | 4,944 | 15,540 |
| | | | | |
| **Free School Meal Dynamics** | | | | |
| No FSM | 30,204 | 29,878 | 30,647 | 90,729 |
| Partial FSM | 1,672 | 1,939 | 1,512 | 5,123 |
| Persistent FSM | 5,075 | 4,288 | 4,306 | 13,669 |
| Not determined | 420 | 261 | 333 | 1,014 |
| | | | | |
| **Special Educational Needs** | | | | |
| No | 31,605 | 30,787 | 30,925 | 93,317 |
| Yes | 5,766 | 5,579 | 5,873 | 17,218 |
| | | | | |
| **GCSE Attainment** | | | | |
| 0 points | 2,929 | 1,316 | 1,199 | 5,444 |
| 1-10 points | 2,578 | 2,411 | 2,546 | 7,535 |
| 11-20 points | 2,882 | 2,825 | 2,788 | 8,495 |
| 21-30 points | 3,909 | 3,853 | 3,884 | 11,646 |
| 31-40 points | 5,022 | 5,153 | 5,208 | 15,383 |
| 41-50 points | 6,516 | 6,609 | 6,786 | 19,911 |
| 51-60 points | 6,315 | 6,543 | 6,473 | 19,331 |
| 61-70 points | 4,304 | 4,397 | 4,523 | 13,224 |
| 71+ points | 2,916 | 3,259 | 3,391 | 9,566 |
| | | | | |
| Total | 37,371 | 36,366 | 36,798 | 110,535 |

# 3. Understanding the Transition to From School to Further Education

There is no single unique identification number within these databases that facilitates the routine linking of information between these sources. To support the preparation of the WA Database, the WG procured the linking of information held on the respective administrative databases. The linking exercise utilised the personal information contained within these databases, such as name, gender, address and date of birth. Any such linking exercise will be prone to error and an important part of constructing the WA database was examining the validity of the matches made.

In this section our attention turns first to the nature of the links that were made between the NPD and LLWR. A lookup table was provided that matched NPD pupil id numbers to LLWR learner id numbers. This file contained links between 195 thousand pairs of id numbers. The first issue to address is that of non-unique matches; i.e. those cases where the same NPD pupil is linked to multiple LLWR learner id numbers. In such cases, it is not clear which LLWR learner record is the correct match or whether they are both correct matches and that a learner in LLWR has been incorrectly allocated multiple LLWR learner id numbers (the LLWR learner id number should uniquely identify individuals within that database). Examination of the data revealed that approximately 5,700 NPD pupil id numbers had been allocated to multiple LLWR learner ids; accounting for 2.8% of all matches in the original look-up table. In these cases, the first match was 'tagged' and retained for the purposes of constructing the linked database. Subsequent matches related to that pupil id were discarded. It is noted that the 3 WA cohorts account for approximately 110 thousand pupils and that the NPD-LLWR matching exercise procured by the Welsh Government extended beyond the coverage of the WA database. Therefore, not all of the disregarded 'non-tagged' matches would necessarily relate to pupils from the WA cohorts.

Following the removal of non-unique matches, Table 2 examines the number of Year 11 pupils in the WA database for whom a link to the LLWR database was established. For the purpose of constructing the WA Database, LLWR data was supplied covering the period 2003/4 to 2009/10. It can be seen in Table 2 that among each of the 3 WA cohorts, there are a small number of Year 11 pupils where a link has been to a learner id in the LLWR database but for whom no actual data on their learning activities is available (we refer to this group as appearing in the 'LLWR Look-up Only'). It can be seen that the numbers of such pupils increase among the later cohorts. This relates to the protracted nature of entry into FE and that the linking exercise procured by WG probably identified some pupils from the 3 WA cohorts who only entered Further Education after 2009/10. Given that the emphasis of this research programme is to examine participation of the WA cohorts in Higher Education, the benefits of requesting further cohorts of LLWR data would have been limited. In the construction of the WA database, the practical implication of this is that those pupils who appear in the LLWR Lookup but for whom no LLWR data is available are assumed not to have entered Further Education.

**Table 2: Availability of LLWR Data for the WA Cohorts**

| NPD Cohort Year 11 Cohort | Only in PLASC | In LLWR Data | In LLWR Lookup Only | Total |
|---|---|---|---|---|
| 2005 | 16,981 | 20,050 | 340 | 37,371 |
| 2006 | 14,988 | 20,878 | 500 | 36,366 |
| 2007 | 15,692 | 20,414 | 692 | 36,798 |
| Total | 47,661 | 61,342 | 1,532 | 110,535 |

The often protracted nature of entry in to Further Education (FE) following the completion of compulsory education is highlighted in Table 3. It is noted that this table only refers to transitions to FE only (i.e. it excludes those who enter Sixth Form directly). For each of the NPD cohorts (2004/05 – cohort 1, 2005/06 – cohort 2 and 2006/07 – cohort 3) an indicator is derived which identifies the year during which the student first appeared in the LLWR data, i.e. when they first entered an FE institution. Among each of the cohorts, approximately 80% appear in the LLWR data during the year following their completion of Year 11. This would be what we might term as the 'normal' or 'conventional' pathway (i.e. making a linear transition from compulsory schooling on to post-16 education within an FE college). The second largest group of students refer to those who appear in LLWR after a gap of 1 year following their completion of compulsory education. Within each cohort, this group accounts for approximately 12% of entrants to FE. There could be a variety of reasons for this gap in participation in education or training. This group may include students who have had to re-sit exams, those who have started at a school Sixth Form but who decided to transfer to FE after their first year, or those who have temporarily gone into employment, but returned to education later. Although declining in size, it can be seen that several hundred students in each cohort only appear in FE some 4 years following their completion of compulsory education.

For ease of exposition, the top panel of Table 3 only provided information on those pupils who entered FE following their completion of compulsory education. The lower panel of Table 3 highlights the presence of second and more unusual group of students who appear in the LLWR data *before* they have completed Year 11. Some of these cases could reflect errors in the administrative data or inaccuracies in the look-up tables developed for the study. However, it will also represent young people pursuing less conventional trajectories. For example, the 14-19 Learning Pathways aims to break down a number of 'perceived artificial barriers to curriculum entitlement' to meet the needs of learning in a new century. These barriers take a number of

forms and include those that exist between vocational and academic pathways; between schools and employers; between stages at which qualifications and exams are conventionally taken; between activities in school and out of school hours and between providers themselves[9]. Such moves have resulted in a small proportion of young people engaging in FE before they would have traditionally done so in the past. A majority of these pupils appear in LLWR during the same year as their final year of schooling. Further examination of the data reveals that of the 9,403 pupils who entered FE prior to completion of compulsory schooling over 70% are taking Entry Level or Level 1 qualifications. Only 435 of pupils appearing in FE prior to their completion of compulsory education do not appear in FE during the year following Year 11. For the purposes of constructing the WA database, we take the activity being undertaken by students immediately following Year 11 as their first FE 'entry activity'. This activity could simply be a continuation of their original entry activity that commenced prior to or during Year 11.

**Table 3: The Timing of Entry into Further Education**

| | Year first observed in LLWR | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Entry Post Compulsory Education** | | | | | | | | |
| | 2003/4 | 2004/5 | 2005/6 | 2006/7 | 2007/8 | 2008/9 | 2009/10 | All |
| Year 11 Cohort | | | | | | | | |
| 2004/5 | 0 | 0 | 15,593 | 2,369 | 1,135 | 506 | 332 | 19,935 |
| 2005/6 | 0 | 0 | 0 | 16,531 | 2,426 | 1,172 | 573 | 20,702 |
| 2006/7 | 0 | 0 | 0 | 0 | 16,348 | 2,596 | 1,326 | 20,270 |
| Total | 0 | 0 | 15,593 | 18,900 | 19,909 | 4,274 | 2,231 | 60,907 |
| **Entry Pre Compulsory Education** | | | | | | | | |
| | 2003/4 | 2004/5 | 2005/6 | 2006/7 | 2007/8 | 2008/9 | 2009/10 | All |
| Year 11 Cohort | | | | | | | | |
| 2004/5 | 950 | 1,947 | 0 | 0 | 0 | 0 | 0 | 2,897 |
| 2005/6 | 218 | 924 | 2,607 | 0 | 0 | 0 | 0 | 3,749 |
| 2006/7 | 72 | 165 | 1,009 | 1,511 | 0 | 0 | 0 | 2,757 |
| Total | 1,240 | 3,036 | 3,616 | 1,511 | 0 | 0 | 0 | 9,403 |

## 4. Conceptualising Participation in Post Compulsory Education

The previous section outlined the complexities associated with the dynamics of entry in to Further Education. Attendance at FE colleges however only represents part of the educational

[9] see: http://www.wlga.gov.uk/14-19-learning-pathways

and training provision available to students following their completion of compulsory education. To provide a comprehensive picture of the experiences of the 3 WA cohorts, it is also necessary to include those students who attended 6th form. Those pupils staying on at secondary school with an attached Sixth form typically study for two years, referred to as Years 12 (Lower Sixth) and 13 (Upper Sixth). Data on participation at Sixth Form is extracted from the Welsh Examinations Database (WED). WED provides a detailed account of the examinations taken by students and the results achieved. Whilst information is recorded regarding the years in which particular exams were undertaken, WED does not record the date on which students entered Sixth Form. For the purpose of constructing the WA database, it is assumed that all transition to sixth form will take place immediately following the completion of Year 11.

Examination of both LLWR and WED data reveals that students can be enrolled within a variety of learning activities. Within Sixth Forms, students predominantly undertake Level 3 qualifications; a majority of which are AS/A levels. Nonetheless, even within Sixth Form environments, the WED data reveals that many students are also engaged in vocational activities such as BTECs, NVQs or Key Skills Qualifications. Another group among those attending Sixth Form are those who are undertaking GCSEs. In over 80% of cases, these students are not undertaking any other assessments suggesting that they are attending solely to re-sit GCSE examinations, possibly in the absence of further tuition. Finally, it is acknowledged that given the emphasis upon WED on recording information in examinations, this data will not capture the activities of students who attended Sixth Form but who did not undertake any examinations. The size of the Sixth Form population may therefore be under-estimated.

Compared to WED, the contents of the LLWR database are far more complex. The contents of the LLWR database are outlined in Annex 1. Individuals within LLWR can be registered in multiple Learning Programmes (25% are enrolled in 2 or more Learning Programmes) with multiple Learning Providers (12% are enrolled with more than 1 provider). Learning Programmes are themselves comprised of multiple Learning Activities. Whilst the Learning Programme will be associated within an ultimate learning objective (e.g. the award of an NVQ Level 3), the activities undertaken as part of that programme may be undertaken at a variety of levels with activities associated with varying levels of attainment often being undertaken simultaneously. Within LLWR, during any given year almost 30% of learners have more than 21 records related to their learning activities. Abstracting from Key Skills qualifications, this figure declines to 12% (see Annex 1).

Table 4 shows how the data in LLWR and WED have been synthesised to produce a typology of the activities being undertaken by the three WA cohorts following Year 11. Two separate typologies are derived relating to participation in FE and participation in Sixth form. A number of assumptions are made in developing these.

- Firstly, the typology is based on the observed activities of WA cohorts within a period of 3 years following their completion of compulsory education. It is noted that distribution of WA cohorts within the FE typology will differ depending upon the chosen elapsed time. For example taking a longer perspective leads to a reduction in the number of pupils who are observed to have never entered FE. Taking a shorter perspective reduces the numbers doing A-levels at both Sixth Form and FE as re-sits are less likely to appear in FE. The Sixth Formers are all assumed to enter immediately following the completion of compulsory education. Whilst they are therefore not directly affected by the selection of the time period over which transitions are monitored, the size of this group does decline as an increasing number of Sixth Form students are also observed as attending FE.
- Qualification levels are based on the maximum aims during the year of entry to FE or Sixth Form. Due to the relatively narrow range of qualification levels undertaken by Sixth Form students, all vocational qualifications are allocated to a single group (Sixth Form Vocational).
- Reflecting the wider interests of the project, students identified as undertaking AS/A-levels (the main route to HE) are classified as such, even if they are undertaking other Level 3 or Level 4 qualifications. Likewise (although of less significance in terms of numbers), those taking GCSEs are identified as such even if they are undertaking other Level 2 qualifications (as noted above, over 80% of students registered for GCSEs at FE or Sixth Form do not undertake any other qualifications.

The FE Summary and Sixth Form Summary typology are then amalgamated to form a Combined Summary shown in the bottom panel of Table 4. The main effect of the combined typology is the development of two additional categories. The first relates to those students who have been observed as having undertaken AS/A-levels in both Sixth Form and FE (possibly at the same time to gain a wider of choice of subjects or as a result of entering FE after Sixth Form to re-sit exams). The second category relates to students observed as having undertaken AS/A-levels within a Sixth Form and Vocational qualifications within FE (whether at the same time or sequentially). Combining data from LLRW and WED reveals that during the first 3 years following compulsory education, 19% of the WA cohorts do not attend either a Sixth Form or an

FE college. The largest single group relates to those students doing AS/A-levels at Sixth Form (26%). Overall, approximately 40% of the WA cohorts are observed as having taken AS/A-levels during the 3 year period following Year 11. In terms of vocational qualifications, 16% of the WA cohorts are observed entering FE colleges to undertake Level 2 qualifications.

**Table 4: Participation in Post Compulsory Education**

| | 2005 | 2006 | 2007 | Total |
|---|---|---|---|---|
| **FE Summary** | | | | |
| Not observed in FE | 18274 | 16237 | 16528 | 51039 |
| FE A/AS Levels (Level 3) | 3898 | 3995 | 4152 | 12045 |
| FE Level 3/4 Other | 4095 | 4627 | 4713 | 13435 |
| FE GCSEs (Level 2) | 436 | 377 | 383 | 1196 |
| FE Level 2 other | 6701 | 6751 | 6758 | 20210 |
| FE Level 1 | 3386 | 3597 | 3829 | 10812 |
| FE Entry Level | 405 | 574 | 379 | 1358 |
| FE Level Unknown | 176 | 208 | 56 | 440 |
| | | | | |
| **Sixth Form Summary** | | | | |
| Not observed in 6th Form | 24,385 | 23,374 | 22,977 | 70,736 |
| 6th Form A/AS Levels - | 12,008 | 12,142 | 12,567 | 36,717 |
| 6th Form Vocational | 343 | 294 | 583 | 1,220 |
| 6th Form GCSE | 562 | 477 | 484 | 1,523 |
| 6th Form other | 73 | 79 | 187 | 339 |
| | | | | |
| **Combined Summary** | | | | |
| Not observed in 6th Form/FE | 8,516 | 6,338 | 6,056 | 20,910 |
| 6th Form A levels | 9,378 | 9,562 | 9,873 | 28,813 |
| FE A levels | 3,081 | 3,190 | 3,322 | 9,593 |
| A levels - both | 758 | 774 | 771 | 2,303 |
| 6th Form A-levels + FE Vocational | 1,045 | 936 | 957 | 2,938 |
| 6th Form Vocational | 171 | 155 | 398 | 724 |
| FE Level 3/4 Other | 3,183 | 3,647 | 3,599 | 10,429 |
| FE Level 2 | 5,847 | 5,952 | 5,902 | 17,701 |
| FE Level 1 | 2,988 | 3,282 | 3,482 | 9,752 |
| FE Entry Level | 339 | 510 | 324 | 1,173 |
| GCSEs – either settings | 530 | 478 | 475 | 1,483 |
| Other Vocational Combination | 1,535 | 1,542 | 1,639 | 4,716 |
| | | | | |
| Total | 37,371 | 36,366 | 36,798 | 110,535 |

Table 5 shows how the characteristics of the 3 WA Cohorts relate to their subsequent participation in post-compulsory education. It can be seen that Females are over-represented amongst those who are doing AS/A levels at both Sixth Form, and within FE colleges. Making up

only 49% of the population as a whole, they constitute 54% of the population doing AS/A levels at Sixth Form and 58% of the population doing AS/A-levels at FE colleges. In contrast, they are under-represented amongst the populations doing Entry Level or Level 1 qualifications within FE settings. Those in receipt of FSM or classified as SEN are over-represented in the 'Not observed in Sixth Form/FE' group, as well as among those entering FE to study for lower level qualifications (Level 2 and below), but are under-represented amongst the groups doing AS/A levels. That said, those who are in receipt of FSM are twice as likely to undertake their A levels at an FE institution as at a Sixth Form. As might be expected, those doing A levels at Sixth Forms have higher than average GCSE scores (61 points in Sixth Form, 57 points in FE) compared with the overall average (42 points), whereas those doing lower level qualifications have, on average, lower GCSE scores.

**Table 5: Personal Characteristics and Participation in Post Compulsory Education**

| | % Female | % FSM | % SEN | GCSE Points |
|---|---|---|---|---|
| **Combined Summary** | | | | |
| Not observed in 6th Form/FE | 43.9 | 21.8 | 26.5 | 25.8 |
| 6th Form A levels | 54.2 | 4.7 | 3.8 | 61.4 |
| FE A levels | 58.4 | 8.5 | 5.1 | 56.5 |
| A levels - both | 61.4 | 9.7 | 4.7 | 56.8 |
| 6th Form A-levels + FE Vocational | 56.1 | 8.6 | 8.0 | 50.7 |
| 6th Form Vocational | 43.4 | 19.6 | 19.9 | 31.8 |
| FE Level 3/4 Other | 53.5 | 10.7 | 9.7 | 44.7 |
| FE Level 2 | 45.9 | 18.5 | 22.6 | 29.7 |
| FE Level 1 | 35.1 | 25.8 | 32.2 | 21.4 |
| FE Entry Level | 40.4 | 31.2 | 46.6 | 15.0 |
| GCSEs - both settings | 52.1 | 18.1 | 17.4 | 29.2 |
| Other Vocational Combination | 50.4 | 13.7 | 13.7 | 42.4 |
| Total | 49.3 | 14.1 | 15.6 | 41.7 |

## 5. Attainment within FE and Sixth Form

As well qualification aims on entry to Further Education, the LLWR database contains detailed information on qualification awards received by those attending FE. It is therefore possible to compare the FE entry aim with the FE award data for the 3 cohorts. Table 6 presents information for all those attending FE where both FE entry aim and award data is available. For each entry aim, it can be seen that a majority of learners attain the qualification level that is associated with their entry aim. This is particularly evident at Level 3, where it is noted that approximately half of this group consist of students attending FE for the purpose of undertaking AS/A Levels.

However, it can be seen that for those doing lower level qualifications, there are relatively high proportions of young people progressing on to do qualifications at a level that is higher than that associated with their entry aim. For example, among those who entered to do a Level 1 qualification, 49% are recorded as having been awarded a qualification at a higher level than this. Given the relatively protracted nature of entry into FE and the relatively organic way in which the attainment of qualifications whilst attending FE can develop, the WA database is likely to provide a truncated view of the qualifications ultimately obtained at FE, particularly among the 2006/7 cohort.

**Table 6: Attainment within Further Education**

| | Award Level | | | | | | |
|---|---|---|---|---|---|---|---|
| | Unknown | Entry Level | Level 1 | Level 2 | Level 3 | Level 4+ | Total |
| **Entry Aim** | | | | | | | |
| Unknown | 8 | 24 | 135 | 121 | 67 | 1 | 356 |
| Entry Level | 4 | 244 | 508 | 304 | 107 | 0 | 1,167 |
| Level 1 | 9 | 154 | 4,527 | 3,356 | 1,190 | 7 | 9,243 |
| Level 2 | 31 | 50 | 1,392 | 10,204 | 6,090 | 55 | 17,822 |
| Level 3 | 9 | 5 | 223 | 1,541 | 17,286 | 97 | 19,161 |
| Level 4+ | 0 | 0 | 21 | 10 | 255 | 22 | 308 |
| Total | 61 | 477 | 6,806 | 15,536 | 24,995 | 182 | 48,057 |

Given that the primary interest of the research programme relates to entry in to Higher Education, we now focus on developing a measure of A-level attainment. Both the WED and LLWR databases include detailed information on the AS and A-levels achieved by students. By interrogating these data sets, it is possible to develop a picture of how students progress from AS to A-levels. It is also possible to observe students who have re-sat their A-levels. Within each database it is therefore possible to select the exam outcome that relates to the highest level of achievement for that subject so as to avoid `double counting' the same qualification and over inflating estimated levels of attainment at A-level. It is not possible however to avoid double counting A-levels where the same subject has been studied within both a Sixth Form and FE setting, for example as a result of undertaking re-sits within an FE setting. This is due to the different recording structures used for qualifications. However, it is acknowledged that this group is relatively small in comparison to the numbers of students studying for A-levels in solely a Sixth Form or FE setting, accounting for approximately 5% of all students who are observed to have undertaken A-levels. In terms of allocating points to A-level grades, we follow the

convention utilised in the WED[10]. It is noted that this schema is not the same as that used to calculate UCAS points. The schema also applies to those students taking Advanced Vocational Certificates of Education (AVCEs) and is also adapted to cover those students undertaking Double Awards.

Table 7 presents information on average A-level attainment for a) all members of the WA cohorts and b) among those pupils who went on to study A-levels. Differences between population sub-groups for the first measure of attainment therefore reflect both a) varying levels of participation in A-levels and b) differences in the levels of academic achievement among those undertaking A-levels. Differences between population sub-groups for the second of these 2 measures will only reflect levels of achievement among those who take A-level examinations. It can be seen that levels of attainment are higher among female students, those not in receipt of FSM and those students who were not diagnosed as having SEN during Year 11. The base of Table 7 also reveals a clear gradient in A-level attainment according to levels of attainment at GCSE. These differences are observed across each of the 2 measures of attainment, indicating that these characteristics relate to both the decision to undertake A-levels and attainment levels among those undertaking these qualifications.

Given the different characteristics exhibited by students undertaking A-levels within Sixth Form settings compared to FE colleges, it is also of interest to compare levels of attainment between students in these different types of setting. Analysis presented in Table 8 reveals that among those students undertaking A-levels, average points achieved among those based at Sixth Forms (560) are higher than those based at FE College (393). However, this differential is largely driven by the higher number of A-levels undertaken by students at Sixth Form colleges (2.6) compared to those in FE Colleges (1.9). The average points achieved per A-level sat is therefore similar within both settings (218 points compared to 210 points respectively). The overall patterns that exist among population sub-groups described in Table 7 appear to persist within both Sixth Form and FE settings. However, it is interesting to note that the inequalities in overall attainment levels that exist between population sub-groups appear to be wider in FE settings than in Sixth Forms. For example, within Sixth Form settings, levels of attainment among non-SEN pupils are estimated to be 23% higher than SEN pupils. This is compared to a differential of 45% between these groups of A-level students in FE colleges. However, these differentials appear to be driven by wider differences in the number of A-levels undertaken by different population subgroups as opposed to differences in levels of attainment per A-level sat. After taking account

[10] Grade A*=300 points; A=270 points; B=240 points; C=210 points; D=180 points; E=150 points, U=0 points

of the number of A-levels sat, the differentials between SEN and non-SEN pupils fall to just 8% and 10% in Sixth Forms and FE colleges respectively.

**Table 7: Average Levels of A-Level Attainment**

| | All | | | | Those with A-Levels | | | |
|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | Total | 2005 | 2006 | 2007 | Total |
| **Gender** | | | | | | | | |
| Male | 162 | 168 | 180 | 170 | 562 | 566 | 579 | 569 |
| Female | 222 | 240 | 247 | 236 | 597 | 606 | 605 | 603 |
| | | | | | | | | |
| **Free School Meals** | | | | | | | | |
| No | 217 | 225 | 235 | 226 | 588 | 593 | 599 | 593 |
| Yes | 55 | 62 | 71 | 62 | 473 | 495 | 504 | 491 |
| | | | | | | | | |
| **Free School Meal Dynamics** | | | | | | | | |
| No FSM | 224 | 234 | 241 | 233 | 589 | 595 | 600 | 595 |
| Partial FSM | 55 | 66 | 72 | 64 | 463 | 508 | 523 | 499 |
| Persistent FSM | 55 | 61 | 71 | 62 | 472 | 492 | 503 | 489 |
| Not determined | 102 | 93 | 139 | 112 | 579 | 530 | 603 | 577 |
| | | | | | | | | |
| **Special Educational Needs** | | | | | | | | |
| No | 220 | 232 | 244 | 232 | 585 | 593 | 598 | 592 |
| Yes | 37 | 47 | 49 | 44 | 475 | 488 | 501 | 489 |
| | | | | | | | | |
| **GCSE points** | | | | | | | | |
| 0-50 points | 40 | 39 | 45 | 41 | 382 | 374 | 394 | 384 |
| 51-55 points | 250 | 244 | 258 | 251 | 484 | 495 | 487 | 488 |
| 56-60 points | 369 | 365 | 382 | 372 | 550 | 551 | 561 | 554 |
| 61-65 points | 479 | 480 | 480 | 479 | 612 | 617 | 618 | 616 |
| 66-70 points | 569 | 575 | 582 | 576 | 672 | 672 | 680 | 675 |
| 71-75 points | 658 | 635 | 659 | 650 | 733 | 719 | 726 | 726 |
| 76/max points | 749 | 744 | 755 | 750 | 816 | 813 | 819 | 816 |
| | | | | | | | | |
| Total | 192 | 204 | 213 | 203 | 581 | 589 | 594 | 588 |

**Table 8: Comparing A-level Attainment within Sixth Forms and FE Colleges**

| | Sixth Form | FE College | Total | Sixth Form | FE College | Total |
|---|---|---|---|---|---|---|
| **Gender** | | | | | | |
| Male | 567 | 404 | 527 | 2.5 | 1.9 | 2.4 |
| Female | 415 | 280 | 364 | 2.6 | 1.9 | 2.4 |
| | | | | | | |
| **Free School Meals** | | | | | | |
| No | 567 | 404 | 527 | 2.6 | 1.9 | 2.4 |
| Yes | 415 | 280 | 364 | 2.1 | 1.4 | 1.8 |
| | | | | | | |
| **Free School Meal Dynamics** | | | | | | |
| No FSM | 568 | 406 | 529 | 2.6 | 1.9 | 2.4 |
| Partial FSM | 433 | 285 | 375 | 2.1 | 1.4 | 1.9 |
| Persistent FSM | 412 | 287 | 366 | 2.1 | 1.4 | 1.8 |
| Not determined | 526 | 296 | 471 | 2.4 | 1.6 | 2.2 |
| | | | | | | |
| **Special Educational Needs** | | | | | | |
| No | 564 | 400 | 523 | 2.6 | 1.9 | 2.4 |
| Yes | 459 | 276 | 402 | 2.3 | 1.4 | 2.0 |
| | | | | | | |
| **GCSE points** | | | | | | |
| 0-50 points | 300 | 179 | 258 | 1.7 | 1.0 | 1.5 |
| 51-55 points | 442 | 309 | 403 | 2.3 | 1.6 | 2.1 |
| 56-60 points | 529 | 418 | 501 | 2.6 | 2.0 | 2.4 |
| 61-65 points | 603 | 503 | 580 | 2.8 | 2.4 | 2.7 |
| 66-70 points | 665 | 591 | 650 | 2.9 | 2.6 | 2.8 |
| 71-75 points | 721 | 653 | 709 | 3.0 | 2.8 | 3.0 |
| 76/max points | 813 | 767 | 807 | 3.2 | 3.1 | 3.2 |
| | | | | | | |
| Total | 560 | 393 | 518 | 2.6 | 1.9 | 2.4 |

Finally in this section, we present information on levels of progression from AS to A-Levels. Whilst it is expected that students will not necessarily pursue all of the subjects that they study at AS Level through to A-Level, the WA database can be used to identify those students who undertook AS levels but who then did not go on to take any A-levels. Table 9 reveals that overall, 13% of students who are recorded as having undertaken AS Levels did not go on to pursue A-Levels. This figure increases to 24% among students within FE colleges compared to just 10% among students in Sixth Form. Those who at Year 11 were observed to be in receipt of FSM, diagnosed as being SEN and who had lower levels of attainment at GCSE are all observed to be more likely not to progress from AS Levels to A-Levels. The lower rates of progression observed within FE colleges persists when within group comparisons are made.

**Table 9: Rates of Non-Progression from AS Levels to A-Levels**

| | 6th Form | FE A levels | Total |
|---|---|---|---|
| **Gender** | | | |
| Male | 10.6% | 24.7% | 13.8% |
| Female | 8.6% | 24.1% | 12.5% |
| | | | |
| **Free School Meals** | | | |
| No | 9.0% | 23.3% | 12.3% |
| Yes | 20.4% | 36.0% | 26.0% |
| | | | |
| **Free School Meal Dynamics** | | | |
| No FSM | 8.8% | 23.1% | 12.1% |
| Partial FSM | 18.8% | 39.0% | 26.5% |
| Persistent FSM | 20.5% | 34.3% | 25.4% |
| Not determined | 16.1% | 29.3% | 19.1% |
| | | | |
| **Special Educational Needs** | | | |
| No | 9.3% | 23.9% | 12.8% |
| Yes | 14.5% | 33.7% | 20.3% |
| | | | |
| **GCSE points** | | | |
| 0-50 points | 28.0% | 44.3% | 33.2% |
| 51-55 points | 13.1% | 29.7% | 17.8% |
| 56-60 points | 6.8% | 19.1% | 9.9% |
| 61-65 points | 4.2% | 12.7% | 6.2% |
| 66-70 points | 2.3% | 9.7% | 3.8% |
| 71-75 points | 1.6% | 6.3% | 2.4% |
| 76/max points | 1.2% | 3.8% | 1.5% |
| | | | |
| Total | 9.5% | 24.4% | 13.1% |

# 6. Charting the Entry to Higher Education

This final section utilises data from the Higher Education Statistics Agency to chart the entry of the WA Cohorts in to Higher Education. The structure and contents of HESA data are already well documented (see www.hesa.ac.uk) and are not discussed in detail here. The HESA data supplied consisted of 3 files per annum providing information relating to details of the student profile on entry to the institution, the main student record and subjects being studied. Table 10 shows the progression into HE among those within the 3 WA cohorts of Year 11 pupils for 2005, 2006 and 2007. The upper panel of Table 10 refers to all HE entrants, whilst the lower panel refers to students who enter to undertake an undergraduate degree. It is noted that some degree schemes may be associated with direct enrolment on to a Master's Degree following a four year

period of study. These degrees are included within our definition of undergraduate degree entry. It can be seen that for approximately two thirds of entrants to HE, entry to university occurs 2 years following the completion of Year 11. This reflects the conventional route to university, where young people complete their A-levels during the first 2 years following the completion of Year 11. However, over a fifth (22%) of HE entrants take an extra year to enter HE. This longer period may reflect the time taken for students to re-sit GCSE or A-level examinations. Alternatively, some students may simply have chosen to take a year out from their studies. It can also be seen that entry to HE can take more unorthodox patterns. The upper panel also includes those students who enter HE straight after Year 11 through qualifications such as Certificates in Higher Education and Foundation Degrees, although it is acknowledge that the number of students undertaking such qualifications is relatively small (approximately 15% of HE entrants from the 3 WA Cohorts).

In terms of supporting further analysis, it is important to note that the 3 WA Cohorts and the HESA data that is available for them each have strengths and weaknesses in terms of charting entry in to HE. The data for the 2005 cohort misses those who may have entered HE straight after Year 11, for example via the HE Certificate route. Conversely, the data for the 2007 cohort will miss those students who enter HE later. The lower panel of Table 10 restricts the analysis of the timing of entry to HE to those students who enter HE for the purpose of undertaking a degree. Among this group, the 'conventional route' to HE is more prominent, with 72% of undergraduates entering HE 2 years after completing Year 11.

**Table 10: Entry to HE Among the WA Cohorts**

| | Year entered HE | | | | |
|---|---|---|---|---|---|
| | **2007** | **2008** | **2009** | **2010** | **Total** |
| **All Entrants** | | | | | |
| NPD Year 11 Cohort | | | | | |
| 2005 | 8,149 | 2,833 | 1,035 | 624 | 12,641 |
| 2006 | **605** | 8,422 | 3,055 | 982 | 13,064 |
| 2007 | 1,035 | **201** | 8,972 | 2,813 | 13,021 |
| Total | 9,789 | 11,456 | 13,062 | 4,419 | 38,726 |
| | | | | | |
| **Degree Entrants** | | | | | |
| NPD Year 11 Cohort | | | | | |
| 2005 | 7,388 | 2,387 | 716 | 340 | 10,831 |
| 2006 | 37 | 7,485 | 2,466 | 609 | 10,597 |
| 2007 | 112 | 71 | 7,825 | 2,200 | 10,208 |
| Total | 7,537 | 9,943 | 11,007 | 3,149 | 31,636 |

Table 11 shows the characteristics of those pupils in the WA Cohorts measured at Year 11 relate to their propensity to subsequently progress into HE. Once again, the table distinguishes between all entrants and degree entrants only. It shows that: females; those who were not entitled to FSM; those who were not diagnosed as SEN; and those with higher GCSE points were more likely enter HE. These findings are unsurprising and are consistent with previous research in this area. The gender imbalance in favour of female students is very much in keeping with a general phenomenon that has seen increasing numbers of females participating in HE as reported in the statistics by HESA.

**Table 11: Year 11 Characteristics and Subsequent Entry to HE**

| | All HE Entrants | | | | HE Undergraduate Entrants | | | |
|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | Total | 2005 | 2006 | 2007 | Total |
| **Gender** | | | | | | | | |
| Male | 30.2% | 31.4% | 31.1% | 30.9% | 24.8% | 24.4% | 23.8% | 24.3% |
| Female | 37.6% | 40.5% | 39.8% | 39.3% | 33.3% | 34.0% | 31.8% | 33.0% |
| **Free School Meals** | | | | | | | | |
| No | 37.6% | 39.2% | 38.6% | 38.4% | 32.4% | 32.1% | 30.5% | 31.7% |
| Yes | 13.0% | 15.0% | 15.0% | 14.3% | 9.9% | 9.7% | 10.2% | 9.9% |
| **Free School Meal Dynamics** | | | | | | | | |
| No FSM | 38.7% | 40.5% | 39.4% | 39.5% | 33.4% | 33.3% | 31.2% | 32.6% |
| Partial FSM | 13.6% | 14.5% | 14.7% | 14.3% | 9.9% | 9.9% | 10.6% | 10.1% |
| Persistent FSM | 12.7% | 14.9% | 15.1% | 14.1% | 9.8% | 9.5% | 10.1% | 9.8% |
| Not determined | 19.3% | 15.7% | 21.3% | 19.0% | 15.5% | 12.3% | 17.7% | 15.4% |
| **Special Educational Needs** | | | | | | | | |
| No | 38.1% | 40.2% | 40.0% | 39.4% | 33.0% | 32.9% | 31.7% | 32.5% |
| Yes | 10.3% | 12.1% | 11.2% | 11.2% | 7.1% | 8.2% | 7.1% | 7.4% |
| **GCSE points** | | | | | | | | |
| 0-50 points | 12.8% | 13.6% | 13.2% | 13.2% | 8.7% | 8.1% | 7.9% | 8.3% |
| 51-55 points | 51.2% | 48.9% | 49.3% | 49.8% | 41.6% | 39.0% | 37.9% | 39.5% |
| 56-60 points | 65.7% | 63.8% | 62.9% | 64.1% | 58.0% | 52.9% | 51.1% | 53.9% |
| 61-65 points | 74.6% | 75.1% | 71.9% | 73.9% | 68.8% | 65.9% | 60.8% | 65.1% |
| 66-70 points | 80.3% | 83.3% | 82.0% | 81.9% | 76.8% | 75.9% | 70.7% | 74.4% |
| 71-75 points | 87.6% | 87.4% | 86.7% | 87.2% | 85.0% | 80.1% | 76.6% | 80.5% |
| 76/max points | 91.5% | 91.3% | 90.3% | 91.0% | 89.2% | 86.1% | 78.3% | 84.1% |
| Total | 33.8% | 35.9% | 35.4% | 35.0% | 29.0% | 29.1% | 27.7% | 28.6% |

Table 12 shows the routes to HE according to the type of institution attended following post-compulsory education and the nature of qualifications studied for at these institutions. It can be seen that almost 80% of students undertaking AS/A-levels at Sixth Form go on to study at university. Almost 70% of Sixth Form students enter HE for the purpose of studying an undergraduate degree. Rates of HE participation among students undertaking AS/A levels within FE settings are noticeably lower. However, as noted earlier this is likely to reflect the lower levels of attainment among FE based A-Level students. Rates of participation in HE among other groups are noticeably lower. It is noted that approximately a third of FE students undertaking qualifications at Level 3-4 also go on to study at HE. A quarter of this group enter HE for the purpose of studying for an undergraduate degree.

**Table 12: Routes to HE Entry**

| | All HE Entrants | | | | HE Undergraduates | | | |
|---|---|---|---|---|---|---|---|---|
| | 2005 | 2006 | 2007 | Total | 2005 | 2006 | 2007 | Total |
| **Combined Post 16 Summary** | | | | | | | | |
| Not observed in 6th Form/FE | 4.6% | 6.7% | 6.2% | 5.7% | 3.3% | 4.4% | 3.4% | 3.7% |
| 6th Form AS/A levels | 76.9% | 78.4% | 78.5% | 77.9% | 70.9% | 68.1% | 64.5% | 67.8% |
| FE AS/A levels | 61.7% | 61.6% | 58.1% | 60.4% | 55.4% | 54.0% | 51.9% | 53.7% |
| AS/A levels - both | 71.5% | 71.1% | 66.5% | 69.7% | 62.1% | 61.2% | 52.8% | 58.7% |
| 6th Form AS/A-levels + FE Vocational | 41.1% | 36.9% | 31.9% | 36.7% | 33.8% | 26.5% | 21.1% | 27.3% |
| 6th Form Vocational | 8.8% | 14.2% | 21.6% | 17.0% | 4.1% | 3.9% | 12.8% | 8.8% |
| FE Level 3/4 Other | 34.0% | 33.2% | 33.2% | 33.4% | 22.3% | 21.4% | 23.1% | 22.2% |
| FE Level 2 | 6.3% | 6.5% | 4.9% | 5.9% | 3.1% | 3.1% | 2.3% | 2.8% |
| FE Level 1 | 2.8% | 2.8% | 2.0% | 2.5% | 1.2% | 0.8% | 0.3% | 0.7% |
| FE Entry Level | 6.5% | 3.3% | 1.5% | 3.8% | 2.1% | 0.8% | 0.3% | 1.0% |
| GCSEs - both settings | 10.9% | 10.7% | 9.1% | 10.2% | 7.0% | 7.3% | 5.1% | 6.5% |
| Other Vocational Combination | 35.2% | 32.9% | 28.2% | 32.1% | 25.1% | 21.0% | 15.6% | 20.5% |
| All | 33.8% | 35.9% | 35.4% | 35.0% | 29.0% | 29.1% | 27.7% | 28.6% |

Table 13 further investigates rates of participation in HE among the 2 largest sources of HE students; those undertaking A-Levels at Sixth Form and those undertaking A-Levels at FE College. Together, these 2 groups of students account for almost three quarters of entrants to HE and almost 80% of HE degree entrants. Those who undertook AS-levels but who did not proceed to take A-levels are excluded from this analysis. We also deliberately abstract from those students who have undertaken A-levels in both locations due to the problems associated with double counting A-level results (this group accounts for approximately 4% of HE entrants). The top panel of Table 13 reiterates the earlier finding that levels of attainment among A-level

students at Sixth Forms are higher than those among A-level students with FE. As noted earlier, this reflects the higher number of A-levels undertaken by Sixth Form students rather than higher levels of attainment per A-level studied. The second panel of Table 13 reveals that levels of participation in HE among those with A-levels at Sixth Form are higher than that among those with A-levels from FE colleges (85% compared to 77%). Interestingly, the third panel of Table 13 reveals that in terms of entry to HE for the purpose of undertaking a degree, there is only a 3 percentage point difference in levels of HE participation (74% among Sixth form students compared to 71% among FE students). Comparisons that take in to account A-level attainment do not reveal any large differences in HE participation rates between these 2 groups.

**Table 13: A-Level Attainment and HE Entry**

| | Sixth Form | FE College | Total |
|---|---|---|---|
| **A-Level Attainment** | | | |
| 0-300 Points | 7.9 | 14.2 | 9.1 |
| 301-500 Points | 18.9 | 20.8 | 19.3 |
| 501-700 Points | 37.9 | 34.4 | 37.2 |
| 701-900 Points | 28.8 | 24.6 | 27.9 |
| 901+ Points | 6.6 | 6.1 | 6.5 |
| Total | 100 | 100 | 100 |
| | | | |
| **HE Entry** | | | |
| 0-300 Points | 49.4% | 46.3% | 48.4% |
| 301-500 Points | 71.5% | 63.1% | 69.6% |
| 501-700 Points | 87.5% | 83.2% | 86.7% |
| 701-900 Points | 94.5% | 93.1% | 94.3% |
| 901+ Points | 95.1% | 93.1% | 94.8% |
| Total | 84.0% | 76.8% | 82.6% |
| | | | |
| **HE Undergraduate Entry** | | | |
| 0-300 Points | 26.6% | 33.5% | 28.8% |
| 301-500 Points | 55.1% | 53.9% | 54.8% |
| 501-700 Points | 79.3% | 78.6% | 79.2% |
| 701-900 Points | 87.8% | 90.4% | 88.2% |
| 901+ Points | 89.6% | 90.4% | 89.8% |
| | | | |
| Total | 73.7% | 70.7% | 73.1% |

As well as identifying participation in HE institutions, the HESA data also contains information in which institutions students attend. Students may attend multiple institutions, for example if they 'drop out' of university and then re-enter the HE sector at a later time or if they transfer to

another degree programme at another institution. Table 14 presents information on the type of institutions attended by students from Sixth Forms and FE Colleges. The top panel of Table 14 refers to the proportion of students who attend HEIs that form part of the Russell Group, an association of 24 Universities characterised by their relatively high rates of research grant capture (accounting for two-thirds of research income awarded) and who account for a majority of PhDs awarded at British Universities. It can be clearly seen that higher levels of attainment at A-level is associated with an increased propensity for students to attend a Russell Group institution. However, it is noted that there is very little difference in the propensity to attend such institutions when comparing students from Sixth Forms and FE Colleges. The second panel of Table 14 presents information on the proportion of students attending 'high status' institutions. This classification was developed by Chowdry et al (2013)[11] in their analysis of HE participation and defines high status institutions as all Russell Group Universities plus any other university whose average score from the 2001 Research Assessment Exercise exceeds the lowest RAE score found amongst the Russell Group universities. Again, little difference is observed between students from Sixth Forms and FE Colleges in terms of their propensity to attend 'high status' institutions. The third panel of Table 14 considers the proportion of students who attend either Oxford or Cambridge Universities. It is demonstrated that attending an Oxbridge institution is clearly related to high levels of attainment at A-level. It can also be seen that proportion of 'high achieving' A-level students attending either of Oxbridge institutions is slightly higher among students attending Sixth Forms. Finally, the lower panel of Table 14 reports the proportion of students attending Post 1992 Universities; a term that relates to those former polytechnics, institutions or colleges of higher education that were given university status through the Further and Higher Education Act of 1992 and any other institutions that have been granted university status since. Regarded as less prestigious institutions, it can be seen that attendance at these institutions is higher among those with lower levels of A-level attainment. Interestingly, for any given level of attainment, it appears that students from FE colleges are slightly less likely to attend Post 1992 Universities.

[11] Chowdry, H., Crawford, C., Dearden, L., Goodman, A. and Vignoles, A. (2013) 'Widening Participation in Higher Education: analysis using linked administrative data, *Journal of the Royal Statistical Society A*, 176:2, 431-57.

**Table 14: Type of Institution Attended**

| | Sixth Form | FE College | Total |
|---|---|---|---|
| **% Russell Group** | | | |
| 0-300 Points | 1.9% | 5.9% | 3.1% |
| 3-500 Points | 2.0% | 3.5% | 2.3% |
| 5-700 Points | 9.5% | 10.2% | 9.6% |
| 7-900 Points | 47.4% | 44.7% | 46.9% |
| 900+ Points | 66.1% | 65.1% | 65.9% |
| Total | 24.4% | 23.0% | 24.2% |
| | | | |
| **% High Status HEI** | | | |
| 0-300 Points | 2.7% | 6.8% | 3.9% |
| 3-500 Points | 2.5% | 4.3% | 2.9% |
| 5-700 Points | 11.0% | 12.1% | 11.2% |
| 7-900 Points | 53.2% | 49.9% | 52.6% |
| 900+ Points | 72.3% | 73.6% | 72.5% |
| Total | 27.5% | 26.1% | 27.2% |
| | | | |
| **% Oxbridge** | | | |
| 0-300 Points | 0.0% | 0.0% | 0.0% |
| 3-500 Points | 0.0% | 0.0% | 0.0% |
| 5-700 Points | 0.0% | 0.1% | 0.0% |
| 7-900 Points | 1.1% | 1.1% | 1.1% |
| 900+ Points | 8.2% | 6.5% | 7.9% |
| Total | 1.0% | 0.9% | 0.9% |
| | | | |
| **% Post 1992** | | | |
| 0-300 Points | 83.6% | 75.9% | 81.3% |
| 3-500 Points | 71.9% | 67.7% | 71.0% |
| 5-700 Points | 52.7% | 50.0% | 52.2% |
| 7-900 Points | 23.1% | 20.2% | 22.6% |
| 900+ Points | 12.5% | 7.4% | 11.5% |
| | | | |
| Total | 44.6% | 43.2% | 44.3% |

The wider research programme will examine how the characteristics of students relate to various aspects about their participation in HE, including the type of institution attended, choice of subject and academic performance. Whilst these issues will therefore not be considered in any detail here, Table 15 presents information on what data is available regarding the progression of our 3 WA cohorts through the HE system. The table is restricted to degree entrants and therefore alludes to how the WA cohorts are likely to be able to contribute to different aspects of our analyses. It can be seen that more than 80% of those entering HE to do a degree during the years 2007-2010, have either obtained their intended qualification or are in the process of doing so; less

than 5% have achieved a lower than intended qualification or have moved on to a lower than intended qualification; less than 10% drop out of HE altogether; and less than 5% drop out of course, but remain in HE.

**Table 15: HE Progress by Year of Entry to HE: Degree Entrants**

| | Year of Entry to HE | | | | |
|---|---|---|---|---|---|
| | 2007 | 2008 | 2009 | 2010 | Total |
| **HE Progression Summary** | | | | | |
| Gained intended qualification | 4,858 | 5,390 | 51 | 16 | 10,315 |
| Intended qualification still in progress | 696 | 2,726 | 9,157 | 2,883 | 15,462 |
| Moved to lower than intended qualification | 213 | 161 | 142 | 0 | 516 |
| Achieved lower than intended qualification | 582 | 190 | 156 | 12 | 940 |
| Dropped out of HE | 659 | 883 | 1,146 | 238 | 2,926 |
| Dropped out of course but remain in HE | 529 | 593 | 355 | 0 | 1,477 |
| Total | 7,537 | 9,943 | 11,007 | 3,149 | 31,636 |

# 7. Concluding Comments

The aim of this working paper has been to provide a descriptive analysis of the Widening Access database that will be used to support the quantitative analysis being undertaken within this research programme. The analysis has aimed to provide a better understanding of the population(s) of interest in the Widening Access Database and, in doing so, provides some verification of the robustness of the data set that is being used to support these further analyses. The descriptive analysis has provided an insight in to a variety of phenomena that are pertinent to our understanding of factors associated with the participation of young adults in Higher Education. These will be studied in further detail during the remainder of the research programme.

This document also represents a first embryonic attempt to provide support for researchers wishing to use linked administrative educational data in Wales. It is beyond the scope of the current research programme to produce a research version of the various databases that have been linked in order to undertake the analysis presented. The development of such a database would require collaboration with the Welsh Government to ensure the derived contents of the database were accurate, the development of user-guides and metadata and the accurate labeling of all variables in the derived database. Whilst such an exercise would be resource intensive in the first instance, once the procedures were set up then the costs to both the Welsh Government and the research community of developing analytical versions of the administrative databases would be considerably reduced, thereby enhancing the efficiency of policy evaluation and research.

**Annex 1: Properties of the LLWR Database**

**Number of Learning Programmes**

| Academic Year | One | Two | Three + | Learners |
|---|---|---|---|---|
| 2003 | 73.4 | 18.4 | 8.3 | 22121 |
| 2004 | 72.2 | 20.7 | 7.1 | 41967 |
| 2005 | 70.0 | 22.4 | 7.7 | 57671 |
| 2006 | 72.2 | 21.0 | 6.8 | 64805 |
| 2007 | 76.6 | 18.5 | 4.9 | 67935 |
| 2008 | 75.6 | 18.3 | 6.1 | 75311 |
| 2009 | 77.3 | 17.3 | 5.5 | 79913 |
| All | 74.3 | 19.4 | 6.3 | 409723 |

**Number of Learning Providers**

| | One | Two | Three + | Learners |
|---|---|---|---|---|
| 2003 | 86.7 | 12.1 | 1.3 | 22121 |
| 2004 | 86.6 | 12.0 | 1.3 | 41967 |
| 2005 | 85.8 | 12.8 | 1.3 | 57671 |
| 2006 | 87.6 | 11.2 | 1.1 | 64805 |
| 2007 | 89.8 | 9.5 | 0.8 | 67935 |
| 2008 | 89.9 | 9.4 | 0.7 | 75311 |
| 2009 | 89.4 | 9.8 | 0.8 | 79913 |
| All | 88.3 | 10.7 | 1.0 | 409723 |

**Number of Learning Activity Records**

| | 1 to 10 | 11 to 20 | 21 plus | Learners |
|---|---|---|---|---|
| 2003 | 45.7 | 21.8 | 32.5 | 22121 |
| 2004 | 44.2 | 23.9 | 31.9 | 41967 |
| 2005 | 48.4 | 23.6 | 28.0 | 57671 |
| 2006 | 50.6 | 21.7 | 27.7 | 64805 |
| 2007 | 52.0 | 20.4 | 27.7 | 67935 |
| 2008 | 54.6 | 19.0 | 26.4 | 75311 |
| 2009 | 54.1 | 19.1 | 26.8 | 79913 |
| All | 51.0 | 21.0 | 28.0 | 409723 |

**Activity Records - Excluding Key Skills**

| | 1 to 10 | 11 to 20 | 21 plus | Learners |
|---|---|---|---|---|
| | 64.2 | 22.3 | 13.5 | 22121 |
| 2004 | 66.5 | 20.7 | 12.8 | 41967 |
| 2005 | 69.5 | 18.7 | 11.9 | 57671 |
| 2006 | 69.8 | 18.0 | 12.2 | 64805 |
| 2007 | 68.3 | 19.4 | 12.3 | 67935 |
| 2008 | 69.3 | 18.9 | 11.8 | 75311 |
| 2009 | 67.4 | 20.1 | 12.5 | 79913 |
| Total | 68.3 | 19.4 | 12.3 | 409723 |