How inclusive is Higher Education? An overview of participation and performance of disabled students at Brookes vs the sector, 2007 to 2013
Strategic & Business Planning Office

Report by Sue Chaudhuri

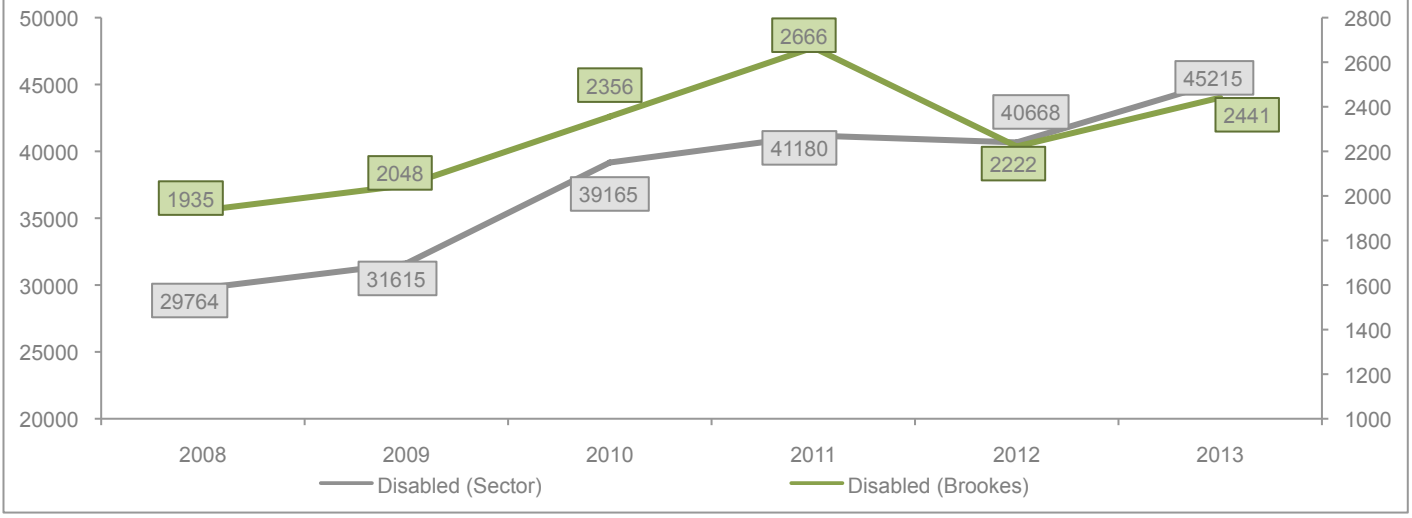
How inclusive is Higher Education in the UK? To be able to answer this question it is important to understand two concepts - 'widening participation' and 'fair access '[1]. Widening participation refers to increasing the total number of people who progress to higher education – particularly from under-represented sections of the society and fair access focuses on who gets accepted on higher education courses, particularly at selective Universities.

Section 1: Participation – Applicants & Entrants

This section looks at disabled applicants and entrants as proportions of overall applicants and entrants, for Brookes and for the sector. Since sector data for applicants and entrants have been sourced from different datasets, trend analysis has been performed on six year periods of variable start and end points. Top-line applicants - for the sector and Brookes have been looked at from 2008 to 2013[2] and entrants from 2007 to 2012[3] (since HESA data for 2013 is still awaiting release) in an attempt to study trends, whereas detailed disability for both these aspects of participation has been limited to a comparison between two academic years.

1. A. Applicants – Brookes vs Sector (disabled)

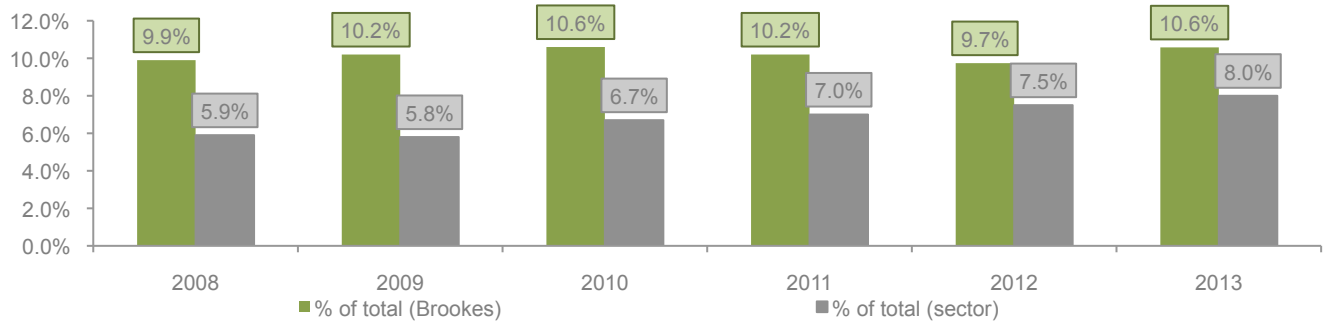
Figure 1: Disabled applicants to Brookes vs sector- trend analysis 2008 to 2013



- The general trajectory of progression for disabled applicant numbers in the period between 2008 and 2013 has been similar for Brookes and the sector. Applicants for Brookes and the sector increased year on year from 2008 to 2010, albeit Brookes recorded a steeper upward curve compared to the sector in the same period.
- Interestingly applicant numbers took a nosedive for both in 2012, although the magnitude of decline for Brookes was much larger (-16% for Brookes -1.2% for the sector). **Was the increase in tuition fees responsible for this?**
- 2013 has seen an increase in numbers by similar margins (+11% for the sector and +10% for Brookes) compared to the previous year.

[1] University Challenge: How Higher Education Can Advance Social Mobility
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80188/Higher-Education.pdf
[2] http://www.ucas.com/data-analysis/data-resources/data-tables/disability
[3] https://heidi.hesa.ac.uk/Home.aspx

Figure 2: Proportion of disabled applicants, Brookes vs Sector, 2008 to 2013



applicants compared to the sector.

- Figure 1 above shows that 2012 recorded a decline in disabled applicant numbers compared to the previous year. However, the proportional representation of this cohort of applicants was not affected too dramatically since the overall number of applicants also declined in 2012, possibly due to increased tuition fees.
- The proportion of disabled applicants in the sector has increased marginally by 0.5% 2013 compared to last year equating to 4547 more applicants.
- The proportion of disabled applicants at Brookes has increased marginally by 0.9% in 2013 compared to last year equating to 219 more applicants.

Table 1: UCAS Applicants (Details) 2012 and 2013

Disability	2012	2013	% change since 2012
No disability	**504,084**	**518,105**	**3%**
Learning Difficulty	21,541	23,480	**9%**
Other disability, impairment or medical condition	4,418	4,795	**9%**
Long standing illness or health condition	4,251	4,515	**6%**
Mental health condition	4,188	5,170	**23%**
Autistic spectrum disorder	2,073	2,635	**27%**
Two or more impairments and/or disabling medical conditions	1,444	1,695	**17%**
Physical impairment or mobility issues	1,283	1,325	**3%**
Serious hearing impairment	909	1,035	**14%**
Serious visual impairment	561	565	**1%**
Total (all applicants)	**544752**	**563320**	**3%**

- Applicants with learning difficulties formed the highest proportion of disabled applicants in 2013 and 2012
- In terms of definable disability, those with mental health conditions formed the second largest applicant group
- Applicants with a diagnosis of Autistic Spectrum disorder have accounted for the highest percentage increase compared to last year

Table 2: Brookes Applicants (Details) 2012 & 2013

Disability	2012	2013	% change since 2012
No Disability	**20,589**	**20,641**	**0%**
Specific learning difficulty	1479	1636	**11%**
Unseen Disability	191	177	**-7%**
Other Disability	184	183	**-1%**
Mental Health Difficulties	161	197	**22%**
Autistic Spectrum Disorder	61	88	**44%**
Multiple Disabilities	46	49	**7%**
Deaf/ Hearing Impairment	40	38	**-5%**
Mobility Difficulties/ Wheelchair	38	44	**16%**
Blind/ Partially Sighted	19	24	**26%**
Unknown	2	5	**150%**
Personal Care Support	1	0	**-100%**
Total (all applicants)	**22811**	**23082**	**1%**

- **A number of similarities were noticeable in applicants' data for Brookes and the sector:**
  - Those with specific learning difficulties formed the largest proportion of disabled applicants in 2012 and 2013, reflecting the sector trend.
  - In terms of definable disability, those with mental health conditions formed the second largest applicant group **– the percentage increase in applicants in this category has been almost similar for Brookes and the sector in 2013.**
  - Brookes has also recorded highest percentage increase in applicants diagnosed with Autistic Spectrum Disorder, compared to last year. **However, the magnitude of increase compared to the sector has been much higher (44% vs 27% for the sector). In this context, it may be interesting to note that Brookes' Access Agreement for 2015/16, through an evaluation undertaken by its target schools of specific groups, has identified pupils with ASC (Autistic Spectrum Condition) as a potential group that may benefit from targeted intervention. A mentorship programme has been set up to support this group, to help pupils with ASC identify any barriers that they may face in going to University and to work with their mentors to break down those barriers.**
- Applicants who considered themselves as having a visual impairment increased by 26% in 2013 compared to last year. The sector recorded only a marginal increase of 1% in this category. In terms of absolute numbers, this increase has been by 4-5 students for the sector and for Brookes.
- In a reversal of the above picture, the sector recorded an increase in applicants with a hearing impairment in 2013 (14%) whereas Brookes registered a decrease of 5%. This equates to an increase of 36 students for the sector and a decrease of 2 students for Brookes.
- **How accessible is higher education to potential learners with visual and hearing impairments? Do the low application numbers tell us something about how attending University is viewed by this particular student group? Section 2 looks at entrant numbers split by particular disabilities as proportions of overall students with disabilities.**

15% and 17% of the applicants in 2013 and 2012 respectively have been recorded as having 'Unseen' or 'Other' or 'Unknown' disabilities. Is it possible that these disabilities can be defined? If that can be done, perhaps an addition in numbers to one or several of the defined categories may allow us to assess how prepared Brookes is perceived to be by disabled applicants, in supporting them in 'getting in', 'getting through' and 'moving on' in their academic journey.

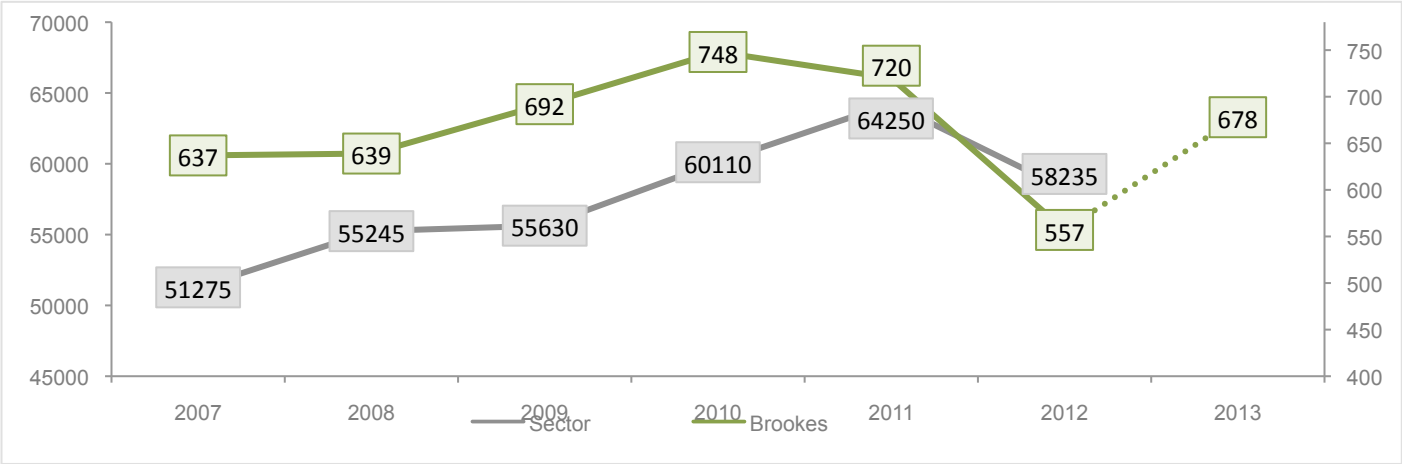
Since the entry route for a sizeable proportion of intake (home students) at UK Universities is non UCAS based, it is difficult to get an idea of the applicants to entrants conversion rate using UCAS (for applicants details) and HESA (for entrant details) databases. Hence, comparing Brookes' conversion to the sector at this point, with regards to disabled students, is not an option.

Section 1.B Entrants – Brookes and Sector

Section 2 takes a look at entrants at Brookes and in the sector.

Sections 2A looks at entrant numbers from 2007 to 2012 to understand the recruitment trend over a period of time and the implications of fee increase in 2012.

Figure 3: Disabled entrants – Sector vs Brookes, 2007 to 2012



- The sector has registered an upward trajectory in the recruitment pattern of less abled students in the five year period preceding the fee increase in 2012. However, Brookes on a similar course to the sector between 2007 and 2010, registered a dip in the trajectory in 2011; and in 2012 there was further decline, possibly in response to the increase in UG fees for Home students.
- 2013 registered an increase in the number of disabled entrants to Brookes; has the sector also seen a recovery? It'll be interesting to see, when HESA data for 2013 becomes available. Was Brookes 'participation in the Clearing process helpful in recruiting a higher number of disabled students?
- In order to get an idea of demand, entrant numbers for the sector and the university were looked at split into full time and part time. Full time trends mirrored those evident in Figure 1. Part time numbers were rather erratic, showing rise and fall in alternate years. **Could the introduction of the ELQ policy in 2008 have been responsible for this, having transferred the onus of paying fees on learners considering enrolling on courses at an equivalent or lower level to their previous qualifications?**
- **Seen as a proportion of overall undergraduate entrants, the sector showed a representation of between 7-10% whereas Brookes recorded representation of about 14-15% in the six year period considered**. This is a very positive scenario particularly in light of Brookes' widening participation initiatives.

Section 2B looks at disabled entrants by detailed disability, in a given academic year, 2012. The same has been looked at for entrant details in the sector as per HESA. Since the categories for disability are quite similar in both data sets; this gives us an opportunity to compare entrant groups.

Figure 4: Sector entrants 2012 – disability details (HESA)

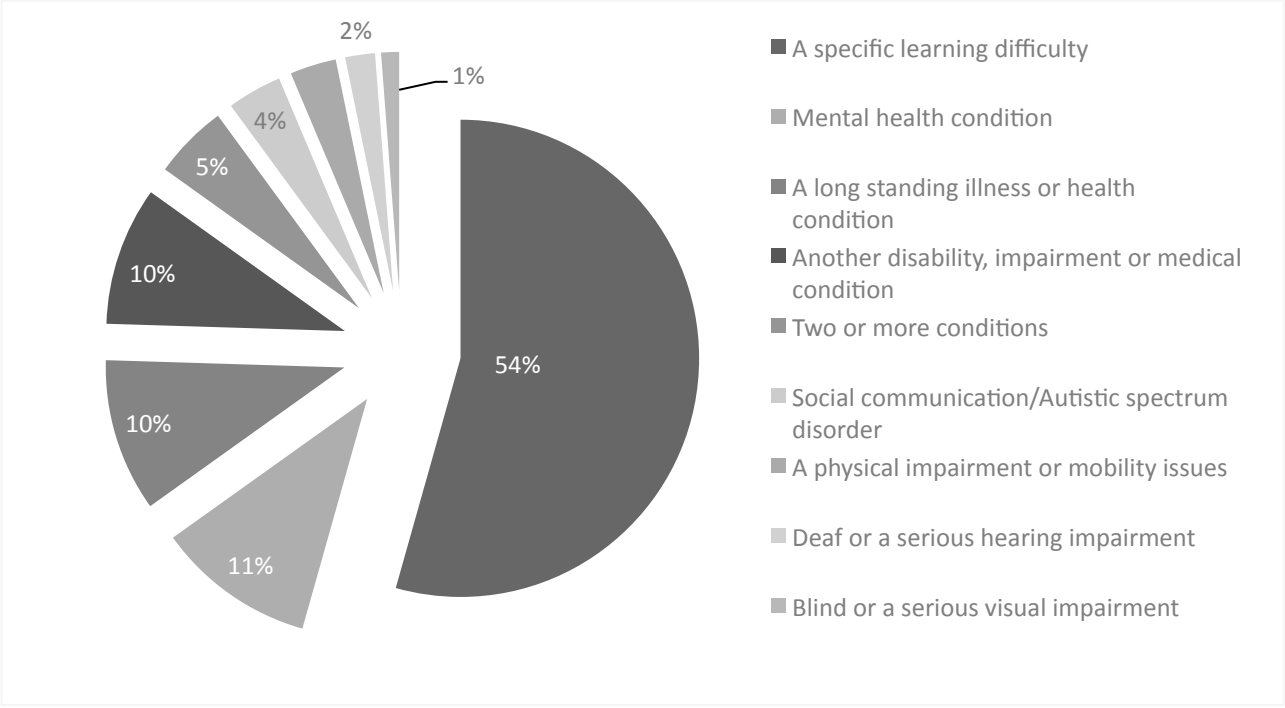
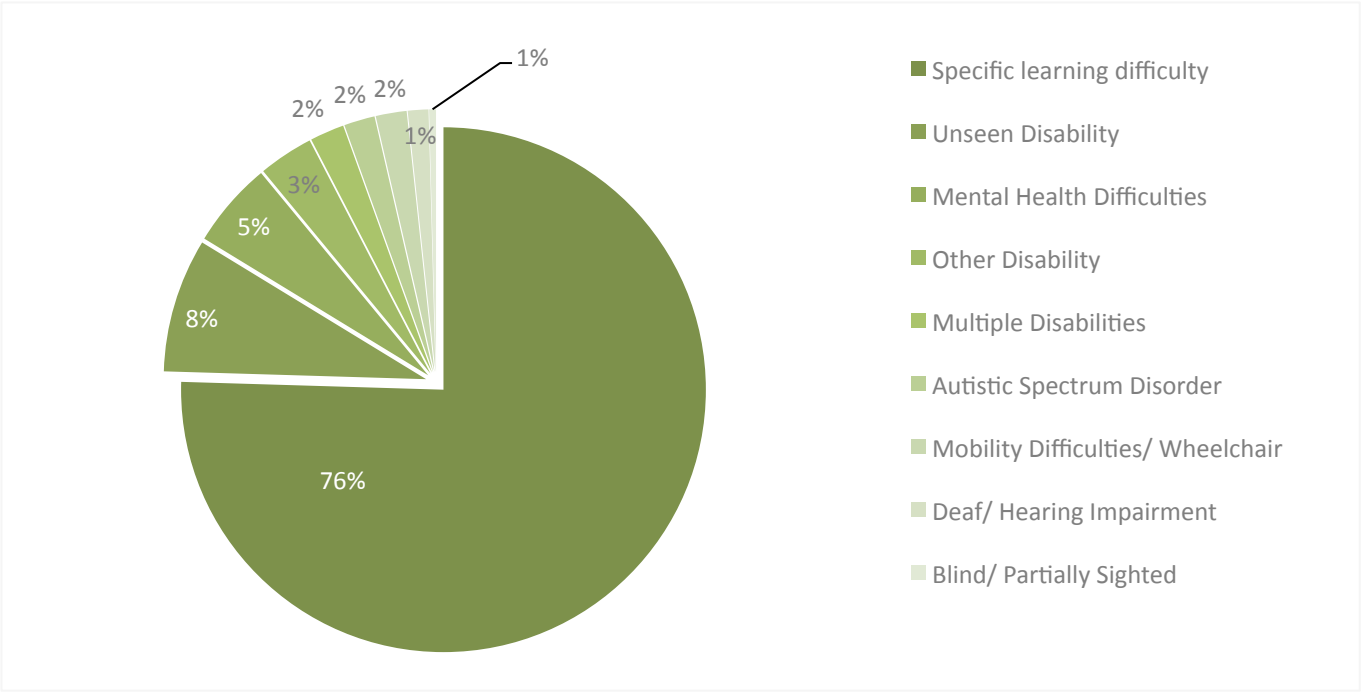


Figure 5: Brookes entrants 2012 – disability details



- Students with learning disabilities formed the largest cohort of less abled entrants in 2012, both for the sector and Brookes (over ½ for the sector and over ¾ for Brookes).
- Those with hearing or visual impairment formed between 1 to 2 % of the total intake (Brookes and the sector) in 2012. **How inclusive is the Higher Education sector? It would be interesting to look at measures that have been put in place in Universities, in terms of skills and attitudes of teachers and equitable access to educational resources in addition to investigating the demographic profiles of disabled students. This would throw light on issues influencing intake for this particular cohort**

of students – is it strategically important to raise aspirations or are the issues more directly connected to basic facilities that have a bearing on accessing education and hence the learning experience?

- **It may also be worthwhile, at this point, to ponder whether targeted events for specific disabilities are the best way forward or integrated events? There are various organisations and HEIs[7] which are working closely with the Office for Disability Issues (ODI) with a focus on working closely with learners with hearing impairment – coaching them to improve their confidence levels and running mentoring programmes for them. Has the rationale been accepted that those with physical impairments may benefit from dedicated support?**

Section 1.C Demographic profile of disabled students at Brookes

Is there a typical disabled learner?

In an effort to understand the profile and demographic mix of disabled students at Oxford Brookes University, an in-depth study was made of their social class, household income and parental HE levels. Data was studied for academic years 2007 to 2012 in order to spot a pattern if one was available. The following information came to light:

- In terms of social class (**HESA social classes 1 -3 and 4-7**), no significant difference was noticeable in student numbers in any group, for the academic years identified above.
- Between 27% and 32% of disabled students at Brookes belonged to low income families (household income under £27K). This was lower than the non-disabled student group for this period, where the number of entrants from a lower household income ranged between 31% and 34%.
- In terms of disabled entrants with parental HE qualifications, the percentage varied between 63% and 67% which was quite similar to the information available on non-disabled entrants (between 63% and 65%).
- Entry age bands and entry tariff bands were also studied for disabled and non-disabled cohorts and there was similarity of pattern noticed there as well i.e. entrants were mostly ≤ 21 and the most popular entry tariff was between 251 and 300.
- While researching barriers to learning faced by disabled students, within the context of widening participation, it was remarked that the two concepts are not necessarily complementary. The above findings further reinforce this fact.
- It was also remarked that societal perception of disability makes integration important to disabled students. This finding was borne out further when it came to light that on campus disabled students far outnumbered those studying online.

Summary of findings:

The basic trajectory set by disabled applicants in the period between 2008 and 2013 were similar for Brookes and the sector. Both trajectories went on an upward slant (albeit of varying magnitudes – Brookes showing stronger growth in absolute numbers) in the pre-fee increase period. 2013 recorded recovery in applicant numbers following the dip in 2012.

Entrant numbers for the sector followed the general route traced by applicants in the pre-fee increase period. Brookes, however, recorded two consecutive years of decline in 2011 and 2012. The decline in 2011 numbers may be explained by the strategic decision to under-recruit deliberately on campus.

Having looked at specific disabilities it became clear that those with learning disabilities formed the largest proportion of disabled participants in higher education. Participation of the physically disabled however, is marginal. What types of intervention would address this issue - targeted or general?

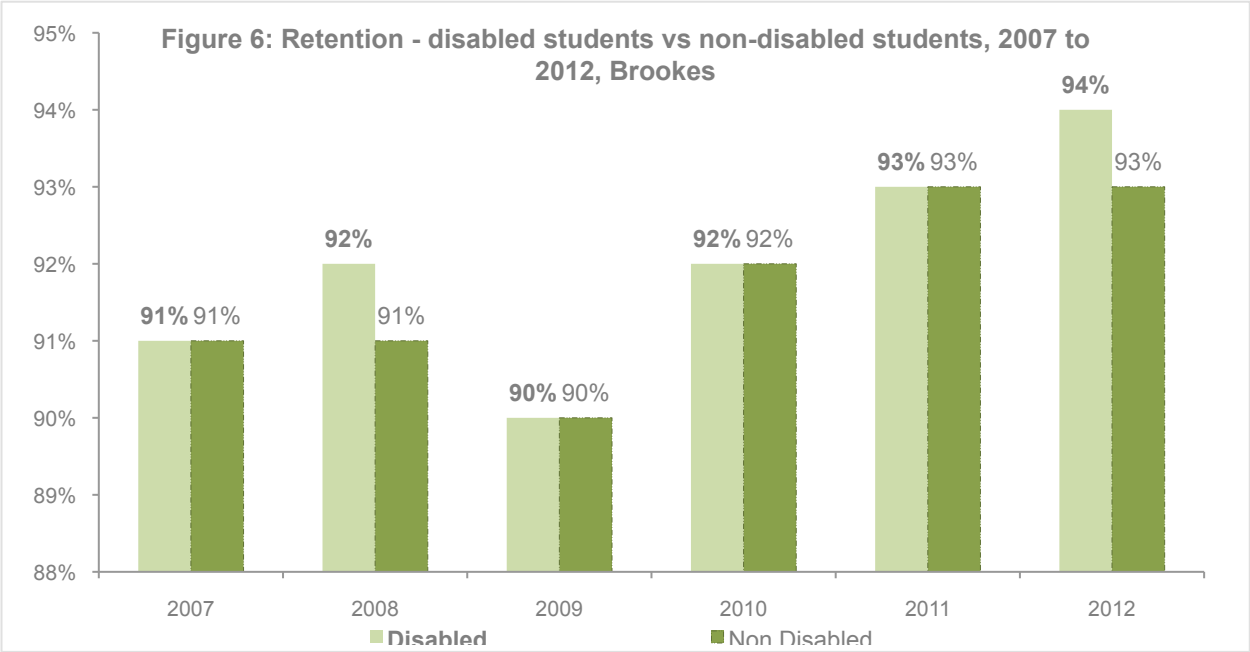
It was interesting to note that demographically no particular pattern was noticeable amongst disabled cohorts, in the contexts of widening participation and entry level qualifications. However, research has shown that the cycle of low achievement rates for disabled students begin at school (see section 3). A look

at entry tariff bands for disabled applicants to Brookes does not reflect any marked difference from their non-disabled counterparts. Does this mean that a proportion of prospective applicants are discouraged from applying at all? Is it strategically important to introduce contextual offers in this regard to incorporate principles of 'fair access' to higher education?

Section 2: Performance – Retention, Completion and Good Completion

This section looks at performance of disabled students by looking at various stages of progression i.e. retention after first 12 months, completion (of programme of study) good completion (proportion of students graduating with UG honours degrees who get 1st or a 2:1 as degree classification) and graduate destinations (looking at proportion of graduates in higher education or employment six months after graduating). It was discovered that specific data was unavailable by sector for retention and completion, hence only good completion for disabled students at Brookes has been compared to performance of this particular cohort of students on a national level. Retention and completion have been studied at University level only (disabled students' performance compared to those without known disability).

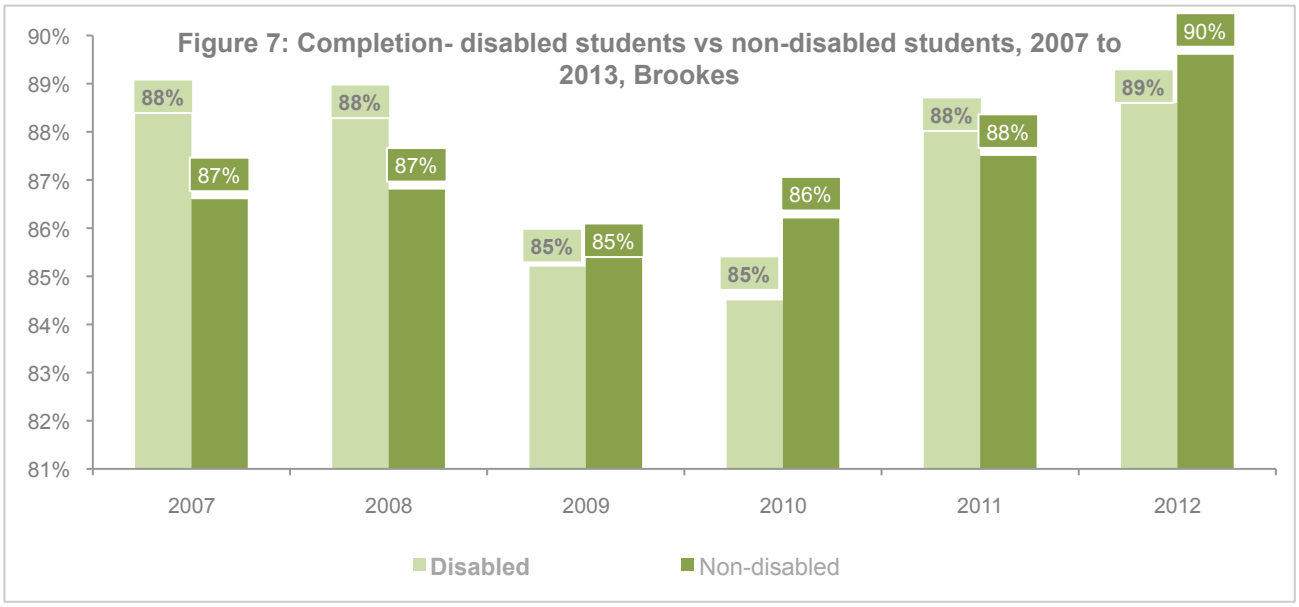
2A – Retention (Brookes – disabled vs non-disabled cohorts), 2007 to 2012



N.B. A difference of 1 percentage point is showing up as a considerable gap in Figures 6 and 7 since decimal places have been rounded up to the nearest integers

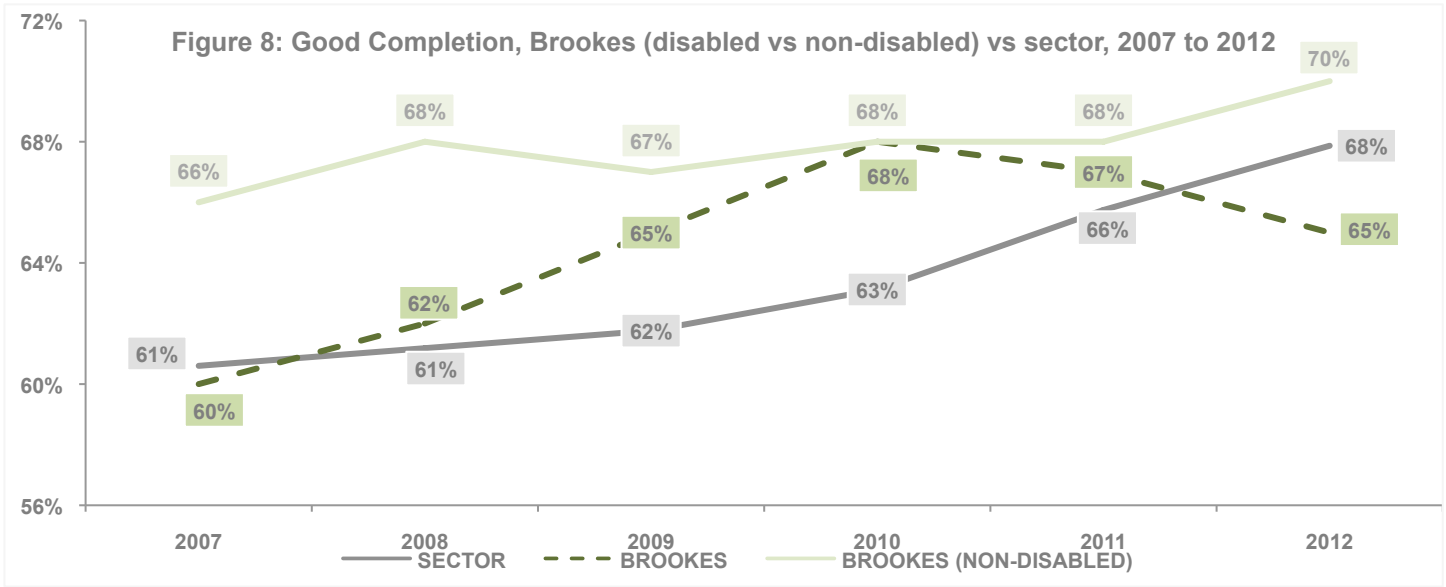
- Retention percentages for disabled students at Brookes have been at par with those for their non-disabled counterparts in the period between 2007 and 2012.
- **In fact 2008 and 2012 registered a better retention rate for disabled students – albeit marginally.**

2B – Completion (Brookes – disabled vs non-disabled cohorts), 2007 to 2012



- Interestingly the patterns noticeable in the completion rates for both disabled and non-disabled students in the period between 2007 and 2012 are somewhat similar i.e. 2009 and 2010 showed a decline in completion percentages compared with the previous two academic years. 2011 and 2012 proved to be periods of recovery for both cohorts of students.

2C – Good Completion – Brookes vs sector (disabled vs non-disabled cohorts), 2007 to 2012



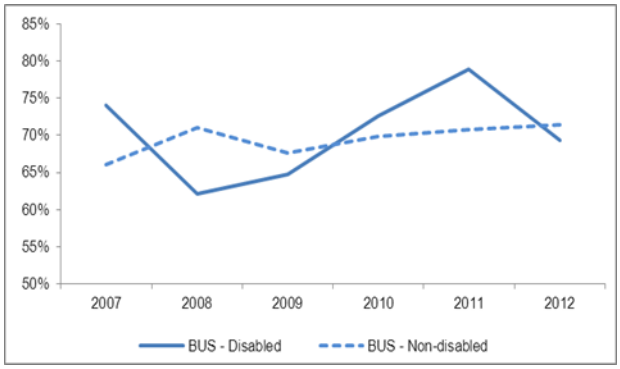
- The sector has registered an upward trajectory in good completion rates for disabled students in the period considered in this report, with the highest increase between 2010 and 2012.
- However, good completion rates for disabled completers at Brookes showed a remarkable increase of 8 percentage points between 2007 and 2010 but the following two years registered a downward trajectory.
- Non-disabled good completion has been fairly stable in the period considered; in fact 2012 registered a 2% improvement compared to the previous academic year.
- **It would be interesting to investigate what propelled the decrease in good completion for disabled students at Brookes between 2010 and 2012. What changed post 2010 that may have been responsible? Having looked at student numbers in the 6 years, it became clear that a higher**

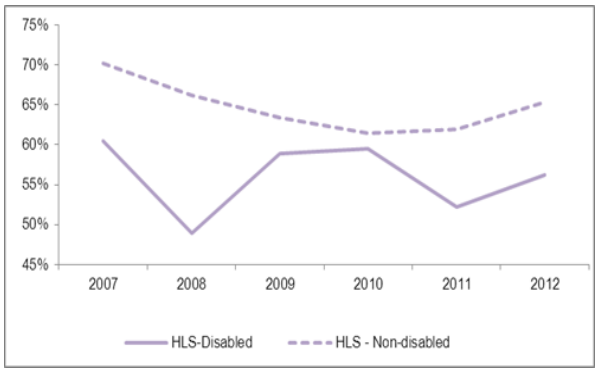
number of students graduated with honours degrees in the period between 2010 and 2012 compared to previous academic years up to 2007. However, the number of students graduating with 1st or 2:1 remained fairly stable on the lower side, and consequently their percentage (calculated as proportion of all students graduating with honours degrees) got suppressed.

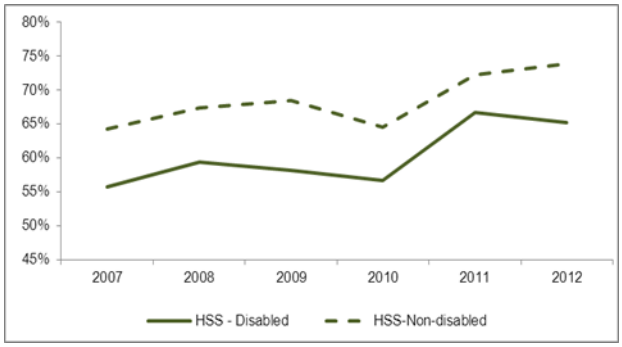
Table 3: Good Completion by Faculty, Brookes 2007 to 2012

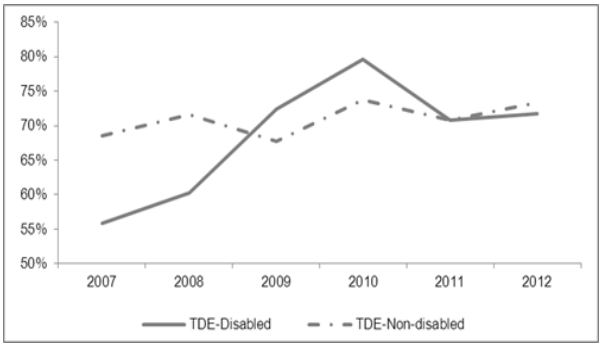
Faculty	2007	2008	2009	2010	2011	2012
BUS	74%	62%	65%	73%	79%	69%
HLS	60%	49%	59%	60%	52%	56%
HSS	56%	59%	58%	57%	67%	65%
TDE	56%	60%	72%	80%	71%	72%

Figure 9 – i,ii,iii,iv – Good completion by faculty – tracing linear patterns in performance for disabled and non-disabled cohorts, 2007 to 2012







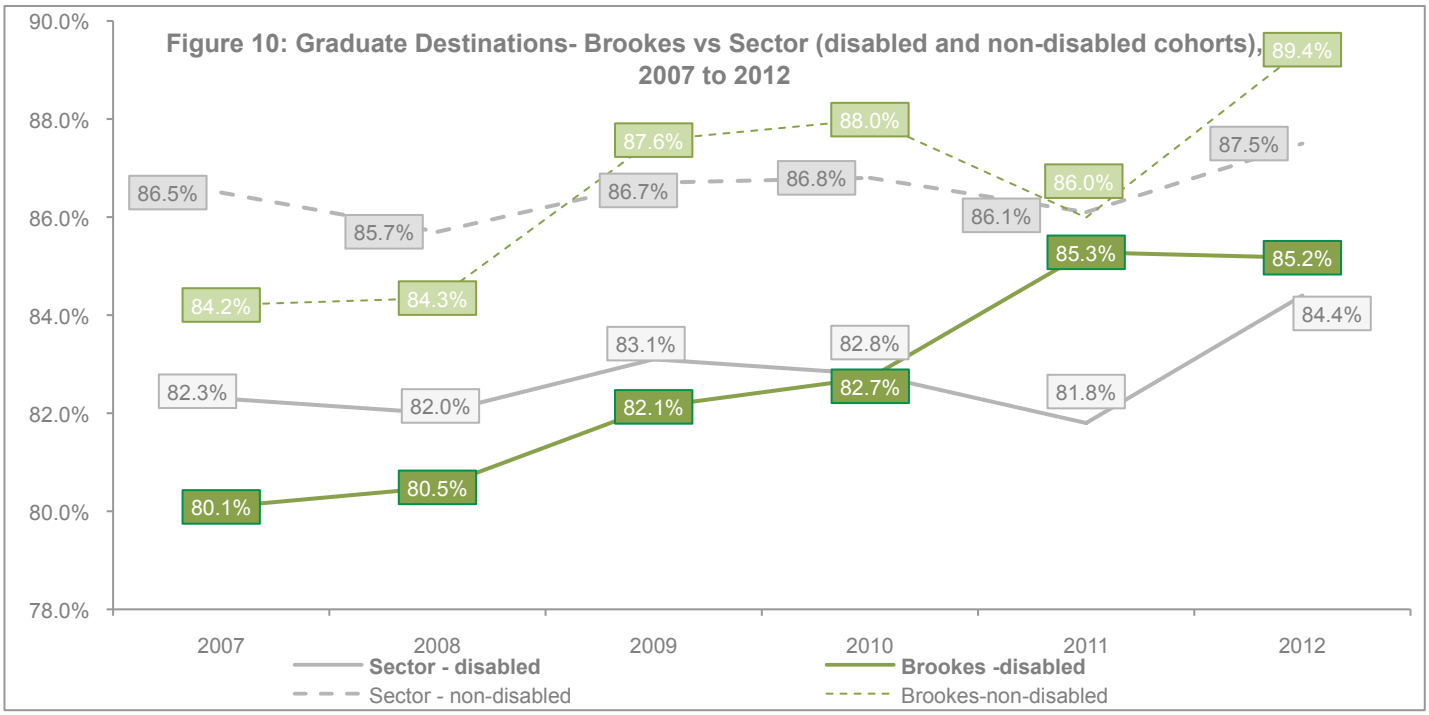


- Figure 7 above illustrates the data contained in Table 5, and compares performance graphs for disabled students with that of their non-disabled counterparts in the period studied in this report. (*Please note that absolute numbers of good completers by faculty for every year considered have been ≥ 30; hence percentage representations are dependable*).
- While good completion rates have been variable for both cohorts of students studied above, those for disabled students have been more markedly so.
- Faculties of Health and Life Sciences and Humanities and Social Sciences have consistently recorded lower performance levels from disabled students.
- As has been noted in the commentary following Figure 6, variations in the base population of students graduating with honours degrees has affected the proportions of students gaining a 1st or a 2:1, on account of the latters' numbers remaining on a more consistent, albeit lower, scale. When looked at in greater detail, this trend is noticeable across all faculties.
- **What measures can Brookes employ to improve performance of disabled students? How can the University ensure the performance graph for disabled students mirrors that for the sector (see Figure 8)?**
- **What measures were responsible in bringing up the number of disabled students who graduated with honours degrees? Could they be replicated to tip the balance in favour of those gaining**

higher degree classifications?

2D – Graduate Destinations – Brookes vs Sector, 2007 to 2012

Figure 10 looks at the graduate destinations i.e. graduates in further study or employment six months after graduating from their undergraduate programmes. Respondents to surveys on graduate destinations form the base population to calculate the proportion of students engaged in further study or employment. It was noticed that the response rates for students completing non-degree based undergraduate programmes were considerably low, both for Brookes and the sector, consequently making proportional representation difficult since small numbers equated to large percentages. Hence this section looks only at first degree graduates.



- The relationship between graduate destination rates for disabled and non-disabled cohorts at Brookes has recorded greater variability between 2007 and 2012 compared to that between similar cohorts in the sector – the latter almost consistently showing an approximate 4% gap in performance rates in the period studied above.
- Having trailed the sector for four years from 2007 to 2010, the proportion of disabled graduates from Brookes not only recorded considerable improvement on sector performance in 2011, it also almost touched the performance margin for non-disabled cohorts at Brookes and the sector.
- **It may be interesting to note that graduate destination rates for disabled graduates from Brookes have been consistently on an upward trajectory in the period considered, unlike the other student populations represented in Figure 10.**

Summary of findings:

A look at key performance indicators have shown that disabled students' performance at Brookes, with regards to retention and completion, has almost matched that of their non-disabled counterparts in the period between 2007 and 2012 (in some cases also outperforming them.)

Comparison with the sector for good completion rates of disabled students, showed Brookes' trajectory on a divergent path from 2010 – having followed a similar upsurge in achievement percentages in the previous four years. On investigating further it was noticed that an increase in the base population of all students (disabled) achieving honours degrees, shrunk the proportion of good completers.

Although performing below par compared to their non-disabled counterparts, graduate destination rates for disabled graduates from Brookes have been consistently on an upward trajectory between 2007 and 2012.

When the above findings are studied against the backdrop of research that outlines low achievement rates of disabled students, it is imperative that we investigate the profile of prospective students with disabilities who perhaps do not take the plunge into higher education at all. What proportion of disabled school leavers actually contemplate going to University? How many of them actually apply?

Is it strategically important to consider those with learning disabilities and those with physical disabilities as completely separate entities and hence develop targeted interventions to widen access to higher education?

Section 3: Inclusion / Outreach activities

The findings and implications of recent research with regards to the participation and performance of disabled students in Higher Education in the UK need to be studied in conjunction with three distinct factors:[4]

1. The conceptualisation and measurement of disability
2. National trends among disabled students in higher education
3. Policy developments pertaining to disability and higher education.

The definition of disability in UK legislation is 'A physical or mental impairment which has substantial and long-term adverse effect on his/her ability to carry out normal day to day activities (Disability Discrimination Act, 1995). To a substantial extent, measuring participation of disabled students in higher education is dependent on declaration of disability and/or record of students in receipt of Disability Living Allowance. As has been noted in Section 1 of this report, the proportion of disabled applicants (UG) to UK Universities saw an increase in 2012 compared to the previous year. While celebrating the success of outreach activities that may have brought about this improvement, it may also be worth noting that this could reflect an increase in the number of students declaring their disabilities. An additional factor that may have played an important role in making HE accessible to disabled students is the policy of 'reasonable adjustment' (Disability Discrimination Act, 2005) which makes it obligatory for HEIs to make anticipatory adjustments to support disabled students rather than responding to situations on an ad hoc basis.

However, the fact remains that students with disabilities are under-represented in higher education. This section attempts to look at potential barriers faced by them and the outreach work that may be undertaken by UK Marketing, in addition to the already prevalent widening participation initiatives in place, to ensure inclusivity and fair access for disabled students.

3A Barriers to participating in Higher Education

A paper published by the Scottish parliament in 2010[5] identified three important characteristics in an individual participating in higher education. These are - an aspiration to improve educational level, confidence in their ability to do so and determination to succeed in higher education. These 'soft' characteristics are often found lacking in certain disadvantaged social groups (in this case disabled students) and hence translate into barriers to higher education. It may be noted that, more often than not, the cycle of low attainment begins at school which often result in **1) non-traditional entry routes into higher education, and/or 2) prior attainment to higher education being lower than non-disabled peers.**

For disabled students, in addition to the above, **Medical (pathology) and Societal (perception) barriers** must also be considered. Medical or physical disabilities may be more easily identifiable as barriers; those that arise from perception need to be understood more completely. Research has shown that often barriers to HE stem from 'external social causes, rather than individual pathology.'[6] Barriers included **being misunderstood by faculty members, being reluctant to request help for fear of invoking stigma and having to work considerably longer hours compared to non-labelled peers**. Findings indicated that these barriers could be mitigated to some extent by raising awareness amongst teachers and fellow students.

Some other barriers that were identified through surveys were difficulties in taking notes in class and following lectures delivered at fast pace, digesting visual aids that were changed quickly, etc. Some solutions suggested were pre-prepared notes and additional supporting materials that could improve the learning experience of students with disabilities and improve their participation in class, thus building up their confidence levels.

Some students make conscious choices of their programmes of study based on the types of assessment they perceive as likely to be used on certain courses, i.e. preferring those that do not have too many exams

[4] Disability equality in Higher education: a synthesis of research – Dr Mark Rickinson (2010) http://www.heacademy.ac.uk/assets/EvidenceNet/Syntheses/disability_equality_in_he_synthesis.pdf
[5] Barriers to Widening Access to Higher Education – Fiona Mullen (2010) http://www.scottish.parliament.uk/Research%20briefings%20and%20fact%20sheets/SB_10-07.pdf
[6] 'Deconstructing Barriers – Perceptions of students labelled with learning difficulties in Higher Education' – Hazel Denhart, 2008

but are more assignment based, and those that are more practical and/or creative rather than academic and/or too precise (therefore choosing subjects aligned to art and design and business rather than law or architecture). A look at participation of disabled students by faculty departments at Brookes between 2007 and 2012 showed that the Departments of Arts and Business and Management have consistently recorded higher proportions of disabled students compared to other departments.

3B Outreach

OFFA defines **'Outreach' as 'activity that helps to raise awareness, aspirations and attainment among people from disadvantaged backgrounds.'** Oxford Brookes works collaboratively with various HEIs to promote inclusivity and widen access to higher education**. It is also a member of NEON**[7] **(National Educational Opportunities Network) that has organised various Working Groups to target different aspects of widening participation activities**. **One of them is Access and Outreach for Disabled Learners Working Group which aims to bring individuals and organisations together to establish and take forward an agenda in different areas of access practice**. This involves exchanging good practice between members and the institutions and organisations they represent, agreeing collaborative ventures, providing evidence of the impact of particular transition (FE to HE, etc.) and retention strategies, raising awareness of the needs of disabled learners and the support that is available (amongst learners themselves, parents and carers, teachers and advisors, University staff, etc.) and creating shared resources with other relevant partners.[8]

It is now widely accepted that, in order to widen participation in HE, resources and policies should be targeted at school age pupils at an early age to develop aspirations and improve attainment. Further research is needed to find a direct correlation, if any, between shaping educational and career prospects at school, particularly for students with disabilities, and participation and performance in higher education and consequently its impact on graduate destinations. Without comprehensive information to track cohorts of students over a certain period of time (perhaps from school age to working age) it is difficult to match final outcomes conclusively with learning choices. Added to that is the time lag that invariably ensues between policy interventions and their impacts. However, if outreach activities are undertaken to raise aspirations at school level, it could be a step in the right direction.

Summary of findings:

Having identified the need to target disabled students early in the process of widening access to higher education, it is important to split the disabled student population further into those that fit widening participation categories, those with learning disabilities and those with physical disabilities. **The sub categories are by no means mutually exclusive and this makes integrated interventions as important as targeted interventions.**

A student life cycle approach as applicable to disabled students would probably begin one step ahead, with 'getting ready'[9]preceding 'getting in', 'getting through' and 'moving on'. 'Getting ready' refers to interventions in primary and secondary schools and colleges. It aims at favourable future outcomes rather than instant success, and is hence perhaps less immediately measurable compared to the three following stages identified above.

[7] http://www.educationopportunities.co.uk/

[8] For more information please contact Trudy Ing at UK Marketing & Partnerships (Ext.4858)

[9] http://www.universities-scotland.ac.uk/uploads/WideningAccessToHE-CREID.pdf