Speech and Language Therapy Students: how do those with 'non traditional' university entry qualifications perform?

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Running head: NON-TRADITIONAL ACADEMIC ENTRY STUDENTS IN SLT

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Abstract

Background: Entry to speech and language therapy (SLT) undergraduate pre-registration programmes in the UK is usually achieved through qualifications attained at school (e.g. A-levels). A smaller number of people who did not succeed academically at school, enter through qualifications achieved post-schooling, for example Access to Higher Education courses. This second group of students are attractive recruits to SLT training programmes as they bring different experiences and backgrounds to the programme and to the SLT profession. However, there are no published studies which explore the academic performance or degree and employment outcomes of students who enter university through this route.

Aims: To investigate the success of non-traditional entry students, specifically those with Access qualifications, on one pre-registration SLT undergraduate degree at a university in the UK. Success is measured in terms of module results, obtaining a degree, the ability to register as an SLT and first employment destination post-graduation.

Methods & Procedures: University applications were reviewed and students who entered via an Access course were identified for a ten-year period. Results for modules, individual assessments and final degree classification were obtained from their files and were compared against the mean score of traditional entry students on the years of the course covered by this study using a series of one sample t-tests.

Outcomes & Results: The students who entered through the non-traditional academic route are generally successful in completing their degree and in registering to work as an SLT. However, as a group they perform less well on the degree overall, on individual modules and on written exams and they do not close this performance gap over the four years of the degree. In contrast, however, they perform on a par with their peers on other types of assessment (e.g. clinical placement, case study, data exercise). The Access students were more likely than traditional entry students to be working as an SLT six-months post-qualification.

Conclusions & Implications: These results suggest that some types of assessment may be more effective at tapping the skills of students from non-traditional academic backgrounds, and that more tailored support could be provided for this group of students in tackling university written examinations throughout all years of the programme. Despite limited preparation for university level study and mixed performance on assessment, students from non-traditional academic backgrounds can do well at university and successfully gain employment as SLTs.

What this paper adds

What is already known on this subject

Students enter university with qualifications attained at school (i.e. A-levels or equivalent in the UK) and also through alternative academic routes (i.e. Access courses or equivalent). Students who enter university without the usual qualifications contribute a great deal to universities, bringing breadth and depth of experience to their programmes of study. However, no studies have looked at the success of the students from non-traditional academic backgrounds in completing a degree in speech and language therapy.

What this study adds

Students from non-traditional academic backgrounds can be successful in completing their degree and in being able to gain employment as SLTs. Written examinations may present particular challenges to students with Access qualifications and they may benefit from tailored support with this type of assessment.

Introduction

Entry into the profession of Speech and Language Therapy / Pathology, or Logopaedics is by either undergraduate or masters level degree, or their equivalents. The majority of people gain entry to university through the qualifications secured at school. For some, however, academic achievement at school does not reflect their actual academic ability or their potential for clinical performance (e.g. Poussaint 1999). For them, university entrance can be gained through alternative qualifications gained post schooling such as foundation degrees or Access to Higher Education courses and extended medical degrees (e.g. Garlick & Brown 2008).

These routes are seen as providing an important means of diversifying the student population (Mathers *et al.* 2011) and, subsequently, the healthcare workforce. Increasing diversity is a major issue internationally (see, for example, Cohen & Steinecke 2006; Jackson & Daly 2004) and in the UK has been a government driver for several years, with the requirement that 'National Health Service organisations [and] education providers… must shape and influence education and training so as to open up opportunities to the whole of the community' (DoH 2001, p. 14). Diversity is important not just for reasons of social justice but also to meet the needs of an increasingly diverse population in many countries. Research has shown that some degree programmes are making small but as yet nonsignificant gains in terms of increasing diversity among students (e.g. Mathers *et al.* 2011), but there remains untapped potential for recruiting from courses which are completed post schooling, such as Access courses (Greenwood *et al.* 2007).

Access courses are designed primarily for people who would like to study at university but who left school without the usual qualifications for university entry, thus providing a sort of 'second-chance' education (McFadden 1995). They include a combination of modules covering subject-specific knowledge and generic study skills components. Methods of module assessment vary between courses and are validated on a programme-specific basis, but

students' learning is typically assessed by a combination of coursework, presentations, reports, essays, in-class tests and/or exams. Courses are usually completed in one year of full-time study (or two years part-time).

Access courses primarily attract older students (aged 21 or over) and/or those with no or few previous formal academic qualifications, and are those who have previously been unable to benefit from the education system (e.g. Burke 2004). This student group is culturally diverse, more likely to come from more deprived areas and includes a high proportion of women (QAA 2012). They also come from a wide range of backgrounds in terms of social class (Reay *et al.* 2002; Ross 2003).

There is a small body of published research which explores whether students entering university – including those undertaking training in the healthcare professions – via a non-traditional academic route (e.g. an Access to Higher Education course) perform as well as their counterparts from traditional routes. Wharrad, Chapple and Price (2003) determined the relationship between pre-entry qualifications and academic outcomes on an undergraduate degree in nursing at a British university. Students entering the course with non-traditional qualifications were found to achieve slightly lower marks throughout the course and had a higher rate of attrition than those who had traditional qualifications. This pattern is mirrored by earlier research carried out by Kevern, Ricketts and Webb (1999). They found that nursing students entering with Access qualifications accounted for the highest proportion of students who withdrew from study, and that they achieved the lowest scores in assessment of theoretical knowledge: entry qualification was found to be the first predictor variable for success on the programme. They raise the issue of ensuring that support systems are targeted appropriately for students who have entered university via Access courses, and comment that more work is required to determine how this might be done. Ofori's (2000) study examined the

performance of students with and without conventional school qualifications on three modules on a pre-registration diploma in nursing and, in contrast to the studies mentioned above, found no significant difference in performance between students with an Access qualification and their peers. Similarly, Garlick & Brown (2008) determined that the final scores of a group of students on an extended medical degree programme were indistinguishable from those of their peers who entered the degree with the qualifications from school. The students on the extended programme had achieved lower grades in their school exams than would usually be acceptable for entry to medical school.

This rather mixed picture is perhaps unsurprising given the variation both in outcomes measured (marks for specific modules, average marks for a whole degree etc), and in degree programmes examined, and as yet no detailed profile has been presented of the relative strengths and weaknesses of students with non-traditional pre-entry qualifications in performance across the whole range of assessment in a professional training programme. In the field of SLT training, while there have been studies which have explored under-represented groups such as men and people from ethnic minorities (e.g. Greenwood *et al.* 2006; Boyd & Hewlett 2001; Stapleford & Todd 1998), little is known about the outcomes for non-traditional entry SLT students from the perspective of their academic and professional achievement. Such information may assist healthcare education providers in providing the kind of tailored support which previous research has highlighted as important.

The study reported here aims to provide such detailed information by exploring the performance of students who have entered a four year undergraduate degree via Access courses, in comparison to those entering via a 'traditional' route, that is school qualifications. The four-year B.Sc. (Hons.) degree in Speech Sciences at University College London (UCL) offers a direct pathway into the profession of speech and language therapy[1].

The aims of this study were (i) to examine the success of the non-traditional academic entry route students in terms of individual modules across the degree and (ii) to examine the eligibility of these students to work as SLTs and their success in terms of securing employment as an SLT.

Method

Ethical approval for this study was granted by the Research Ethics board in Psychology and Language Sciences at UCL. The project was registered with the Data Protection Officer and data were stored anonymously and securely.

Participants

The application information for ten years of the BSc Speech Sciences degree (2000-2009) was reviewed and all students who entered the programme with an Access to HE diploma were identified (N=34). Data from these participants were compared against those of students who had entered the programme via traditional routes (N=426).

Data analysis

In contrast to other countries which use a Grade Point Average system, academic performance is typically measured in the UK by reference to percentage marks, weighted averages and classifications[2]. The following information was available for all the Access students analysed:

- percentage point performance on each piece of assessed work (e.g. written examination; data analysis coursework; viva examination);

- percentage point performance on the modules of the course (these usually include more than one piece of assessment, e.g. coursework (worth 40% of the final mark) plus written examination (60%));

- overall degree classification for those who had completed the degree programme (this is calculated on the basis of the mean of the best 75% of modules over the four years, and including the four professional studies units).

These data were compared against the mean score of non-Access students on the years of the course covered by this study using a series of one sample t-tests. The one sample t-test is a standard analysis for comparing a sample with the performance of a population. Since several t-tests were performed an experiment-wise Bonferroni correction was applied to avoid Type I error. Though more powerful analyses are available, this was viewed to be the most reliable analysis possible as some items of data from earlier years in the sample were missing (individual assessment marks – but not overall module marks – for years 2001-04).

Information is also presented on the first employment destination post-graduation of the two groups of students, where this information is available. Information is routinely requested from graduates six months after graduation.

Results

Profile of students on entry to the programme

Thirty-four students entered the B.Sc. in Speech Sciences at UCL between 2000 and 2009 with an Access to HE diploma, accounting for 7.4% of the 460 entrants to the programme over that period. The national average of Access students studying at degree level is 2% (QAA, 2012). Table 1 provides summary information on the profile of the students on the degree during the period of the study.

Table 1. Profile of Access students vs. non-Access students entering the course 2000-09

	Access students	Non-Access students
Number of entrants	34	426
Mean age on entry	24	22
Age range on entry	21-51	17-52
Proportion of men	3.03%	3.15%
Ethnicity		
White	29 (85.3%)	337 (79.1%)
Black	0	59 (13.8%)
Asian	5 (14.7%)	13 (3.1%)
Chinese	0	17 (4.0%)
Attrition rate	20.6% (7)	9.9% (42)

The ratio of male to female Access students is low compared to the national pattern of male students accounting for 42.9% of all those in undergraduate study in the UK in 2010-11 (HESA, 2012), and compared to students studying subjects allied to medicine (19.8%). However, it is not dissimilar to the corresponding ratio relating to their non-Access counterparts. The data

provided in table 1 also highlight the fact that the group of Access students on this programme are no more diverse (in age, ethnicity or gender) than those who entered via traditional qualifications, and in fact the non-Access students constitute a more diverse group in terms of ethnicity.

At the time of writing, 23 Access students and 306 non-Access students had graduated (four Access students and 78 non-Access students were still studying). Seven Access students had withdrawn from study (two in Year 1; three in Year 2; two in Year 4). Withdrawal from the course was for a variety of reasons, including personal and financial circumstances and poor academic performance, though none of the Access students who left the course did so because they felt SLT was not the right choice for them. The attrition rate of 20.6% is somewhat higher than 2009-10 UK national non-continuation rate for all students on all courses of 7.2%, and of 12.4% on subjects allied to medicine (HESA, 2012).

Academic performance

Analysis of all the modules of the degree programme shows that the non-Access students perform better than the Access students on all but one module on the degree: first year linguistics, with eight of these differences (across Years 2, 3 and 4) statistically significant.

Type of assessment

Access students performed less well than other students in all written examinations, and significantly less well in five exams (see table 2; the programme includes 15 exams over four years). An experiment-wise Bonferroni correction yielded a corrected alpha value of $\alpha=.0033$ (.05/15); significant results are marked (*). Note that significant differences were only observed for exams in the latter two years of the degree programme.

Table 2. One sample t-test analyses of Access vs non-Access students' performance on written exams (* indicates a statistically significant difference)

Module	Access students			Non-A students			t	df	p
	N	Mean	SD	N	Mean	SD			
Year 1									
Professional Studies 1	32	56.48	7.59	407	59.22	5.75	-1.48	31	.16
Phonetic Science 1	31	59.16	9.45	404	63.00	9.74	-2.82	30	.01
Intro. to Psychology	31	60.59	6.20	408	62.33	6.65	-1.80	30	.09
Child Language	31	55.55	6.07	407	59.88	7.08	-2.95	30	.01
Year 2									
Professional Studies 2	27	59.27	6.43	394	59.38	6.06	-1.41	26	.17
Phonetic Science 2	29	46.73	11.67	395	52.86	11.38	-3.28	28	.01
Anatomy & Physiology	29	50.89	11.31	394	58.13	11.23	-0.56	28	.58
Research Methods 1	30	58.40	16.63	395	63.86	13.06	-1.06	29	.31
Year 3									
Professional Studies 3	25	53.26	9.21	348	58.97	7.09	-3.57	24	<.001*
Disorders of Vocal Tract 1	25	55.02	5.05	349	56.71	7.10	-1.68	24	.12
Hearing Science	25	52.45	8.58	350	58.80	7.50	-4.55	24	<.001*
Research Methods 2	25	53.54	12.64	351	62.43	13.67	-4.10	24	<.001*
Year 4									
Professional Studies 4	22	55.81	6.18	304	60.73	5.90	-3.53	21	<.001*
Disorders of Vocal Tract 2	22	53.09	7.83	304	58.28	8.28	-3.52	21	<.001*
Health Psychology	22	58.16	7.75	304	61.83	5.86	-2.71	21	.01

Rather than show an improvement in written exams, which might have been expected (and which might result in smaller differences between the groups in the later years of the course), the Access students continue to perform less well than students who have qualifications from school. Examining results of individual Access students across the four years of the course, there are equal numbers of students (nine) maintaining and decreasing their average exam marks (by at least 4%); only one student improved by at least 4% between Year 1 and Year 4.

Table 3. One sample t-test analyses of Access vs non-Access students' performance on practical assessments (* indicates a statistically significant difference)

	Access students			Non-A students					
Module	N	Mean	SD	N	Mean	SD	t	df	p
Year 2									
Oral Presentation	27	63.04	6.84	407	62.10	9.35	.51	26	.618
Year 3									
Viva Examination	25	57.72	9.07	394	61.83	9.02	-2.18	24	.003*
Clinical Placement	25	63.23	9.83	394	63.87	8.45	-.33	24	.747
Year 4									
Oral Presentation	22	62.26	12.03	304	64.72	8.13	-.64	21	.529
Viva Examination	22	58.00	8.8	304	62.11	7.24	-1.83	21	.084
Clinical Placement	22	61.79	10.09	304	65.09	7.97	-2.02	21	.059

In practical assessments (oral presentations in Years 2 and 4, viva examinations and clinical placements in Years 3 and 4) a further set of one-sample t-tests revealed only one significant difference between groups of students (after Bonferroni correction): the 3rd year viva examination (Access mean=57.72, SD=9.07; non-A mean=61.83; $t(24)=-2.49$, $p<.01$) – see table 3. No significant differences between the two groups of students were found for any of the data-based coursework assignments. In fact, the Access students overall perform better than the average 'traditional' student on six of the 14 assessments of this type, all of which are in the first and second years of the course.

Overall results

The number of degrees awarded between 2004 (entrants in 2000) and 2011 is shown in table 4, by class of degree, across two types of degree: clinical and non-clinical. Although all the students enter the programme with the intention of completing a degree which will enable them to register to work as an SLT, there are some situations where a student will not meet the requirements to qualify to work as an SLT, and will instead obtain a 'non-clinical' Bachelors degree. The professional requirements of the degree are more stringent than those for obtaining a non-clinical BSc degree at UCL (e.g. students must pass all modules on the course and must achieve an average of at least 50% in professional studies modules across the four years of the course). Others decide themselves not to pursue the professional qualification (possibly because they do not believe that the clinical job will be right for them). These students are awarded a 'non-clinical' BSc degree, and are not eligible to register as an SLT.

Three of the 23 Access students (13.0%) who completed their degree did not graduate with the professional degree. This can be compared to the traditional entry students where 13

of the 306 (4.2%) did not graduate with the professional degree. A Fisher's exact test indicates

that the difference between these two groups is approaching significance (p=.083).

Table 4. Final degree classifications, Access students vs. other students (graduating 2004-2011),

for students graduating with clinical and non-clinical degrees.

	First	Upper second	Lower second	Third
Clinical degree				
Access students	0	12 (60.0%)	8 (40.0%)	0
Non-Access students	54 (18.4%)	199 (67.9%)	40 (13.7%)	0
Non-clinical degree				
Access students	0	0	2 (66.7%)	1 (3.3%)
Non-Access students	1 (7.7%)	4 (30.8%)	7 (53.8%)	1 (7.7%)

First destination

As mentioned above, of the 23 Access students who had completed their degrees at the time of

writing, three did not receive the clinical qualification. Of the remaining 20, it was possible to

obtain information on the first job destinations of 15 graduates: 11 were working as SLTs and

four were looking for an SLT job (three of these graduated within a year of writing). There are

five students for whom there is no information; we have been unable to locate them, but that

does not indicate they are not working as SLTs; it could be that we have been unable to locate

them due to name change for example. Of the 306 non-Access students who have graduated,

we were able to obtain information of the first destinations of 175. A comparison of the two

groups of students is shown in table 5, and indicates that of those about whom we have

information, 73% of Access students were working as SLTs compared with 64% of students who

had entered the programme with traditional qualifications.

Table 5. First employment destinations post-graduation of Access and non-Access graduates

from the BSc Speech Sciences

	Access students	Non-Access students
working as an SLT	11	112
looking for SLT work	4	32
taking time out	0	4
travelling	0	5
PG study	0	7
other	0	15

Discussion

Students enter the UCL Speech Sciences programme with the goal of obtaining a Bachelors

degree and being eligible to work as an SLT. This study demonstrates that students who enter

from non-traditional academic backgrounds can be successful in achieving this goal. However,

the average non-Access student performs significantly better than Access students, both overall

on the degree and in several of the individual modules, matching previous research in nursing

(e.g. Wharrad *et al.* 2003). The difference may be due to the predominance of written exams in

the degree (only three modules out of a total of 19 do not involve an exam) and differences

between the groups of students were particularly marked on this type of assessment. Given the lack of focus on written examinations in Access courses, it is possible that this group of students is less experienced with this method of assessment; it may simply be that Access students perform less well in this kind of assessment and especially in the later years of the course when exams focus on the consideration of case studies in the abstract rather than factual understanding. Students in the first year of study on our B.Sc. course are provided with study skills sessions on time management, note taking, essay writing and revision and exam technique, and support is provided throughout the course. These sessions are well attended, especially by ex-Access students, but it is possible that they would benefit from more on-going tailored support. This study reports the results from one institution, and the picture may be different in other institutions offering SLT training. The main factors which are likely to impact on differences across institutions are not only the level of support provided to students on admission and throughout their programme of study, but also the emphasis on examinations compared with coursework (i.e. the number of examinations and how heavily they contribute towards individual module marks and overall degree classification) as well as differing entry requirements between institutions.

In contrast to written examinations, the data here reveal that the Access students perform on a par with their peers (and sometimes slightly better) on the other types of assessment, which include data analysis and case studies. Students may benefit from these types of assessment for a number of reasons: their familiarity from previous study; the environment in which the assessment is completed (i.e. at home rather than a high-pressured exam situation); the length of time they have to reflect on what they have done (typically students are given up to a month to complete coursework assignments); the opportunity provided (and indeed encouraged) to engage with fellow students about the task and the nature

of the task itself (e.g. engaging directly with data, presenting actual cases of clients with communication difficulties, rather than discussing abstract cases as in written exams). Students entering via the non-traditional route also perform similarly to other students on practical examinations, such as clinical placements and presentations. The only exception here is the viva examination in the third year of the course, in which the performance of the Access students was significantly worse than that of their peers. The main focus of these examinations is on three unseen questions relating to aspects of clinical management and, with two examiners present, the viva examination – particularly the first one taken in Year 3 – can be particularly stressful for the student.

These findings underline the need, which has been noted before (e.g. Christie *et al.* 2007), for those working with students on SLT training courses to be alert to the potential difficulties of transferring learning skills from one setting to another. An awareness of this may impact on (a) the way in which students are assessed: coursework may be better at tapping the kinds of abilities these students have, and (b) the way in which students entering without traditional qualifications are supported: as well as pastoral care and support with practical considerations such as the time to study, this group of students may need particular help with preparation for written exams, above what is generally offered to students. They may also benefit particularly from support which helps them to identify areas of relative strength in terms of assessment and on recognising where to focus their energies. This help may be most valuable if offered in the first year of study (Lowe & Cook 2003), though this group of students may require more than just the initial 'stepping stones' into HE and university staff may need to ensure support remains in place throughout the training (Elliot & Brna 2009).

An alternative – or additional – factor affecting the non-traditional students' performance may be that since a lower second class degree (i.e. a final weighted average of 50-

59%) provides straightforward access to their chosen profession, they may simply be content with that outcome. In the case of those students who are juggling competing demands on their time (e.g. Osborne *et al.* 2004), they may deliberately do "enough" rather than as well as they can, and this may be particularly the case with tasks that are less enjoyable (e.g. exam revision).

Also of note in the profile of students was the relatively high rate of attrition amongst the Access students (see also Kevern *et al.* 1999). Attrition for both Access and non-Access students was higher than the national average. This is not entirely unsurprising because of the nature and length of the course, and it is not uncommon for students to decide that the course is not suitable for them after beginning their studies, especially once clinical placements have begun, at which point they gain clearer – first-hand – knowledge of the extent of the roles and responsibilities of a speech and language therapist. Indeed, higher attrition rates are reported for courses which lead to professional qualifications than for non-vocational undergraduate programmes (Hinton & Jinks 2009). Interestingly, none of the non-traditional entry students left the programme because they did not feel that SLT was the correct choice for them. This would suggest that these students have researched the profession and have a good understanding of the work an SLT does. This cohort of students, both from non-traditional and traditional academic backgrounds, includes students who are older than the typical university entry 18 or 19 year old. These older students may have additional pressures on their time such as paid employment (Christie et al. 2002) and family / domestic responsibilities (Osborne et al. 2004) in addition to university work. This is an area which would benefit from additional study.

The information on first destination of the students post-graduation, though limited by the response rate of graduates, suggests that students who begin their SLT training without the traditional entry requirements and who successfully qualify, go on to succeed also in gaining employment as an SLT. From the numbers that we have, they appear to do no worse than

traditional students in this respect. Arguably, this is the outcome that matters most to the students themselves. More research in the area of the employment destinations of different groups of students (including graduates of both undergraduate and postgraduate programmes) would be particularly useful, especially in the current context of significant changes to the funding and organisation of healthcare and training in the UK.

A note of caution is of course required in the interpretation of the findings of this relatively small-scale study. As with previous research in this area (e.g. Wharrad *et al.* 2003), only one degree programme was considered, and although the study explored data from ten years' worth of entrants to this programme, the numbers of students in both the Access and non-Access groups are relatively small. Larger scale studies in this area would be valuable, though with the low proportions of non-traditional entry students per year, data from many cohorts would be necessary. Alternatively a cross-institutional study might provide sufficient data for conclusions with wider scope to be drawn, though such a study would necessarily include a number of differing variables to take into account (e.g. variation in entry requirements, different levels of student support, as mentioned above). We offer the findings of this study as a snapshot of a group of SLT students in the UK in the early 21st Century, and as a pointer for future research.

The proportion of students who enter this programme with non-traditional academic backgrounds is four times the national average (QAA 2012) and yet is only 7.4% of the total number of students. The drive by the government and universities, in the UK and elsewhere, to recruit students from a broad range of backgrounds to work as SLTs makes the profession better prepared to serve a diversity of communities. These findings suggest that though targeted support may be beneficial for some, these individuals are professionally competent students and have the potential to be critical-thinking, reflective clinicians (HPC 2007).

Footnotes

[1]A level entry requirements for the BSc Speech Sciences at UCL at the time of writing was ABB. This is equivalent to an International Baccalaureate Diploma with 34 points overall (plus a combined score of 16 achieved in three higher level subjects), and to 5,4,4,4 in US Advanced Placement scores. Successful students on the course are eligible to apply to the UK Health & Care Professions Council (HCPC) for registration as a speech and language therapist and are recommended for membership of the Royal College of Speech and Language Therapists.

[2] The British undergraduate degree classification system grades performance thus: First class honours (1st): 70% and above; Second class honours, upper division (2:1): 60-69%; Second class honours, lower division (2:2): 50-59%; Third class honours (3rd): 40-49%; Ordinary degree (Pass): 39% and below. At UCL, first class honours is equivalent to a Grade Point Average of 3.6-4.0

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