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Health Education England North West/MMU Widening Participation Project: Phase 1 Report

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Introduction

This is the phase 1 report from a 3-phase project to investigate widening participation activities (WPA) on NHS commissioned programmes, specifically concerning students at Manchester Metropolitan University (MMU) who have disclosed specific learning needs.

Background

The National Health Service (NHS) employs more than 1.6 million people in total and more than 1.3 million in England. It has one of the five largest workforces in the world alongside the US Department of Defence, McDonalds, Walmart and the Chinese People's Liberation Army (NHS 2014). The Equality Delivery System (NHS, 2013a) includes specific goals and outcomes to guarantee equality for its workforce in accordance with the provisions of the Equality Act (2010) the Disability Discrimination Act (DDA) (1995) and the via the NHS Constitution (NHS, 2013).

The Equality Act (2010) and the DDA (1995) impose a general duty on public sector employers to consider reasonable adjustments for staff who have disclosed disabilities. NHS England reports that 6% of the workforce have disclosed a disability (NHS England, 2015) although scrutiny of Individual Trust Annual Equality and Diversity Reports suggests that the value may be closer to 3%. Instances of disclosure by students on NHS commissioned programmes in higher education institutions (HEI) would appear to be markedly different with 12% of FT, UG students studying subjects Allied to Medicine and 9% of those studying Medicine and Dentistry disclosing a disability in 2013-14 (HESA, 2015). It is unclear why there a discrepancy in the number of students disclosing a disability in HE and the number of staff who disclose a disability in the NHS workplace?

Is it conceivable that students are willing to disclose disability in HEI because they are able to access additional support and assistive technology to support their studies? The Higher Education Funding Council for England report that first degree, FT students achieved a better degree classification and obtained a graduate job than the sector average if they had disclosed a disability and were in receipt of the Disabled Students Allowance (DSA) compared to those who had disclosed but were not in receipt of DSA (HEFCE, 2013). The reasons why students do not appear to disclose disability to their eventual employers is unclear, though this may be related to fears of discrimination, fears that they will be perceive only in terms of their disability or because they do not feel that their disability will interfere with their ability to fulfil the job role (Disability Rights UK, 2012).

This project will have the potential to facilitate seamless transition from student status to that of NHS employee by increasing knowledge of the nature of the workplace, challenges encountered by NHS employees with specific learning difficulties and supportive systems and strategies already in place. In addition, it will identify barriers and facilitators to using supportive technology in the workplace and facilitate the development of inclusive work practices that may reduce the necessity for reasonable adjustment.

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Phase 1 aims and objectives

Aims:

1. To design a procedure (framework to extract the data) to retrieve data from HEI student databases to facilitate reporting of WPA activity to key stakeholders

2. To benchmark data relating to students on NHS commissioned programmes of study to incidence and prevalence of specific learning needs reported by NHS employers in Equality and Diversity annual reports.

Objectives:

- To use the procedure to generate reports for students (BSc Hons Physiotherapy) who graduated 2011, 2012 and 2013 at MMU;
- Benchmark BSc Hons Physiotherapy against MMU and Faculty of Health students;
- Describe the population of students with respect to particular characteristics:
  - Incidence/prevalence of specific learning disability
  - Academic performance (students who have disclosed specific learning need compared to those who have not)
  - Describe rate of academic progression
- To document the journey of students from with specific learning needs (entry qualifications; progression and academic achievement; first post destination).

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To design a procedure (framework to extract the data) to retrieve data from HEI student databases to facilitate reporting of WPA activity to key stakeholders

To use the procedure to generate reports for students (BSc Hons Physiotherapy) who graduated 2011, 2012 and 2013 at MMU

In order to extract data relevant to the aims of the project, a literature search was carried out to identify factors relating to the reporting of specific learning needs (SpLD)/Dyslexia. We concentrated on SpLD in order to enable comparison of our research to existing literature.

A total of 18 databases, websites and search engines (Appendix 1, page 19) were used with 19 search terms (Appendix 2, page 20) divided into three categories: combined broad truncated terms related to teaching and dyslexia; discipline specific terms which include combinations, such as, nurse, health care, and employee; and finally area specific topics, such as, HEI, NHS and health programme. Additionally, resources from unpublished or grey literature were also explored through the Education-line database. Simultaneously, colleagues/experts in the field were contacted to acquire further materials (e.g. conference papers) on this topic. Two researchers independently carried out the search and verified the findings.

Twenty articles were found relevant to the project, 13 of which provided factors that could be used in the reporting of SpLD. The full list of articles can be found in Appendix 3 (page 21.

The factors identified were:

1. Number of students out of cohort with a PLP (reasonable adjustment)
2. Number of these students with a SpLD
3. No of these that went on to have DSE assessment/funding
4. For the students with DSE funding – what was the cost?
5. Age at start of the programme
6. Gender
7. Entry qualifications
8. Progression/unit marks at each level
9. Suspended studies
10. Withdrew from programme
11. Exit award
12. Ethnic origin

Three full-time, NHS commissioned courses, were chosen for analysis from the Faculty of Health, Psychology and Social Care (HPSC) at MMU:

1. BSc (Hons) Physiotherapy
2. BSc (Hons) Speech Pathology & Therapy
3. BSc (Hons) Psychology and Speech Pathology

Strategic planning and management information (SPMI) reporting was provided by TARDIS, a reporting system used by MMU to provide read only reports from information retrieved from the student records system. All data were retrieved using the TARDIS system (Fig. 1). See Appendix 4 for a detailed description of data extraction.

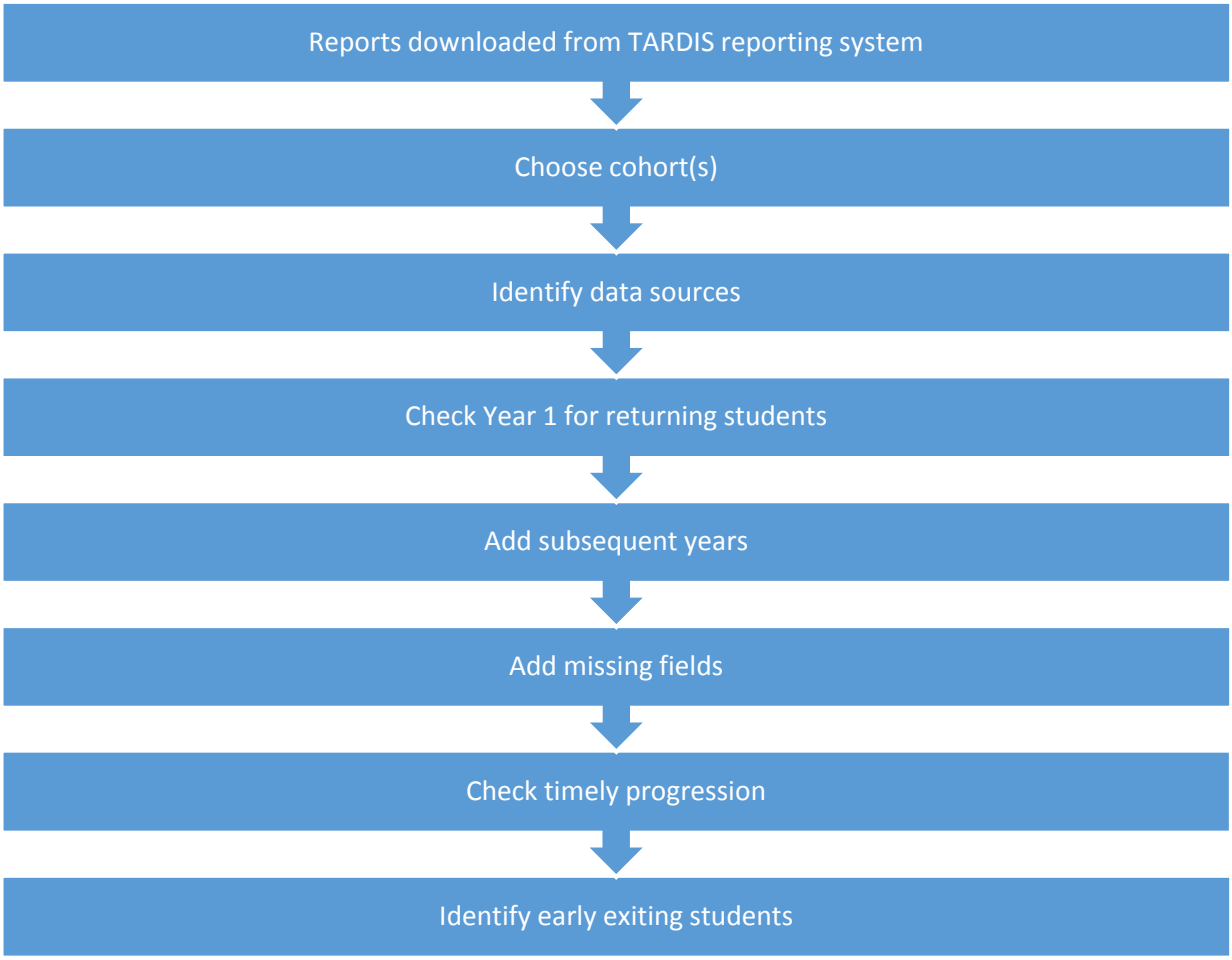

Figure 1: Summary of data extraction procedure.

The data extracted from TARDIS was analysed to address the second aim of phase 1.

All results (absolute and percentages) have been rounded to the nearest whole number.

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Benchmark data relating to students on NHS commissioned programmes of study to incidence and prevalence of specific learning needs reported by NHS employers in Equality and Diversity annual reports.

Benchmark BSc (Hons) Physiotherapy against MMU and Faculty of HPSC students

More students on the physiotherapy and speech pathology courses disclosed a disability (8-16%) over the three cohorts compared to other courses. This is in line with the overall figure of 12% for all students studying subjects Allied to Medicine. As a percentage of the whole university, the highest number of students who disclosed was 7%, slightly rising from previous years. The lowest number of students disclosing on Physiotherapy courses is more than twice that reported by NHS employers in Equality and Diversity Annual Reports (fig. 2).

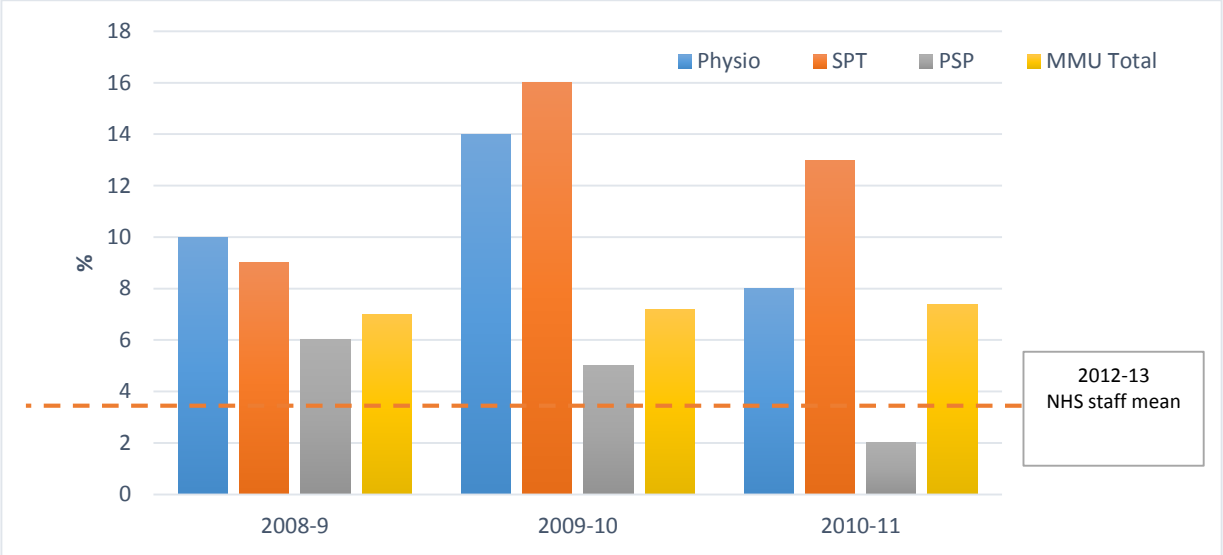

Figure 2: Percentage of total MMU students who disclosed a disability from each course and cohort compared to NHS staff who have disclosed a disability.

Physio = BSc (Hons) Physiotherapy
SPT = BSc (Hons) Speech Pathology & Therapy
PSP = BSc (Hons) Psychology and Speech Pathology
MMU Total = all enrolled students

Describe the population of students with respect to particular characteristics:

Incidence/prevalence of specific learning disability

In 2008-9, nine students in Physiotherapy year one had disclosed a disability (Table 1). Six out of nine had a PLP and of those nine, three were in receipt of DSA.

In 2009-10, 11 students in year one disclosed a disability. One student did not have a PLP. The data does not indicate when specifically the student disclosed their disability, it simply notes if a disclosure occurred during the academic year. Of the 10 students with a PLP, four were in receipt of DSA.

In 2010-11, 7 students in year one disclosed a disability. For two students it is not stated whether they had a PLP. Three out of the seven students were in receipt of DSA.

There is very little difference in the ages between those disclosed a disability and those who did not.

Table 1: Description of BSc (Hons) Physiotherapy student cohorts

Cohort	Year	N=	Disability disclosed (N=)			No disability disclosed (N=)
			Disclosed	DSA	Age (Yrs) Mean(SD) Range	Age (Yrs) Mean(SD) Range
2008-9	1	95	9	3	19(3) 18-40	23(5) 18-34
2009-10	1	81	11	4	22(6) 18-41	21(5) 17-41
2010-11	1	93	7	3	21(4) 18-29	21(6) 18-51

The data cannot explain why six students who had disclosed a disability did not benefit from a PLP (fig. 3). For the students who did not benefit from a PLP the nature of the disability that had been disclosed was not available. It is possible that the medical evidence that the students subsequently provided to MMU was not sufficient to meet definitions of disability provided in the Equality Act (2010), the DDA (1995) or covered by SENDA (2001) and it is for this reason that no personal learning plan was negotiated/no application for DSA was made.

The most prevalent disability in Physiotherapy students was dyslexia (fig. 3). Dyslexia is viewed as the most commonly recognised form of SpLD; other neurodevelopmental syndromes also considered as SpLDs are: dyspraxia, specific language impairment (SLI) and hyperactivity and attention deficit (Deponio, 2005).

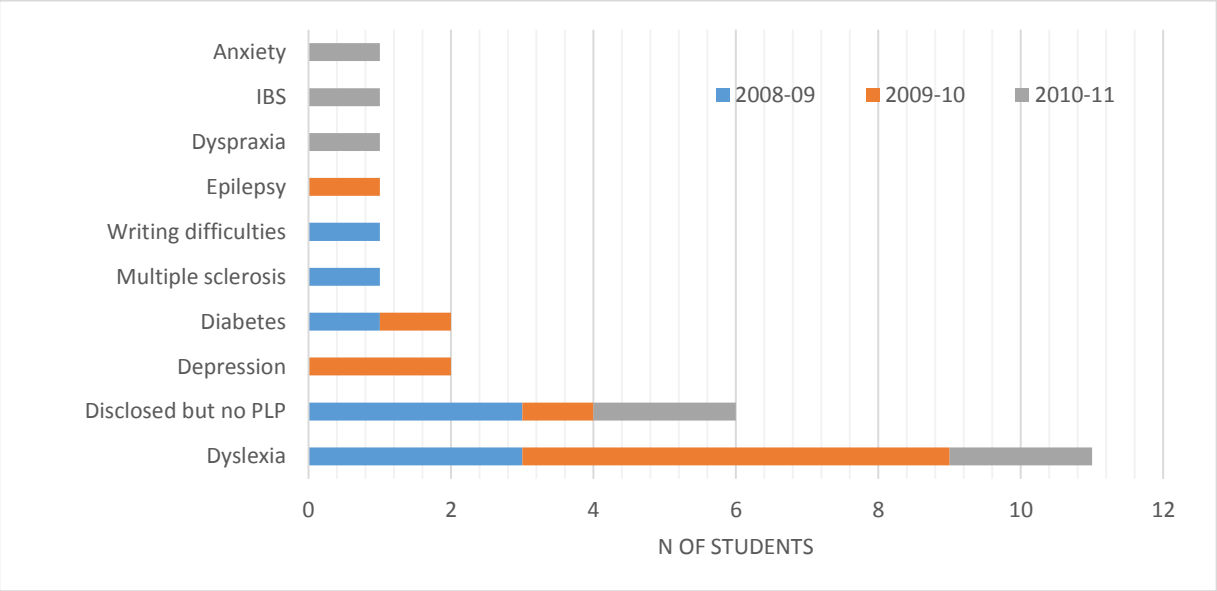

Figure 3: Nature of disability/Personal Learning Plan (PLP) by cohort for BSc (Hons) Physiotherapy.

Academic performance (students who have disclosed specific learning need compared to those who have not)

In the 2008-9 cohort, one student achieved a degree with First Class Honours (dyslexia), two students achieved an upper Second Class Honours degree (dyslexia in both instances), three students achieved Lower Second Class Honours degrees (writing difficulties, diabetes and multiple sclerosis) (fig. 4). For

the whole cohort, 4% achieved First Class Honours, 59% achieved Upper Second Class Honours, 34% achieved Lower Second Class Honours and 1% achieved Third Class Honours.

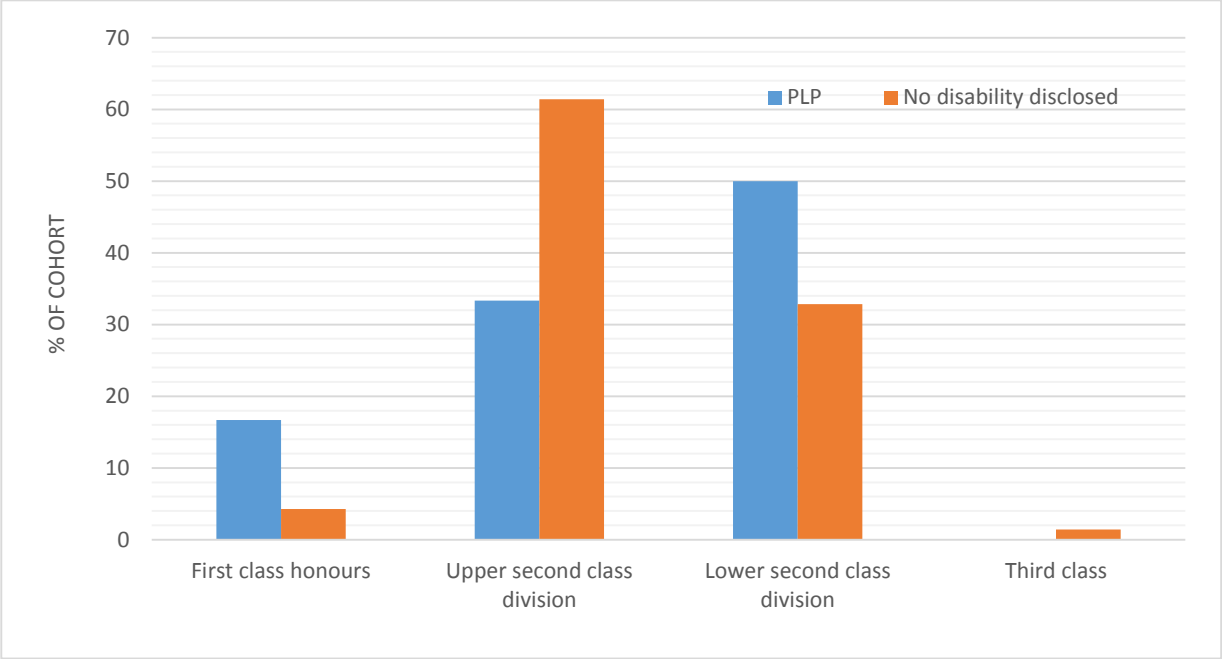

Figure 4: Percentage of qualifications gained by BSc (Hons) Physiotherapy 2008-9 cohort, comparing students who disclosed and disability with those who did not.

In the 2009-10 cohort, one student (10%) achieved a degree with First Class Honours (MH depression), 5 students (50%) achieved an Upper Second Class Honours (MH depression, physical arthritis SpLD dyslexia and 3 further students who disclosed dyslexia), four students (40%) achieved Lower Second Class Honours Degrees (MH depression, physical epilepsy, SpLD dyslexia and SpLD dyslexia. idiopathic anaphylaxis). For that whole cohort 19% achieved First Class Honours, 54% achieved Upper Second Class Honours, 26% achieved Lower Second Class Honours and 1% achieved Third Class Honours degrees (fig. 5).

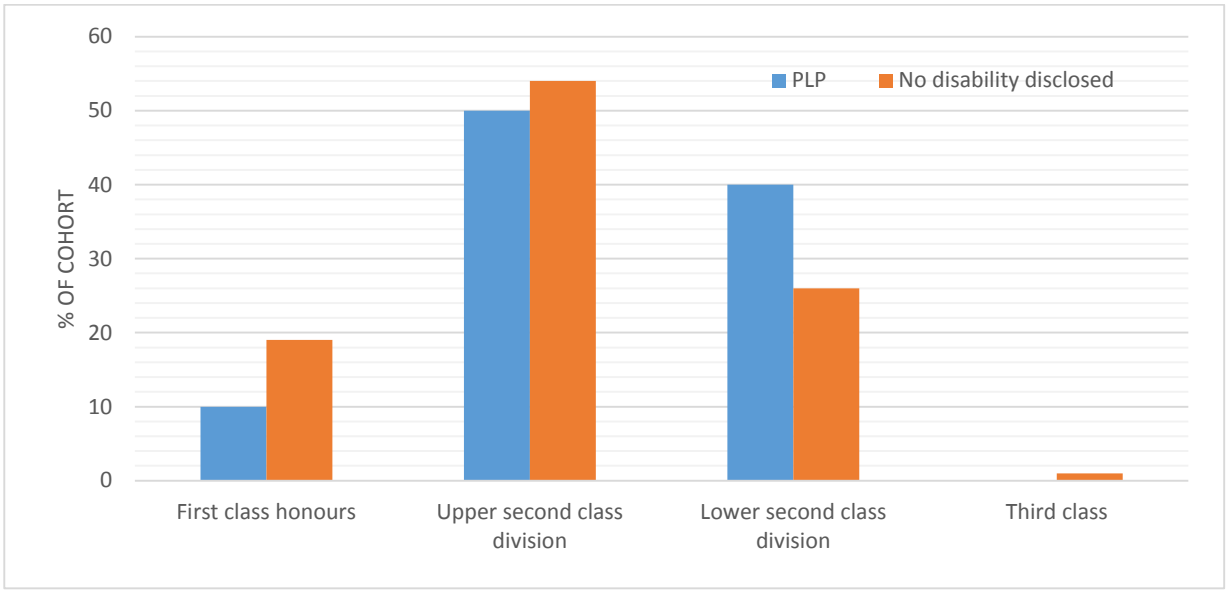

Figure 5: Percentage of qualifications gained by BSc (Hons) Physiotherapy 2009-10 cohort, comparing students who disclosed and disability with those who did not.

In the 2010-11 cohort, no students who had disclosed a disability achieved a First or Third Class degree. Five students (83%) achieved an Upper Second Class Honours degree, (Dyspraxia, Physical – irritable bowel syndrome SpLD dyslexia, and 'not stated'). One student (17%) achieved a Lower Second Class Honours degree (MH anxiety). For that whole cohort 8% achieved First Class Honours, 68% achieved Upper Second Class Honours, 16% achieved Lower Second Class Honours and 1% achieved Third Class Honours degree (fig. 6).

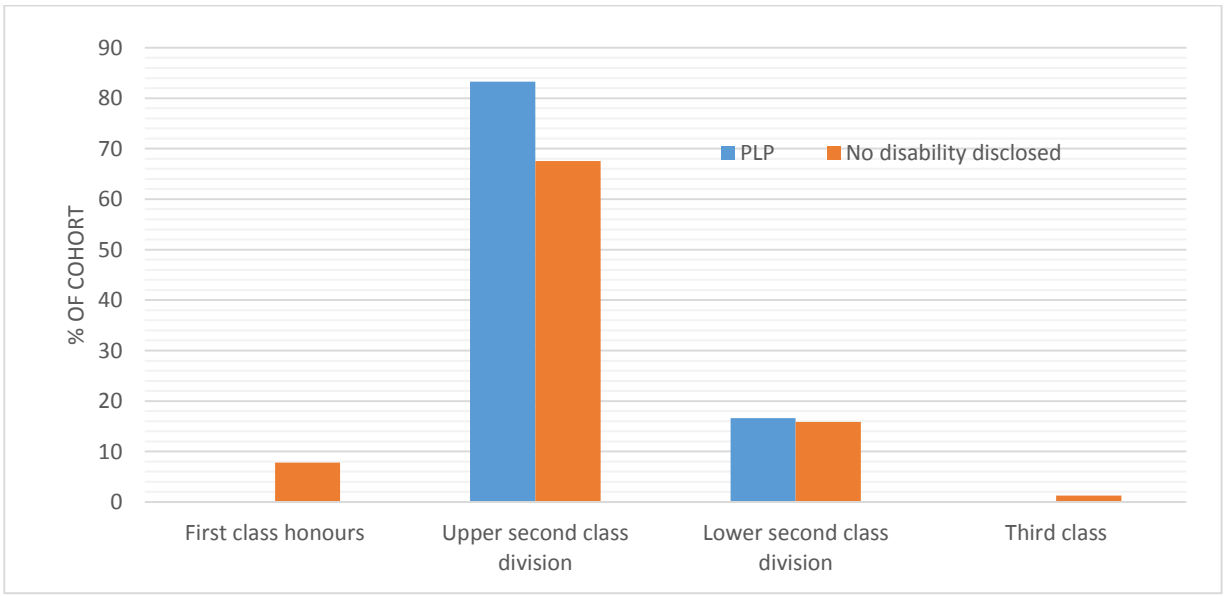

Figure 6: Percentage of qualifications gained by BSc (Hons) Physiotherapy 2010-11 cohort, comparing students who disclosed and disability with those who did not.

Describe the rate of academic progression.

Of the students who disclosed a disability in the 2008-9 cohort, six out of nine proceeded from year 1 to year 2. These students also proceeded from year 2 to year 3. All of the students benefited from a PLP and three out of nine of the students were in receipt of DSA. All third year students who had disclosed a disability successfully completed their programme of study (fig.7).

In the 2009-10 cohort, of the students who disclosed a disability, 11/11 proceeded from year 1 to year 2 in common with their cohort. 10/11 students proceeded from year 2 to year 3. 10/11 of the students benefited from PLP/reasonable adjustment and 10/11 of the students were in receipt of DSA. All third year students who had disclosed a disability successfully completed their programme of study.

In the 2010-11 cohort, two students suspended studies during year 1. One of the two students subsequently disclosed a disability though it is not clear from the available data whether a disability/specific learning need that was unmet contributed to the student's decision to suspend during this stage. This student returned to studies during the next academic cycle and successfully completed the programme. All third year students who had disclosed a disability successfully completed their programme of study.

A more detailed picture student progression, including yearly progression, whether or not the student disclosed a disability and the reasons for withdrawal can be found for all cohorts in Appendix 5 (page 29)

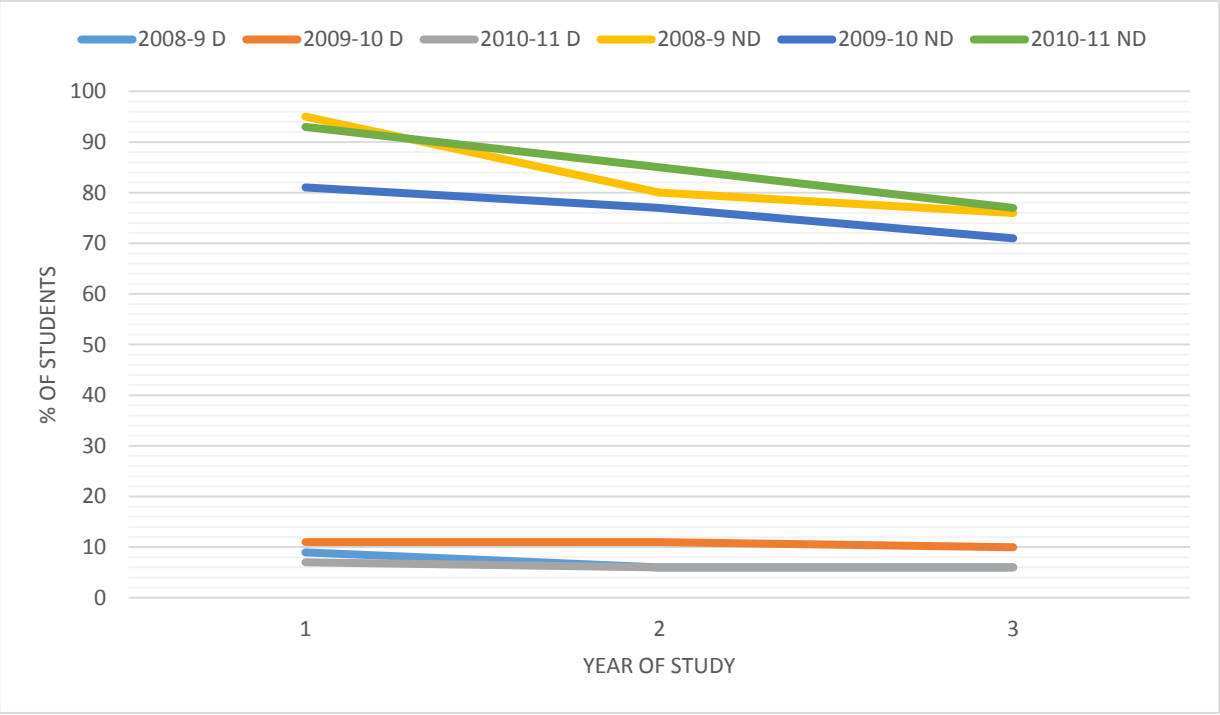

Figure 7: Rate of academic progression compared between those who have disclosed and those who have not disclosed a disability (BSc (Hons) Physiotherapy, all cohorts).

D = Students who disclosed a disability
ND = Students who did not disclose a disability

To document the journey of students with specific learning needs (entry qualifications and first post destination).

We have presented each cohort separately as each contain students with different entry qualifications; for example, only the 2008-9 cohort contains students who had disclosed a disability and entered the programme with an HND/HNC and the 2009-10 cohort contains no Access students who disclosed a disability.

Important to note is that represented in Figs. 8, 9 and 9 are only the entry qualifications of students who disclosed a disability; we have included, for comparison, the students with the same qualifications who did not disclose, but the total number of students in the graphs will not equal the total cohort. At certain times there were as many as 12 different categories of entry qualifications; these have changed over the years, for example A levels are now called A2s .

In the 2008-9 cohort, 10% (9 out of 95) disclosed a disability. 2% (2/95) of students who disclosed a disability entered the programme with A levels or their equivalents; 4% (4/95) an Access qualification; 2% A level equivalents not specified elsewhere (NSE); and 1% (1/95) an HND/HNC.

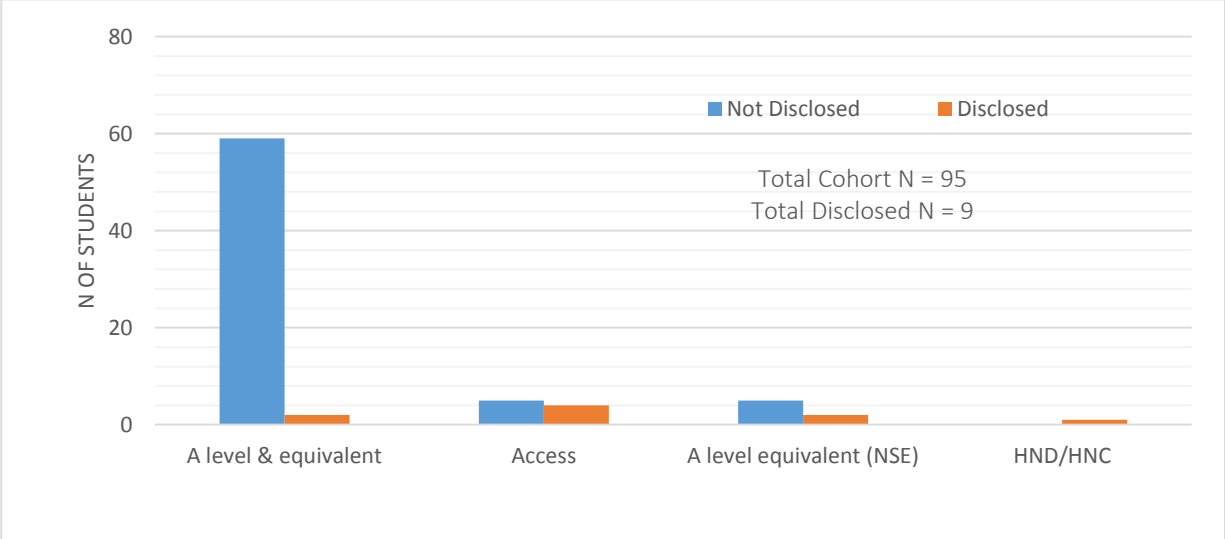

Figure 8: Entry qualifications of all students in 2008-9 cohort

In the 2009-10 cohort, 14% (11 out of 81) disclosed a disability. 5% (4/81) of students who disclosed a disability entered the programme with A levels or their equivalents; 4% (3/81) A level equivalents not specified elsewhere (NSE); 1% (1/81) was an overseas (O/S) graduate; 2% (2/81) their first UK degree; and 1% a graduate equivalent (NSE).

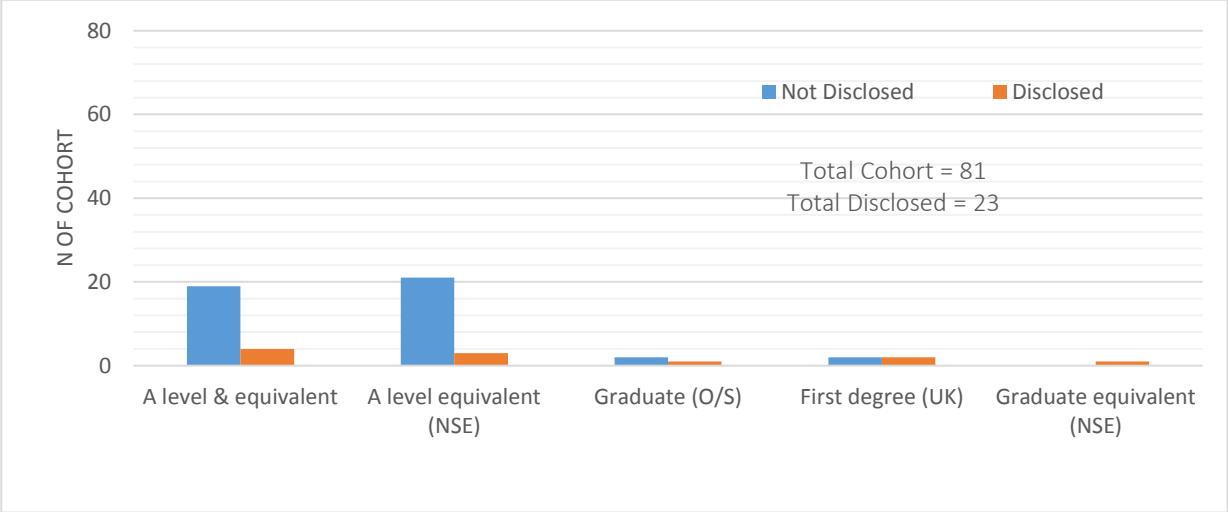

Figure 9: Entry qualifications of all students in 2009-10 cohort

In the 2010-11 cohort, 8% (7 out of 93) disclosed a disability. 3% (3/93) of students who disclosed a disability entered the programme with A levels or their equivalents; 1% (1/93) an Access qualification; 1% had their first UK degree; 1% a level 3 Diploma; and 1% had other level 2 qualifications.

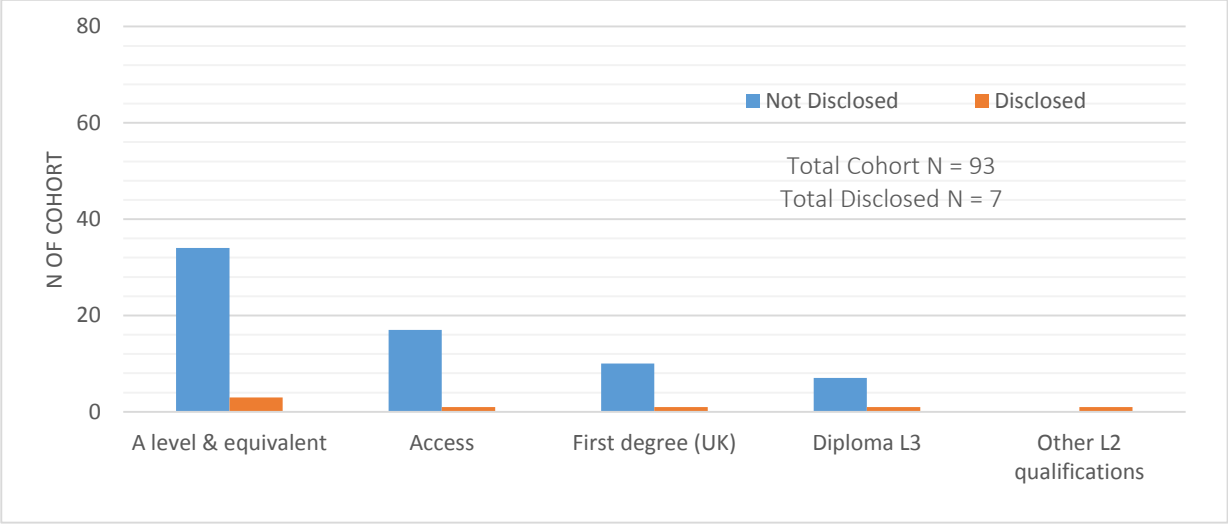

Figure 10: Entry qualifications of all students in 2010-11 cohort

Limitations of study

The data available for analysis was retrieved from databases that were created to satisfy the needs of the institution and its stakeholders (including funding bodies). In some respects the nature of the available data was not sufficient. For example, the number of students who disclosed disability was available, though the point at which the student made the disclosure cannot be derived. Literature suggests that individuals who are diagnosed during their school days are more aware of the help that is available and are more willing to access supportive interventions/technologies than those who are diagnosed during adult life who may be less aware of and more reticent in accessing these resources (Scottish Council for Research in Education, 1998). It would not be unreasonable to speculate that those

who had been recognised as dyslexic during compulsory/post-16 education would have disclosed on enrolment, while those students who were recognised as dyslexic during their degree programme would have disclosed later. Anecdotally, some adults whose dyslexia is diagnosed during their programme of study will not seek a personal learning plan and the data is not sufficient to identify when this has occurred.

It is also conceivable that some students had disabilities but did not disclose at any point during their programme of study. It is not possible to estimate how large this potential source of error is or whether the effect of any such error was equal in magnitude from one cohort to another. Small amounts of attrition are associated with students who had disclosed disabilities but did not benefit from PLP. It cannot be determined whether undisclosed disability was contributor to the withdrawal of other students reported within the data.

The nature of the students' disabilities was available for the UG physiotherapy programme from historical data maintained by the programme team. The same data was not available for other programmes of study so while incidence of disclosure for other programmes (PSP, SPT) can be reported, the nature of the disability disclosed is not available and may not relate to SpLD.

First post destination data is available for the cohorts of interest. However, requests for the data must be made to DHLE. Data that summarises destination countrywide is available to download. However, there is a four week waiting period if specifics for a particular cohort are required. It is not possible therefore to compare first post destination data for those who did/did not disclose disability though this data will be sought and will inform future phases of this project.

Summary

We have designed a repeatable procedure to allow other HEIs to retrieve data relevant to students with a disability. The procedure produced is not restricted by cohort size, programme duration or management information system. It will allow comparison between institutions and the pooling of data at some point in the future. Future work might pilot the procedure in another institution to determine its adequacy given that the software used to maintain databases in other institutions may be different. Larger data sets will produce a greater insight and better management of students with disabilities.

We benchmarked three Physiotherapy cohorts at MMU with overall MMU student data as well as two other NHS commissioned programmes in the same Faculty. We also compared this to the percentage of NHS staff who disclosed a disability in 2012-2013. More students on HEI programmes consistently disclosed their disability compared to NHS staff. More students on Physiotherapy programmes disclosed than MMU students as a whole.

The differences in age between students who disclose and those who do not is very small. Those who disclose a disability are generally not older or younger.

In keeping with other literature, the most frequently disclosed disability is dyslexia, followed by those who are ineligible for/do not seek a PLP and then depression and diabetes.

HEFCE data indicates that students who disclose and are in receipt of DSA do better than those who are not. We have found that students who have disclosed and are in receipt of a PLP generally do better

than those who have disclosed and have not benefited from a PLP. No students with a PLP obtained a Third Class Honours degree over the three cohorts studied.

In terms of academic progression, a smaller percentage of students who disclosed do not proceeded through the programme compared to those who did not. Students who have disclosed a disability and who benefit from a PLP are not disadvantaged and make timely progress through their programme of study.

Students who disclosed a disability have a smaller range of entry qualifications than the total cohort. It is clear that students with disabilities access the programme via traditional and non-traditional routes into HE. Qualifications offered to meet the programme entry requirements by students with disabilities included previous degree, both UK and overseas and also level 2 equivalents. Entry qualifications are not a suitable benchmark or comparator between cohorts because they are constantly changing.

Action Plan

Phase 2: We will conduct interviews with 8-10 NHS employees who have disclosed disabilities (SpLD) while on a physiotherapy NHS commissioned programme of study. We will determine if they subsequently disclosed their disability to their NHS employers. We will explore participants' reasons for their disclosure/non-disclosure decisions. We will explore the barriers and facilitators to accessing support subsequent to disclosure where this has occurred and their perception of the impact of this on the quality of their working life.

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References

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Scottish Council for Research in Higher Education (1998) 'Students first: the experiences of disabled students in Higher education. [online] [Accessed 05/02/2015] http://dspace.gla.ac.uk:8080/bitstream/1905/238/1/085.pdf

Appendix 1 – Databases searched to identify factors relating to the reporting of Specific Learning Needs (SpLD)/Dyslexia

The Databases searched are listed below:

- Social Science Citation Index
- Ebsco Professional Development Collection
- Cambridge Scientific Abstracts: ERIC
- Cambridge Scientific Abstracts: ASSIA
- Medline
- ASSIA
- Cinahl
- Ovid
- SCOPUS
- Web of Knowledge
- Web of Science
- ZETOC
- British Library
- Google Scholar
- COCHRANE
- DfE: https://www.gov.uk/government/organisations/department-for-education
- NHS England: http://www.england.nhs.uk/about/equality/
- OFFA: http://www.offa.org.uk/publications/national-strategy-links-to-supporting-evidence/
- PEDRO

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Appendix 2 – Search terms used to identify factors relating to the reporting of Specific Learning Needs (SpLD)/Dyslexia

Search Terms

Category 1.
student* OR educat* OR learn* OR teach*) AND (dyslexi*)

Category 2.
#1 Nurse
#2 Health care professional
#3 Doctor
#4 Healthcare students
#5 #1 OR #2 OR #3 OR #4
#6 Health personnel
#7 #5 OR #6
#8 Adult Dyslex*
#9 Adult Dyscalcul*
#10 Adult Learning Disability
#11 #8 OR #9 OR #10
#12 Workforce
#13 Employee
#14 Employment
#15 #12 OR #13 OR #14

Category 3.
HEI or University
NHS commissioned program*
University Health program*

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Appendix 3 – Results of the literature search

Table 2: Total list of references found.

	Reference
1	Aiken & Dale (2007) A Review of the Literature into Dyslexia in Nursing Practice. Royal College of Nursing.[Online] [Accessed 30/01/15] http://www.uhs.nhs.uk/Media/suhtideal/NursesAndMidwives/PreQualifyingNursing/RCNreportdyslexiaandpractice.pdf
2	Allison et al., (2007) Managing Disability Information Flow in an academic institutional environment. International Journal on E-Learning. 6(2): 213.
3	CSP (2004) Guidance – supporting disabled physiotherapy students on clinical placement. Chartered Society of Physiotherapists, London.
4	Evans (2014) 'I am not a dyslexic person I'm a person with dyslexia': identity constructions of dyslexia among students in nurse education. Journal of Advanced Nursing. 70(2):360-372.
5	Foster (2008) Enhancing the learning experience of student radiographers with dyslexia Radiography 14: 32e38
6	Millward et al. (2005) Clinicians and dyslexia—a computer-based assessment of one of the key cognitive skills involved in drug administration International Journal of Nursing Studies 42: 341–353
7	MORRIS & TURNBULL (2006) Clinical experiences of students with dyslexia. Journal of Advanced Nursing 54(2): 238–247
8	MORRIS & TURNBULL (2007) The disclosure of dyslexia in clinical practice: Experiences of student nurses in the United Kingdom Nurse Education Today 27: 35–4
9	MORRIS & TURNBULL (2007) A survey-based exploration of the impact of dyslexia on career progression of UK registered nurses. Journal of Nursing Management 15: 97–106
10	Murphy (2009) The clinical experiences of dyslexic healthcare students. Radiography 15(4) 341–344
11	Murphy (2011) On being dyslexic: Student radiographers' perspectives. Radiography 17(2) 132–138
12	Ridley (2011) The experiences of nursing students with dyslexia. Nursing Standard. 25(24) 35-42
13	Sanderson-Mann & McCandless (2005) Guidelines to the United Kingdom Disability Discrimination Act (DDA) 1995 and the Special Educational Needs and Disability Act (SENDA) 2001 with regard to nurse education and dyslexia 25(7) 542–549

	Reference
14	Sanderson-Mann & McCandless (2006) Understanding dyslexia and nurse education in the clinical setting Nurse Education in Practice 6(3) 127–133
15	Storr et al. (2011) Supporting disabled student nurses from registration to qualification: A review of the United Kingdom (UK) literature. Nurse Education Today 31 e29–e33
16	Taylor & Walter (2003) Occupation Choices of Adults with and without Symptoms of Dyslexia. Dyslexia 9: 177–185
17	Walker et al., (2013) Risk, Fitness to Practice, and Disabled Health Care Students. Journal of Psychological Issues In Organizational Culture. 3 Supplement 1:50-63
18	Wharrad, et al (2012) Using reusable learning objects to raise awareness and disseminate research findings about the impact of dyslexia on placement-based learning. Diversity in Health & Social Care. 9(2):141-149.
19	Wray et al (2012) Screening for specific learning difficulties (SpLD): The impact upon the progression of pre-registration nursing students. Nurse Education Today 32(1): 96–100
20	Wright (2000) Educational support for nursing and midwifery students with dyslexia. Nursing standard 14(41):35 -41

Table 3: References with relevant factors used to report SpLD.

	Reference	List of factors used to report students/staff with SpLD
1	Aiken & Dale (2007) A Review of the Literature into Dyslexia in Nursing Practice. Royal College of Nursing.[Online] [Accessed 30/01/15] http://www.uhs.nhs.uk/Media/suhtideal/ NursesAndMidwives/PreQualifyingNursing /RCNreportdyslexiaandpractice.pdf	Literacy and Numeracy Clinical issues [Record keeping/Care planning/Administration of drugs/Manual skills] Understanding Stigma Clinical setting/Placements] Safety Study/Exams/HEI Incidence Discrimination Stress Career options

	Reference	List of factors used to report students/staff with SpLD
		Policy, guidelines, legislation Professional standards Issues in practice: diagnosis, disclosure, fitness to practice, fitness for purpose, patient safety, numeracy, record keeping, manual skills, technology, teamwork, Employer's responsibilities: screening, reasonable adjustment, Assistance: financial support, Psychological & emotional support: HEI, placements, employment Equipment & technology, accessible e-learning Interventions: career guidance, Literacy and numeracy interventions and outcomes Clinical strategies Self-determination
5	Foster (2008) Enhancing the learning experience of student radiographers with dyslexia. Radiography 14: 32e38	When diagnosed Profile of marks for different assessment types Comparison of profiles against non-dyslexic students
6	Millward et al. (2005) Clinicians and dyslexia—a computer-based assessment of one of the key cognitive skills involved in drug administration International Journal of Nursing Studies 42: 341–353	Occupation Gender Age First language Reading difficulties Educational difficulties Difficulties with spelling
7	MORRIS & TURNBULL (2006) Clinical experiences of students with dyslexia.	Disclosure

	Reference	List of factors used to report students/staff with SpLD
	Journal of Advanced Nursing 54(2): 238–247	Self-managing strategies The need for more time Emotional aspects of being a dyslexic nursing student Choice of future work setting
8	MORRIS & TURNBULL (2007) The disclosure of dyslexia in clinical practice: Experiences of student nurses in the United Kingdom Nurse Education Today 27: 35–4	Disclosure
9	MORRIS & TURNBULL (2007) A survey-based exploration of the impact of dyslexia on career progression of UK registered nurses. Journal of Nursing Management 15: 97–106	Incidence Discrimination Length of qualification When diagnosed Qualifications Place of work Role/client contact Staff grade/duration at grade Has dyslexia affected your day-to-day duties? Do you think dyslexia has had an impact on your career progression? Has dyslexia influenced your choice of work setting? What are you reasons for disclosure or non-disclosure of your dyslexia? Please describe the type and level of support you have received in the workplace (practical/emotional/resource)
10	Murphy (2009) The clinical experiences of dyslexic healthcare students. Radiography 15(4) 341–344	Disclosure Initial screening

	Reference	List of factors used to report students/staff with SpLD
		Coping strategies
11	Murphy (2011) On being dyslexic: Student radiographers' perspectives. Radiography 17(2) 132–138	Degree of difficulty for completing professional tasks Visualising the disability Self-protection Strengths and talents The badge of disability Adjustments and support
13	Sanderson-Mann & McCandless (2005) Guidelines to the United Kingdom Disability Discrimination Act (DDA) 1995 and the Special Educational Needs and Disability Act (SENDA) 2001 with regard to nurse education and dyslexia 25(7) 542–549	Diagnosis Legislation Discrimination Reasonable adjustments Disclosure & confidentiality Clinical Placements
14	Sanderson-Mann & McCandless (2006) Understanding dyslexia and nurse education in the clinical setting Nurse Education in Practice 6(3) 127–133	Legislative requirements Positive aspects Difficulties students may experience Communication skills Inconsistent performance Time management Spatial awareness Paperwork Attitudes of healthcare professionals and institutions Strategies for individual students Disclosure
15	Storr et al. (2011) Supporting disabled	Accessing a nursing programme

	Reference	List of factors used to report students/staff with SpLD
	student nurses from registration to qualification: A review of the United Kingdom (UK) literature. Nurse Education Today 31 e29–e33	Information and advice, Financial support, Disclosure Continuing on a nursing programme Perceptions and attitudes of staff, Teaching and learning Strategies, Assessment and methodologies, Anxiety as a result of occupational stress Reasonable adjustments Transition from education to employment.
16	Taylor & Walter (2003) Occupation Choices of Adults with and without Symptoms of Dyslexia. Dyslexia 9: 177–185	Gender Age Occupation Education Symptoms Career choice
19	Wray et al (2012) Screening for specific learning difficulties (SpLD): The impact upon the progression of pre-registration nursing students. Nurse Education Today 32(1): 96–100	Level of qualification, diploma/degree Attendance Request Assessment for SpLD Milestones for SpLD assessment Progression, suspended studies, discontinued

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Appendix 4 - A detailed description of data extraction

Three cohorts for each course were identified for analysis (Table 1). A cohort is a group of students who enrol onto a particular course in year-one for the first time and who then complete the course in the expected time. The cohort was identified using the course length and the last year that data was available for the student; this was then backtracked to identify the starting cohort.

Table 4: Summary of cohorts included in analysis.

Course	Cohort	Year 1	Year 2	Year 3	Year 4
BSc (Hons) Physiotherapy	1	2008/09	2009/10	2010/11	
BSc (Hons) Physiotherapy	2	2009/10	2010/11	2011/12	
BSc (Hons) Physiotherapy	3	2010/11	2011/12	2012/13	
BSc (Hons) Speech Path & Ther	1	2008/09	2009/10	2010/11	2011/12
BSc (Hons) Speech Path & Ther	2	2009/10	2010/11	2011/12	2012/13
BSc (Hons) Speech Path & Ther	3	2010/11	2011/12	2012/13	2013/14
BSc (Hons) Psych & Speech Path	1	2008/09	2009/10	2010/11	2011/12
BSc (Hons) Psych & Speech Path	2	2009/10	2010/11	2011/12	2012/13
BSc (Hons) Psych & Speech Path	3	2010/11	2011/12	2012/13	2013/14

Data was chosen for analysis

i. Mulitple data sources were identified and downloaded (Table 2).

Table 5: Summary of data sources used.

Data	Source
Student Records including Stage Codes	Tardis Report: 'Student Data - Common Parameters'
Student Entry Qualifications	Tardis Report: 'Highest Qualification on Entry'
Student Final Awards	Tardis Report: 'Final Award Results List'

Year 1 for each cohort was checked for any returning students.

ii. Further investigation into the student record was carried out to identify students who have previously studied at the institution. This is to make sure that they have not already been enrolled onto the course being analysed

iii. These students were removed as they belonged to the previous year's cohort. For example, this can happen if a student suspends their studies in a previous Year 1.

Years 2, 3, and 4 (where applicable) were added.

iv. Unique identifiers were used to enable the identification of duplicate students.
v. Duplicated students were removed, for example, those who had returned from suspended studies or repeated a year

Add missing fields

vi. The data not included in the original download was 'final awards', 'entry qualifications' and 'ethnicity'.

Calculating timely progression

vii. Timely progression was defined as a student completing their studies within the expected course length and achieving the Final Award, as opposed to an interim or fall-back award
viii. The timely progression for a course was calculated as a percentage of those students who completed in a timely fashion against those who did not. Timely progression is only recommended when there is a pre-determined course length and therefore is usually restricted to full-time courses

Disability codes and definitions

ix. HESA "Disabled student allowance" fields were used to identify whether or not a student was known to be disabled and whether they were in receipt of Disabled Student Allowance (DSA)
    1 The student has no known disability.
    4 The student has a disability and is in receipt of DSA.
    5 The student has a disability and is not in receipt of DSA.
    9 The student has a disability but information about DSA is not known/not sought.

Identifying students who leave the cohort

x. Students who did not return in subsequent years (repeating, suspending or withdrawing) were identified by comparing the students unique identifiers from one year to the next

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Appendix 5 – Details of student withdrawal

The following tables present data for students who withdrew from the programme. In each instance the table indicates the years during which data is available for the student, whether or not the student disclosed a disability, whether or not the student benefited from a PLP/DSA. Data that reports the reasons for student withdrawal is available in the final column.

Table 6: Withdrawal of BSc (Hons) Physiotherapy students in cohort 2008-9.

ID	Year 1	Year 2	Year 3	Disability	PLP	DSA	Reason for withdrawal
1	✓	×	×	×	×	×	Academic failure
2	✓	×	×	×	×	×	Student required to repeat first year units without attendance. Student was successful at reassessment and a full dataset is available for the 0910 cohort
3	✓	×	×	×	×	×	Student required to repeat first year units without attendance. Student was successful at reassessment and a full dataset is available for the 0910 cohort
4	✓	✓	×	×	×	×	Student withdrew from the second year for personal reasons
5	✓	×	×	×	×	×	Student withdrew from the second year for personal reasons
6	✓	×	×	×	×	×	Student suspended studies during the academic year 0809. The student did not return to the programme following suspension.
7	✓	×	×	×	×	×	Academic failure
8	✓	✓	×	×	×	×	Student withdrew from the second year for personal reasons
9	✓	✓	×	×	×	×	Student transferred to a NHS commissioned programme at another HEI
10	✓	×	×	×	×	×	Student suspended studies during the academic year 0809. The student did not return to the programme following suspension.
11	✓	×	×	×	×	×	Academic failure
12	✓	×	×	×	×	×	Student withdrew from the first year for personal reasons
13	✓	×	×	×	×	×	Student required to repeat first year units without attendance. Student was successful at reassessment and a full dataset is available for the 0910 cohort
14	✓	×	×	×	×	×	Student required to repeat first year units without attendance. Student was successful at reassessment and a full dataset is available for the 0910 cohort
15	✓	×	×	✓	×	×	Academic failure
16	✓	×	×	✓	×	×	Academic failure
17	✓	✓	×	×	×	×	Student transferred to a non NHS-commissioned programme at MMU
18	✓	×	×	×	×	×	Student required to repeat first year units without attendance. Student was successful at reassessment and a full dataset is available for the 0910 cohort
19	✓	×	×	×	×	×	Student required to repeat first year units without attendance. Student was successful at reassessment and a full dataset is available for the 0910 cohort

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Table 7: Withdrawal of BSc (Hons) Physiotherapy students in cohort 2009-10

ID	Year 1	Year 2	Year 3	Disability	PLP	DSA	Reason for withdrawal
1	✓	✓	×	×	×	×	Academic failure
2	✓	✓	×	×	×	×	Student suspended studies in the second year of the programme. Returned in subsequent cohort and completed studies
3	✓	✓	×	×	×	×	Academic failure
4	✓	×	×	×	×	×	Student suspended studies in the first year of the programme. Returned in subsequent cohort and completed studies
5	✓	✓	×	✓	✓	×	Student withdrew from the second year for personal reasons
6	✓	×	×	×	×	×	Student withdrew from the first year for personal reasons
7	✓	✓	×	×	×	×	Academic failure
8	✓	×	×	×	×	×	Student suspended studies in the first year of the programme. Returned in subsequent cohort but subsequently withdrew from second year.
9	✓	×	×	×	×	×	Student withdrew from the first year for personal reasons

Table 8: Withdrawal of BSc (Hons) Physiotherapy students in cohort 2010-11

ID	Year 1	Year 2	Year 3	Disability	PLP	DSA	Reason
1	✓	×	×	×	×	×	Student withdrew from the programme in the first year for personal reasons
2	✓	✓	×	×	×	×	Student successfully completed year 1. Withdrew from the programme during the second year to transfer to another HEI
3	✓	✓	×	×	×	×	Academic failure
4	✓	×	×	×	×	×	Student withdrew from the programme in the first year for personal reasons.
5	✓	×	×	×	×	×	Student withdrew from the programme in the first year for personal reasons.
6	✓	×	×	×	×	×	Student withdrew from the first year for personal reasons
7	✓	×	×	×	×	×	Student repeated units of the first year without attendance – continued with the 1112
8	✓	✓	×	×	×	×	Student repeated units of the second year without attendance – continued with the 1112 cohort
9	✓	×	×	×	×	×	Student withdrew from the first year for personal reasons
10	✓	✓	×	×	×	×	Student did not complete first year. Repeat without attendance for second year. Withdrawn for academic failure
11	✓	✓	×	×	×	×	Student repeated units of the second year without attendance – continued with the 1112 cohort
12	✓	✓	×	×	×	×	Withdrew from the second year for personal reasons
13	✓	×	×	×	×	×	Student repeated units of the second year without attendance – continued with the 1112 cohort

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