Reading Assessments for students with ASD: A survey of summative reading assessments used in Special Educational Schools in the UK

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Abstract

Schools have an obligation to assess the literacy skills of their students, and the provision of reading instruction to students includes the ability to measure progress in this area. However, the design of reading tests includes the ability not only to read words, but also the ability to verbalise them. This presents a particular challenge for practitioners working with students with Autism Spectrum Disorders (ASD) who can be nonverbal in many cases. How this issue is generally overcome is currently unknown. A survey was developed, in the form of an online multiple-choice questionnaire, in order to determine which tests are currently being used in the UK to assess the reading abilities of nonverbal students, and to examine the opinions of the education practitioners who use them, in relation to their suitability. Using the schools web directory, e-mail invitations were sent to 1,050 special educational needs schools across the UK, and 70 schools responded to the invitation. Respondents' suggested that the majority of practitioners hold little faith in the ability of current reading assessments to provide an accurate picture of reading ability for ASD students, and this holds particularly true for nonverbal ASD pupils. One purpose of education assessment is to establish a baseline of students' ability in order to plan for lifelong learning and achievement. If there is an inability on the part of schools to accurately assess the reading abilities of nonverbal ASD students, then it would be fair to assume that this could have a negative impact on the provision of learning opportunities for this population.

Key words: reading assessment, nonverbal, ASD, survey

It is estimated that there are around 1 in 100 people with an Autism Spectrum Disorder (ASD), and roughly 25% of this population are nonverbal (NAS, 2014, SFARI, 2014). Difficulties experienced by the population with ASD include impairments in the areas of social interaction, social communication, and restricted and repetitive behaviours, as well as abnormal responses to sensory input (DSM-5; Wing, Gould, and Gillberg, 2013). Associated problems for those with ASD, which are not necessarily core to the diagnosis of ASD, have also been proposed by a wide range of researchers (see Eagle, Romansczk, and Lenzenwger, 2010; Jordan, 2013; Srivastava and Schwartz, 2014), and many of these relate to intellectual and language functioning (Frith, 1989; Matson and Shoemaker, 2009).

A common term for those whose cognitive and language abilities are less impaired is 'high functioning', whereas those with poorer language and cognitive abilities are referred to a 'low functioning' (O'Connor and Klein, 2004). In the UK, children with ASD who fit into the broad category of 'low functioning' are likely to be educated in settings which form part of special educational needs schools (Reed and Osborne, 2014). Therefore, not only the severity of ASD, but also the level of intellectual capability, is likely to impact on educational placement (Eave and Ho, 2008; Reed, Osborne, and Waddington, 2009). In fact, only around 29% of children with ASD are now educated in special school settings (Ambitious about Autism, 2014).

Government makes statutory guidance available for these special educational needs (SEN) settings in the form of codes of practice (Nasen, 2014). Education for students with ASD is governed by such codes of practice, and these guidelines apply to pupils with ASD who are nonverbal. A code of practice in education sets out the statutory obligations and the role of the Local Authority, as well as the responsibilities of the school in supporting both pupils and parents. Whilst codes of practice are individual to England, Scotland, Wales, and Northern Ireland, they all carry a common theme of access and inclusion. Each local

authority across the UK is responsible for ensuring that SEN pupils are afforded equal access to the national curriculum. The national curriculum is a set of standards and subjects taught at each key stage, and delivery of the national curriculum is a statutory requirement for local authority schools (Department for Education, 2013).

Literacy instruction forms a major part of national curriculum (Department for Education, 2014; Welsh Government, 2014). Assessment of individual progress and achievement allows evaluation of the effectiveness of such instruction. Summative assessments of reading ability, such as the Salford Reading Test (SRT; Hodder and Stoughton Limited, 2012), and Neale's Analysis of Reading Ability (NARA; Neale, 1989), aim to provide an estimation of reading age. This estimation allows teachers to monitor the progress of their pupils, and plan for their future attainment. In most cases, the pupils will be asked to read aloud a set of sentences and/or paragraphs that have been graded in terms of their difficulty. Once a certain number of errors have been made, the test is stopped, and a reading age for that pupil is recorded. A literature search for reading tests tailored towards those with special educational needs, with a particular focus on minimally verbal children, revealed no reading tests specific to this population appeared to be in common use. In fact, in terms of research relating to the reading abilities of nonverbal or minimally-verbal school aged children with ASD, there appears to be very little conducted, which has been noted by previous studies and reviews (see Muchetti 2013; Tager-Fusberg & Kasarri 2013). There is currently a lack of clear definitions for the terms 'nonverbal', 'minimally verbal', 'preverbal' or 'verbal' (Tager-Fusberg and Kasari, 2013). For the purposes of this study, 'nonverbal' refers to children who have reached school aged children with little or no spoken language that is used spontaneously for communication (Plesa Skwerer, Jordan, Brukilacchio and Tager-Flusberg, 2015), as opposed to' verbal' – children of the same age who use words spontaneously for the purposes of communication.

The relationship between the ability to speak and the ability to read is not a simple one (Bishop and Adams, 1990; Ferreira, Ronnberg, Gustafson, et.al., 2007). Although delay in functional language is considered to be associated with ASD (e.g., Vacca, 2007), and a great number of children with ASD are also diagnosed with severe learning difficulties (Matson and Shoemaker, 2009), it does not automatically follow that the inability to speak goes hand in hand with an inability to read. For example, Diehl (2006) posited that children with ASD may display delayed phonological development, but that cognitive development may otherwise be intact. A further set of studies have highlighted the diverse nature of reading abilities within the ASD population (e.g., O'Connor and Perry, 2004; Frith and Snowling, 1993; Happe, 1997; Snowling and Frith, 1983,). Therefore, there is enough research to suggest that having ASD and being nonverbal does not rule out the possibility of having the ability to read, even if that ability cannot be accessed through traditional reading assessments.

Thus, the research previously cited, suggests that there are clear distinctions between the ability to speak and the ability to read, especially in pupils with ASD. However, these distinctions are not reflected in the popular forms of reading assessment, such as the SRT and NARA, which require an ability to verbalise words in order to access the tests and, hence, establish a reading age. One suggested use of the SRT is as a "screening test, for use with pupils with suspected reading or learning difficulties" (Hodder and Stoughton Limited, 2012). This would, of course, only be possible for detecting reading or learning difficulties in verbal children, and may well exclude many pupils with ASD who are nonverbal, but reading-competent, from being assessed. In turn, this may severely disadvantage those pupils in terms of planning their access to the national curriculum.

Therefore, the present study was performed in order to evaluate the current situation in UK special schools with regards to the assessment of reading abilities of pupils with ASD, with a particular focus on those pupils with ASD who are nonverbal. The first aim of the survey was to explore which tests are most likely to be used to assess the reading abilities of students with ASD in SEN classrooms, and whether or not this differed from tests being used for students who do not have ASD. Of particular interest, was the kind of tests being employed to test the reading abilities of nonverbal students with ASD. The second aim of the survey was to explore the teacher's views with the regards to the suitability of these tests for students with ASD, again, with a particular focus on the nonverbal student with ASD.

Method

Participants and Recruitment

Special Educational Needs schools were selected to receive an email inviting them to complete the online questionnaire. SEN schools were targeted for this survey as it is uncommon for minimally verbal students to be educated in a mainstream setting. Further, cognitively able students with ASD would likely be able to access traditional reading assessments, and the purpose of this study was to evaluate provision for those students who would be likely to all outside of this demographic. E-mail addresses were obtained from online directory of SEN schools (schoolswebdirectory), and an e-mail was sent to the head teacher, or to the school administration, e-mail address. The initial e-mail contained information with regards to the study, and a request that a member of staff be selected to take part in the survey. Thus, participants were practicing professionals working in special schools across the UK. The initial e-mail invitations were sent out to 1,050 schools across the UK, of which 70 schools responded, and all of these responses contained enough data to be used in the analysis of responses.

Ethical Considerations

Schools were notified at the outset that there was no obligation to complete any of the questionnaire, and they were provided with information about how they could ensure that they received no further e-mails from the researcher with relation to this topic. Data was collected anonymously, and no information relating to schools identities, or the identities of staff members completing the questionnaire, were collected or stored. Consent was provided by participant's selecting the 'next (I consent)' button on the front page of the survey. Participation in the survey was voluntary. Ethical approval for the study was gained from the Department of Psychology, Swansea University Ethics Committee.

Survey Design

The Reading Assessments for ASD Students Survey consisted of an online questionnaire, which had a total of 18 questions, with free text box for additional comments at the end. A multiple-choice method was selected for each of the questions, in order to ensure comparable quantitative data could be obtained (see Appendix 1). Questions 1 to 4 related to basic information about the education settings. Questions 5 to 11 were about the nature of the students in the school. Questions 12 to 16 sought to identify the current procedures in place for testing students reading abilities and the names of any summative reading tests being employed.

The final section of the questionnaire (questions 17 and 18) focused on the professional opinions of participants with regards to the suitability of the tests for use with ASD students. This was broken down into two sections: ASD students, and nonverbal ASD students. The options for the ASD students section were: Assessments provide a very accurate picture of reading ability for the majority of students with ASD; Assessments give

some idea of reading ability for students with ASD but need improvement; Assessments are not fit for purpose for students with ASD. The options for the nonverbal ASD students section were: Assessments provide a very accurate picture of reading ability for the majority of students with ASD; Assessments give some idea of reading ability for students with ASD but need improvement; Assessments are not fit for purpose for students with ASD; We don't have nonverbal students with ASD.

Space was provided at the end of the questionnaire for any further comment participants want to make.

Procedure

Data was collected via an online questionnaire, provided by Webquest server, and analysed using the statistical analysis software package SOFA Statistics, version 1.4.3. From the initial invitation e-mail sent to 1,050 special schools across the UK, to the final e-mail announcing the deadline for closure, the questionnaire was available online for a six-month period. The e-mail address of the researcher was included in every e-mail sent, and it was made specific that this address could be used to request help or further information about the study. None of the schools contacted the researcher for help, although 3 participants indicated an interest in participation in further studies. All 70 responses contained enough information to be included in the analysis; that is, they provided a sufficient amount of information for relevant comparisons to be made.

Results

All responses were from institutions that fitted the criteria of being SEN schools or SEN units attached to mainstream schools. Due to the anonymity of the data, the researcher was unable to determine the geographical position of the schools, other than that they were in

the UK. The sizes of the schools, in terms of numbers of pupils, are displayed in Figure 1, which reveals that most of the schools had between 51 and 150 pupils.

Figures 1 and 2 about here

The nature of the participating schools was also examined, and these data are shown in Figure 2. Inspection of these data reveals that the majority of the schools (77%) were local authority schools. The remaining schools were non maintained special schools, private schools, academies, charitable trusts, free schools, grant aided special schools and independent schools. No school had Welsh as a first language.

All but 3 of the schools declared that 100% of their students were classed as SEN. The 3 that did not declare 100% SEN were Additional Needs/Mainstream combined schools. With regards to ASD prevalence, all participating schools stated that they had pupils with a diagnosis of ASD. The lowest percentage of pupils with ASD in a school was 5%. However 15 out of the 70 schools that participated had a 100% of ASD students. In addition, 61 out of 70 schools stated that they had students who were mostly nonverbal or had severe communication difficulties. 35 schools had ASD students who were considered to be high functioning.

Table 1 about here

Frequency counts of the identified reading tests most commonly being used by respondents were converted to percentages of the schools that had responded. The most commonly reported reading test was the Salford Reading Test, being used by 17.1% of schools. This was closely followed by Neale's Analysis of Reading Ability at 14.3%. The

third most popularly reported test was the National Foundation for Educational Research, with 10% of schools employing this test. However 30 out of the 70 SEN schools that participated (i.e. 42.9%), did not use a reading test at all. No school declared the use of a reading test that was being employed exclusively with their ASD students.

In answer to questions relating to the National Reading Tests, which have only been introduced in Wales, 6 schools said that the tests were applicable for their settings. However, all 6 had disapplied all students from the test. In order to qualify for disapplication, a student must be performing at a level way below what would be expected for his/her chronological age.

Table 2 about here

The final section of the questionnaire, focused on the professional opinions of participants with regards to the suitability of the tests for use with ASD students. The data for the most popular choices were analysed to determine the professional opinions of the participants with regards to the suitability of tests for use with ASD and nonverbal ASD students, and these data are displayed in Table 2.

The Salford Reading Test was the most popular reading test: about 17% of respondents expressed the opinion that the test gave a very accurate picture of ability for ASD students, and 67% felt that the test gives some idea of reading ability for ASD students but requires improvement. However, about 17% felt that the test is not fit for purpose. For nonverbal ASD students, 42% expressed the opinion that the test is not for purpose, and only 17% agreed that it gives a very accurate picture of ability.

In terms of Neale's Analysis of Reading Ability, 50% of participants felt that the NARA was not fit for purpose for students with ASD, and 50% agreed that it gives some idea

of ability but requires improvement. No participants felt a very accurate picture of reading ability could be gained using the NARA. All of the participants who work with nonverbal ASD pupils, felt that the NARA is not fit for purpose for nonverbal ASD pupils.

No participants agreed that the NFER can give a very accurate of reading ability when used with ASD students: 85% felt that the test gives some idea of ability, while 14% were of the opinion that the test is not fit for purpose. This latter figure rose to 74.4% for those working with nonverbal pupils, which represents 100% of the participants who use the NFER with nonverbal pupils.

It should be noted that 43% of participants stated that they do not use a summative reading test: 64% of these felt that the systems they have in place give some idea of ability, but need improvement; 17% agreed that these systems are not fit for purpose; and 17% felt that they were getting a very accurate picture of reading ability for their ASD pupils. In terms of nonverbal pupils with ASD, 42% felt that their systems were not fit for purpose; 17% agreed that they were getting a very accurate picture of ability for nonverbal students; and 42% of participants not using a reading test, were not working with nonverbal ASD students.

Figure 3 about here

Figure 3 shows the cumulative proportion of the sample that reported having different percentages of pupils with ASD in their school (left panel), and the cumulative proportions of the sample with different proportions of pupils with ASD who were nonverbal. These data were used to assess whether these factors had any impact on the degree to which various reading tests were thought to be fit for purpose or not, as it was thought that exposure to different populations of pupils with ASD might impact this assessment. To this end, the

sample was split at the mean for numbers of pupils with ASD in that school. This produced a lower numbers group (mean number of ASD pupils = 58.26 $\pm$ 30.25, range 0-56), and a higher numbers group (mean number of ASD pupils = 58.26 $\pm$ 30.25, range 60-100). The numbers of participants in these groups who had assessed the suitability of the tests that they were using as not for purpose, or as moderately or fit for purpose, was calculated. For the lower numbers group, the figure for not fit for purpose was 15/38, and this figure for fit/moderately fit for purpose was 23/38. For the higher numbers group, the figure for not fit for purpose was 8/32, and for fit/moderately fit for purpose the figure was 24/32. Analysis of these data using a 2x2 chi square (low/high numbers versus not fit/fit) indicated that this factor had no impact on the opinions of practitioners with regards to the suitability of the tests they were using, $\chi 2 = 0.81$; df 1; p=0.37.

The sample was also split at the mean for numbers of pupils with ASD in the school who were nonverbal. This produced a lower numbers group (mean number of nonverbal ASD pupils = 42.2 $\pm$ 39.31, range 0-35), and a higher numbers group (mean number = 42.2 $\pm$ 39.31, range 50-100). The numbers of these groups who had assessed the suitability of the tests they were using as not for purpose, or as moderately or fit for purpose, was calculated. For the lower numbers group, the figure for not fit for purpose was 7/38, and this was 16/38 for fit/moderately fit for purpose. For the higher numbers group, the figure for not fit for purpose was 16/32, and for fit/moderately fit for purpose the figure was 16/32. Analysis of these data using a 2x2 chi square (low/high numbers versus not fit/fit) revealed that there was a statistically significant difference between the groups that were above and below the mean. $\chi 2 = 6.49$; df 1; p=0.01, with those with the higher population were more likely to give the opinion that the tests they were using were not fit for purpose.

The above data analysis examined the question of the suitability of tests for ASD students. Analysis showed that higher population of ASD students did not make it more or

less likely that participants would be of the opinion that the tests were not fit for purpose. However, schools with a higher population of nonverbal ASD students were more likely to express the opinion that the tests were not fit for purpose.

Further analysis looked at the question of suitability of the tests for use with nonverbal ASD students specifically. The requirement was that that only the answers of those schools with a nonverbal ASD population be included in the data analysis. The results analysed were responses in relation to the suitability of the tests for specific use with nonverbal ASD students.

Figure 4 about here

With regards to nonverbal students, 50/70 of the participating schools had a population of non-verbal ASD students; range 2-100%. In response the question of suitability of the tests for use with nonverbal ASD students specifically, 8/50 gave the opinion that the test was moderately or fit for purpose. 42/50 gave the opinion that the test was not fit for purpose (see Figure 4). The question of suitability for non-verbal ASD students specifically was only open to those participants with a non-verbal population. The remaining 20 schools selected NA (not applicable) for this section. The sample of 50 was split at the mean for numbers of nonverbal ASD pupils in the school. This produced a lower numbers group (mean number of nonverbal ASD pupils = 40.71 $\pm$ 28.31, range 2-40), and a higher numbers group (mean number = 40.71 $\pm$ 28.31, range 45-100). Analysis of these data using a 2x2 chi square (low/high numbers versus not fit/fit) revealed that there was not a statistically significant difference between the groups that were above and below the mean. $\chi 2 = 0.02$; df 1; p=0.87.

Discussion

The present study was performed in order to evaluate the current situation in UK schools with regards to the assessment of reading abilities of ASD pupils, with a particular focus on those pupils who are nonverbal. The first aim of the survey was to find out which tests are most likely to be used to assess the reading abilities of students with ASD in SEN classrooms, and whether or not this differed from tests being used for students who are not on the ASD spectrum. Of particular interest were the kinds of tests being employed to evaluate the reading abilities of nonverbal pupils with ASD. The second aim of the survey was to explore teachers' views of the suitability of these tests for students with ASD, again with a particular focus on the nonverbal ASD student.

The Salford Reading Test was the most the reading test reported to be used most by the SEN schools who participated in the study. However, even though it was the most popular test for general SEN and ASD school populations, only a relative few practitioners felt that SRT provides an accurate picture of reading ability when used with ASD pupils, and nearly three-quarters of practitioners working with nonverbal ASD pupils felt that the test was not fit to be used with this population. The other two prominently used reading tests were the NARA and the NFER. However, none of the practitioners felt that these tests provide an accurate picture of reading ability for ASD pupils or nonverbal ASD pupils. Thus, the current survey demonstrates that the majority of practitioners who are making use of reading tests for ASD students lack faith in the tests' abilities to provide an accurate picture of these students' abilities. This is even more so for those practitioners working with nonverbal ASD students.

With regards to the percentage of populations, it was found that those with a higher number of students with ASD were neither more nor less likely to deem the reading tests unsuitable as those with a lower number of ASD students. However, with regards to non-

verbal ASD students, those with a greater population of non-verbal students were more likely to say that the tests were not fit for purpose. Therefore, although practitioners working with ASD students were not wholly confident in the tests' ability to provide a very accurate picture of reading ability for students with ASD, the issue for nonverbal students would appear to be further pronounced.

This was further demonstrated by the responses of the schools with a non-verbal ASD population in relation to the tests' suitability for use with nonverbal ASD students specifically. In this instance 84% were of the opinion that the reading tests they are currently employing, are not fit for purpose.

The development of literacy skills is one of the uppermost aims of education, not only as a life skill but also because it provides access to all other curriculum areas (Department for Education, 2014). Mucchetti (2013) advocates the creation of "effective curricula, including literacy interventions, for students with autism". However, when developing a curriculum for any student, it would make sense to have a way to measure its effectiveness, and the assessment of individual ability, and tracking their progress, fulfils that role. Speaking on behalf of the communications charity, chief executive Virginia Beardshaw comments: "If a child cannot speak, they will be unable to read and write" (I CAN, 2014). This view may unfortunately be a reflection of current general attitudes in education, which could well ensure that nonverbal pupils will continue to be excluded from an 'inclusive education system'. An obvious difficulty for nonverbal students is that even if they are able to read the words contained in the test materials, they will be unable to verbalise them, making this form of assessment inaccessible.

Research that has focused on ASD and intellectual disability has shown that people with ASD are a distinct group, not only in terms of social behaviours, but also in terms of their patterns of intellectual functioning (Matson and Shoemaker, 2009). For example,

Munson (Munson et al., 2008) who carried out a study involving 456 children, was able to identify multiple IQ subgroups as well as variations in cognitive strengths and weaknesses. Due to the heterogeneous nature of ASD, assessment of reading ability is not likely to be a straightforward matter. Some children with ASD never demonstrate any reading skills (Vacca, 2007), however, there are numerous case studies describing some with ASD who have exceptional reading ability (Turketaub 2004, Grigorenko 2002; Nation, 2006). Research into reading ability of those with ASD has tended to focus on those who can be described as high functioning (Nation, Clarke & Wright, 2006). In contrast, with regards to the nonverbal ASD population, there is relatively little research.

The main implication of these findings is that practitioners working with nonverbal students have no knowledge base on which to draw. Further, for those practitioners who state that the summative tests available to them are not fit for purpose, there appears to be no alternative being offered. Whilst teachers may resort to their own methods of assessment, one could argue that these are professionals being made to make the best of a bad situation. The danger then, is that students who are nonverbal, but have an ability to read, may be underrepresented in whole-school data; with therefore no provision being made for these skills to be further developed, or suitable adjustments being made to the curriculum. It is whole-school data which informs schools' self-evaluation procedures and therefore plans for school improvement. Since literacy provides access to the rest of the curriculum, the negative impact of this could be pervasive in terms of a child's whole education. A possible solution to this would be further research (Arnold & Reed, 2016; under review) which is inclusive of nonverbal students with ASD; resulting in the development of a reading test which is comparable to traditional methods, but accessible for all.

A limitation of the survey was the relatively low response rate. Only 70 schools responded to the invitation to complete the survey. For the purposes of generalisation, there

is a need to interpret the results of the current study with caution. This said, since all schools reported a percentage of ASD students, students with severe communication difficulties and those to be considered high functioning, in the researcher's opinion the sample was a good representation of SEN schools in the UK. Making the survey anonymous meant that we were unable to identify which schools took part. Therefore, we were unable to ascertain any impact that geographical location may have on the choice of tests. Perhaps the ability to state geographical area would be a useful addition to any future survey.

Due to the way in which the survey distributed, via e-mailing the link to head teacher, there was an assumption that all those who participated were practitioners working with ASD students in educational settings. It would have been useful to clarify the exact nature of the role that participants played within these settings, in order to ensure they had full adequate knowledge of all systems employed by their settings.

In summary, the findings of this survey indicate that practitioners do not have a reliable means for assessing the reading abilities of children with ASD, this is particularly true for nonverbal ASD students. While it may seem common sense, or obvious, that a nonverbal student would not be able to access a reading test that requires verbal output; the results of this survey would imply that, despite this, the situation in SEN schools in the UK is not currently being addressed.

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Figure 1: Sizes of schools that participated

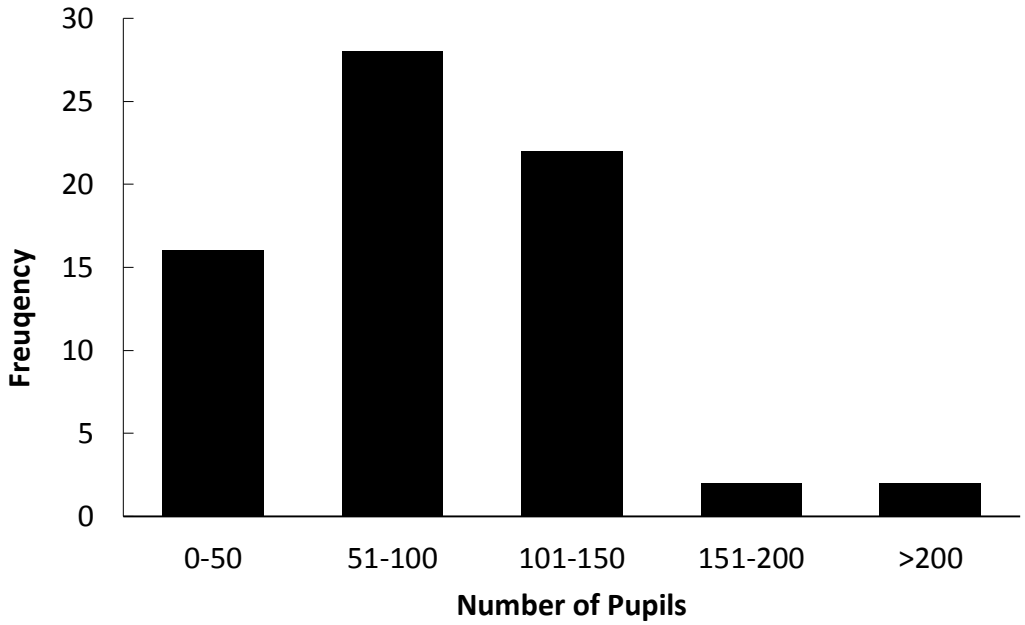


Figure 2: Types of schools that participated

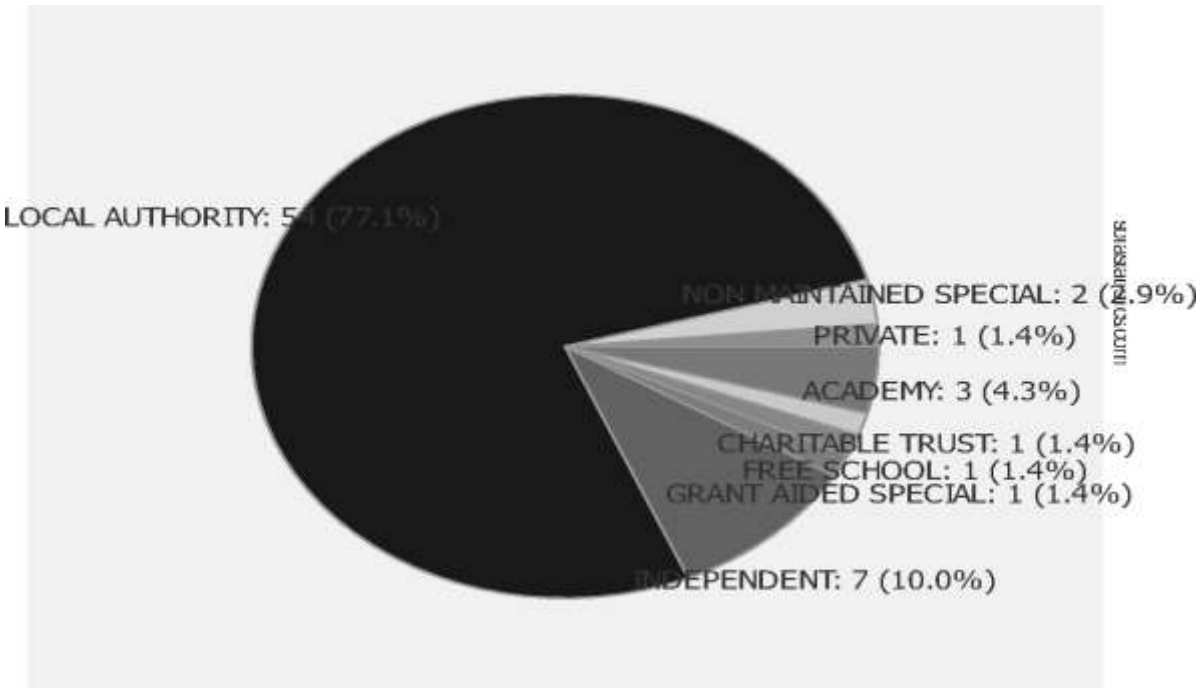
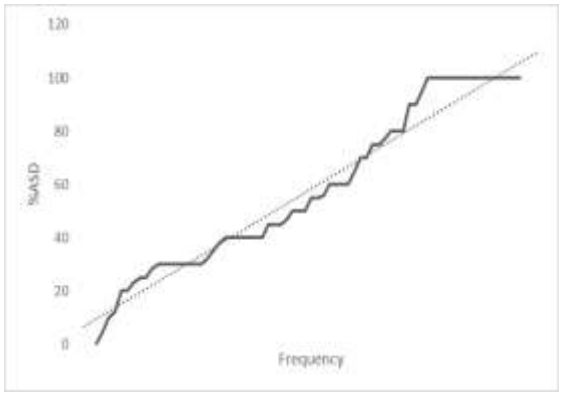


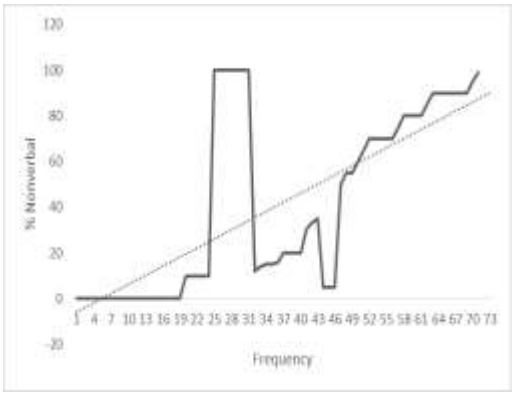
Figure 3: Proportions of ASD and Nonverbal ASD Students in Participating Schools

% ASD Populations Reported



Mean average = 58.26

% Nonverbal Populations Reported



Mean average = 42.2%

Figure 4: The Opinions of Schools with a Nonverbal ASD Population with Regards to the Suitability of Tests for Specific Use with Nonverbal Pupils

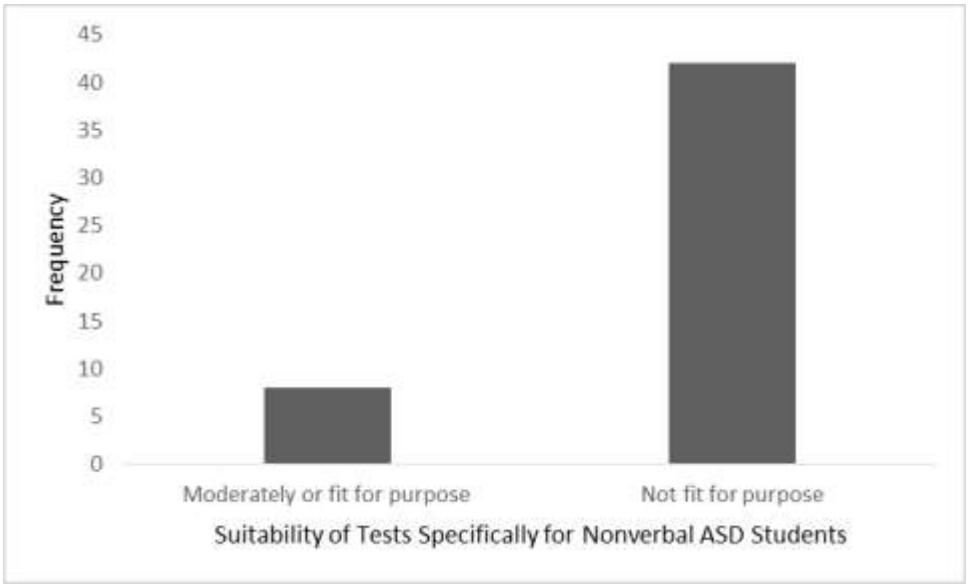


Table 1: Most Popular Reading Tests Reported in SEN Settings

Reading Assessments	No Test	30
	Salford Reading Test	12
	Neale's Analysis of Reading Ability	10
	National Foundation for Educational Research	7
	Wechsler Individual Achievement Test	3
	PIVATS	2
	Edinburgh Reading Test	1
	Herberton	1
	National Curriculum	1
	New Group Reading Test	1
	Wide Range Achievement Tst 4	1
	York Assessment of Reading for Comprehension	1

Table 2: Suitability of most popular tests for use with nonverbal ASD students

		Suitability						Nonverbal Suitability							
		not fit		some		very		NA		not fit		some		very	
		Freq	Row%	Freq	Row%	Freq	Row%	Freq	Row%	Freq	Row%	Freq	Row%	Freq	Row%
Reading Assessments	NARA	5.0	50.0%	5.0	50.0%	0.0	0.0%	3.0	30.0%	7.0	70.0%	0.0	0.0%	0.0	0.0%
	NFER	1.0	14.3%	6.0	85.7%	0.0	0.0%	2.0	28.6%	5.0	71.4%	0.0	0.0%	0.0	0.0%
	NO TEST	13.0	43.3%	13.0	43.3%	4.0	13.3%	3.0	10.0%	21.0	70.0%	3.0	10.0%	3.0	10.0%
	OTHER	2.0	18.2%	7.0	63.6%	2.0	18.2%	5.0	45.5%	5.0	45.5%	0.0	0.0%	1.0	9.1%
	SRT	2.0	16.7%	8.0	66.7%	2.0	16.7%	5.0	41.7%	5.0	41.7%	0.0	0.0%	2.0	16.7%

Appendix 1: The Reading Assessments for ASD Students Survey

Question Number	Instruction	Available Answers
1	Please tick the statement which best describes your school.	Additional Needs/SEN
		Mainstream
		AN/Mainstream Combined
2	Are you classed as a school with Welsh as a first language?	yes
		no
3	Please tick the statement which best describes your setting	Local Authority
		Free School
		Academy
		Other – please specify
4	Please tick the statement which best describes your setting	50 pupils or less
		51-100 pupils
		101-150 pupils
		151-200 pupils
		201-250 pupils
		251-300 pupils
		301-350 pupils
		351-400 pupils
		401-450 pupils
		451-500 pupils
		If over 500 please specify

Question Number	Instruction
5	Approximately how many (%) of these pupils have additional needs/special educational needs?
6	Approximately how many (%) of your AN/SEN pupils have communication difficulties?
7	Approximately how many (%) of your pupils have a diagnosis of ASD?
8	How many (%) of your students with ASD can be described as mostly nonverbal?
9	How many (%) of your students with ASD can be described as having very limited communication?
10	How many (%) of your students with ASD are considered to be high functioning/Asperger's?
11	Do you have students with other forms of communication difficulty? If so, please comment.
Instruction	Answers Available
Please select the reading assessments which you are currently using to measure reading ability (whole school).	Neale's Analysis of Reading Ability (NARA)
	Salford Reading Test (SRT)
	National Foundation for Educational Research (NFER)

	Progress in Reading Assessment (PiRA)
	Welscher Individual Achievement Test (WIAT)
	Suffolk Reading Scale (SRS)
	Non word reading test
	National Reading Test Wales