Moderate learning difficulties: searching for clarity and understanding

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Moderate learning difficulties: searching for clarity and understanding

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The concept of moderate learning difficulties (MLD) is not clearly understood in its definition and in its general use. Nevertheless, as a distinct area of special educational needs (SEN) this category has constituted about a quarter of all of those pupils identified as having SEN in England. This paper reports the analysis of findings from an ongoing research project in an attempt to improve understanding of the MLD category. Pupils (aged 12–14 years) identified as having MLD were compared with others in the same classes identified as having either specific learning difficulties or low attainments in terms of literacy, reasoning and dispositional measures. The paper shows that the label of MLD is often used in an over-generalised way in schools and that although there are some differences in reasoning and literacy abilities between those identified as having MLD and those who have not, no such differences were found in learner self-concept and in pupils’ attitudes to education and learning questioning the current definition of MLD which includes associated low self-esteem. Reasons for lack of clarity in the definition/category of MLD are discussed, as are implications for future use of the term.

\textbf{Keywords:} moderate learning difficulties (MLD); SEN; identification; classification

Introduction

\textbf{Background and rationale}

Moderate learning difficulties (MLD) is a term used to describe a group of pupils which is currently the largest proportion of those identified as having a special educational needs (SEN) in England (DfE 2010). However, this has been a contentious category, which is currently understood in the English school census definition to refer to significant general difficulties in literacy and numeracy learning and in understanding concepts. It is also an important category to represent general learning difficulties and so acts as the reference point for specific learning difficulties (SpLD), which are understood as being distinct from MLD learning difficulties. Compared to other areas of SEN, this is a neglected area for educational research and initiatives and there has been considerably less research related to MLD than other areas such as SpLD (dyslexia), autism and speech and language impairment (Desforges 2006).

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The research reported in this paper was designed as part of a 2-year Research and Development project – 'Raising levels of achievement through lesson development for pupils with MLD' – which aimed to improve the learning experiences and opportunities of pupils identified with MLD at Key Stage 3 (aged 11–13 years) in English secondary schools. One of main aims of the MLD Lesson Study project was to evaluate the usefulness of the MLD category. This section sets the scene to the general aim of the paper which is to examine the problematic nature of the category of MLD as used in the English school system.

Questions of terminology and categorisation of MLD have evolved over the past 100 years according to changing social and political contexts. The debate about how to identify MLD focuses on whether to classify children according to how much their school attainments differ from others, or whether and how to take account of intellectual functioning as measured by cognitive ability tests (often called IQ test). Some of the current criticisms of the MLD category stem from its precursor, the category ‘educationally sub-normal (moderate)’ or ESN (M) from a critical social perspective (Tomlinson 1982, 1985). This perspective focused on the stigma and devaluation of learners so categorised, which when combined with disability studies critique of the medical model (Oliver 2004) has led to the social model of learning difficulties and disabilities and a contemporary critique of all SEN categories including MLD (Booth and Ainscow 2011).

One of the key questions in the debate is whether pupils identified with MLD are simply those at the lowest end of the range of pupils with low attainment or whether they also have an intellectual disability (Norwich and Kelly 2005). A relevant point to this question was raised by Porter et al. (2011) in their survey of disability in schools which found that in one special school for pupils identified with MLD only 50% of parents reported that their child had a disability as defined in the national disability legislation.

The Warnock Report (1978) signalled the advent of the current system of terminology, with acknowledgement of the issues of stigma and the intention to shift focus to the learning needs of individuals and away from medical classifications. The term ESN (M), (Tomlinson 1982), was replaced by ‘MLD’ and educationally sub-normal severe, ESN (S), by ‘severe learning difficulties’ (SLD). Like the continuum of ‘mental deficiency’ initiated in the late 1900s, learning difficulties ran on a continuum of profound and multiple learning difficulties (PMLD), to SLD, through to MLD and to SpLD, with no set definitions of boundaries between these terms (Copeland 2002). The Warnock Report also suggested a category of ‘mild learning difficulties’ which was not taken up by practitioners. The current conception of the ‘low attainer’ could represent some of these learners. Indeed, Norwich and Kelly (2005) have suggested that the MLD category has been widened to incorporate some of these ‘low attaining’ learners.

Following the publication of Binet’s test in the early 1900s, the IQ criterion became a common aspect of identification for pupils who needed special provision in many countries. Binet had argued for the need to standardise intellectual assessment on the grounds that it would provide an objective, and therefore fairer, means of assessment of children to ascertain if they should be educated in special classes or schools (Clarke and Clarke 1974). From around the time of the Warnock Report in the late 1970s official reluctance to refer to IQ/intelligence measures had grown as the theoretical validity and use and misuse of intelligence testing had come into question (Norwich and Kelly 2005). Current legislation and educational guidance,
for example the SEN Code of Practice (2001), do not refer to the use of intelligence measures in identification procedures. However, educational psychologists who often carry out assessment of pupils for the purpose of identification of MLD commonly use them, so intelligence measures can still play a prominent role (Norwich and Kelly 2005).

With the fairly recent decision to collect statistical data about pupils with SEN, the government issued formal definitions for eleven categories of SEN to enable reliable reporting in the school census (DfES 2003). MLD was defined as:

Pupils with MLD will have attainments significantly below expected levels in most areas of the curriculum, despite appropriate interventions. Their needs will not be able to be met by normal differentiation and the flexibilities of the National Curriculum. They should only be recorded as MLD if additional educational provision is being made to help them to access the curriculum. Pupils with MLD have much greater difficulty than their peers in acquiring basic literacy and numeracy skills and in understanding concepts. They may also have associated speech and language delay, low self-esteem, low levels of concentration and under-developed social skills. (DfES 2003: 3)

Using this definition, according to Government statistical analysis (DfE 2010), pupils identified with MLD comprise nearly one quarter of all those registered with SEN at School Action Plus (SA+) or with Statements (see Appendix 1 for an outline of the SEN system in England). This makes it the most common type of need at these two levels (see Table 1). These data are collected through school surveys which are completed by teachers using the above definition of MLD in every school in England at a particular time in the school year. There is no specific national guidance about how the above definition of MLD is to be interpreted and what evidence indicates the various elements making up the definition.

In 2010, Ofsted reviewed legislation and provision for children and young people with SEN and disabilities. They concluded that children with SEN were in many cases not supported equitably or appropriately (Ofsted 2010). SEN were identified in widely varying ways between and within local areas, so that children with similar needs were identified differently, according to where they lived and what schools they attended. Thresholds for securing additional provision also varied widely, so that children with similar needs received varying levels of provision. It was also found that around half of schools used low attainment and lack of progress to indicate SEN, when many of these pupils were actually experiencing ‘poor teaching’ provision and low expectations. For this reason, it was concluded that the term ‘SEN’ was being used too widely and that existing terminology on SEN was problematic (Ofsted 2010).

The Green Paper released by the Department for Education (2011, 10), to outline Government SEN policy, adopted the findings of the Ofsted report by propos-

<table>
<thead>
<tr>
<th>Type of need</th>
<th>SA+ No.</th>
<th>SA+ %</th>
<th>Statement No.</th>
<th>Statement %</th>
<th>Total No.</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLD</td>
<td>130,460</td>
<td>26.8</td>
<td>38,120</td>
<td>18.2</td>
<td>168,580</td>
<td>24.2</td>
</tr>
</tbody>
</table>

Source: DfE (2010).
ing ‘to tackle the practice of over-identification by replacing the current SEN identi-

fication levels of School Action (SA) and SA+ with a new single school-based

SEN category for children whose needs exceed what is normally available in

schools’. However, the National Union for Teachers contested the claim that SEN

was over-identified as ‘unfair and inaccurate’. Combining SA and SA+ would, they

claimed, not decrease the number of pupils having additional needs, but reduce the

support and specialist input for these children (NUT 2011, 19).

Review of relevant literature
Though the recent SEN classification (DfES 2003) does not specify the relationship
between the MLD definition and intellectual functioning, the historical system has
assumed that different degrees of ‘learning difficulties’ are associated with various
IQ score ranges. MLD has been seen to correspond to a range of 51–70, which cor-
responds to the mild intellectual disabilities (mild ID) range in the US-based med-
cal classification DSM IV-TR (APA 2000; Frederickson and Cline 2009). In the
DSM medical classification identification also requires that there is low adaptive
functioning (in areas concerned with personal and social functioning in home, social
and neighbourhood contexts). This relates to the lower incidence of mild intellectual
disabilities relative to all identified as having disabilities in education in the USA
than England (MacMillan, Siperstein, and Gresham 1996). This is partly to do with
the tighter US definition used in identification as involving both intellectual func-
tioning below 70 on standard scale (IQ scale) and low adaptive functioning outside
school.

Although the cognitive tests are designed to have a mean of 100 and standard
deviation of 15, with about 2% scoring below 70, this criterion for MLD has been
discredited by studies over a long period of time. When the current term was educa-
tional (ESN-M), 25% of pupils in special schools for this group were found to have
scores above 70 in the Isle of Wight study (Rutter, Tizard, and Whitmore 1970).
This may reflect that special schools designated for ESN (M) were used for other
purposes. In Wales, Chazan (1964) found even a higher percentage: 38% in the spe-
cial schools had scores above 70. Further analysis showed that less than half of
those with scores below 70 were in special schools. What distinguished those in
special schools with below 70 scores from those in ordinary schools was low read-
ing scores. This shows that low attainment was a key factor in going to special
school for MLD (Yule 1975).

International research has also shown that the prevalence of intellectual func-
tioning in the mild ID range is above the expected 2%. Roeleveld, Zeilheis, and Gab-
reels (1997) reported widely varying ranges from 0.5 to 8% for those identified as
having mild ID. According to Simonoff et al. (2006), the reasons for this variation
are not well understood as age, the cognitive measures used and socio-economic
levels are all seen as relevant factors. Simonoff and colleagues (2006) in a study in
Croydon, London, undertook an epidemiological study through borough-wide
screening followed up by in-depth assessment of children in Years 8 and 9 (12–
14 years old). Depending on the specific measures used and assumptions made,
between 5.8 and 10.6% of the pupils had Weschler intelligence scores below 70,
and were so taken as having mild ID. Interestingly, only 15% of these pupils had
statements of SEN and attended special schools, which is usually taken as indicat-
ing a significant SEN. Furthermore, only about 10% of pupils who had scores
below 70 in ordinary schools had statements. What this study also found was that it was not low educational attainment as much as behaviour difficulties, including social communication difficulties, which predicted identification as having MLD in the school system. The researchers concluded that identifying mild intellectual disability through the school SEN system would include those with behaviour difficulties. The main conclusion was, however, that many young people with intellectual disabilities are not identified in the school system; but whether there may be any benefits in doing so was at the same time also questioned (Ibid.).

These findings imply that the majority of those pupils with scores of less than 70 did not have statements. However, the study did not collect data about pupils with SEN at SA+, and so could not identify those with scores of less than 70 and identified with SEN at SA+. This methodological gap is important as the national school level statistics show that only 26% of all those recorded as having MLD nationally have a statement, whereas 74% are recognised at SA+ (DCSF 2007). It could be that most of the 5–10% identified as having mild ID in DSM terms in the Croydon study are identified as having SEN without a statement. However, one of the strengths of the Croydon study is that it used multiple measures of intellectual functioning and gave a range of incidence for mild ID. The high incidence found in this study is in line with other studies using the same epidemiological identification methods, as noted by the authors, but may also be due to the norms of the tests being more than eight years old. The authors considered whether their estimation of the Croydon population was accurate (Simonoff et al. 2006). Another interesting aspect of these epidemiological studies comes from comparing the older Isle of Wight epidemiological study with the more recent Croydon one. In the Isle of Wight study about 37% of those with scores of less than 70 were in special schools which compares with 11–13% in any special school in the Croydon study. This change probably represents the greater increase in provision for pupils with SEN in ordinary schools.

**Research context and questions**

The development part of the project aimed to enhance the educational achievements of pupils identified with MLD using Lesson Study to develop pedagogic strategies, programmes and materials for wider use in secondary schools. Lesson Study is an approach to continuing professional development developed in Japan (Takahashi and Yashida 2004) and used widely internationally, including the UK (Dudley 2004). It involves teacher collaboration in the planning, teaching and reviewing of specific lessons. The series of research lessons are jointly planned, observed and analysed with the aim of improving the teaching and learning process. Lesson Study involves identifying 1–2 pupils who become the focus for planning and evaluation, called ‘case pupils’, depending on the topic and aims of the Study. The case pupils in this project were those that participating schools identified as having MLD.

The specific aim of this paper is to examine how the MLD category is used in identifying pupils in the Lesson Study project schools and the pattern of scores of the pupils so identified in terms of their reasoning, literacy, self-concept, resilience and attitudes to school and class learning. In addition, the paper aims to examine how pupils who have been identified as having MLD compare with others in their classes who were identified as having SpLD and those with low/average attainment.
With these aims, the paper will throw some light on the question of the usefulness of the MLD category. The research questions were:

1. How is the MLD category used in identifying pupils in the project schools?
2. What is the recorded level of SEN of those identified with MLD in the project schools?
3. What is the pattern of scores of pupils with identified MLD in reasoning, literacy, academic self-concept, resilience and attitudes to school and class learning?
4. How do those with identified MLD compare with others in their classes identified as having SpLD, with low and average attainment?

Methods
Design, participants and setting
The survey was conducted in 18 secondary schools located in two urban and two rural local authorities in the south-west of England at the start of the two term Lesson Study programme. However, only 14 of the schools completed the programme fully and some data therefore only relate to the following schools: 11 secondary schools and three schools which had special school status. In each school there were two teachers involved in the Lesson Study programme. Of the total of 34 teachers 82% \((n=28)\) were female and 18% \((n=6)\) were male; 41% \((n=14)\) were between 20 and 30 years old, 24% \((n=8)\) were between 31 and 40 years old, 26% \((n=9)\) were between 41 and 50 years old and 9% \((n=3)\) were aged over 51. About 60% \((n=20)\) of the teachers had less than 10 years of teaching experience while the rest had been teaching for over 10 years. Teachers worked with classes which had 1–3 pupils who were identified as having MLD. These pupils were the focus of the development of teaching in these Lesson Study classes. In addition, in each Lesson Study class, Lesson Study teachers were asked to choose a small number of contrast pupils who were seen as having a SpLD and low/average attaining pupils (as identified by the school). In each school between two and three Lesson Studies were conducted over two school terms.

All the pupils were at Key Stage 3, aged between 11 and 13 years old, and consisted of those that had been identified as having MLD \((n=61)\), SpLD \((n=25)\), low attaining \((n=19)\) and average attaining \((n=14)\) (see Table 2). Having a group of

<table>
<thead>
<tr>
<th>Case pupils</th>
<th>Total number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupils with MLD (total)</td>
<td>61</td>
<td>51.3</td>
</tr>
<tr>
<td>Of whom ‘SA’</td>
<td>(22)</td>
<td>–</td>
</tr>
<tr>
<td>Of whom ‘SA+’</td>
<td>(8)</td>
<td>–</td>
</tr>
<tr>
<td>Of whom ‘Statement’</td>
<td>(12)</td>
<td>–</td>
</tr>
<tr>
<td>Unknown</td>
<td>(19)</td>
<td>–</td>
</tr>
<tr>
<td>Pupils with SpLD</td>
<td>25</td>
<td>21.0</td>
</tr>
<tr>
<td>Pupils who are low attaining</td>
<td>19</td>
<td>16.0</td>
</tr>
<tr>
<td>Pupils who are average attain.</td>
<td>14</td>
<td>11.8</td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>100</td>
</tr>
</tbody>
</table>
contrast pupils enabled comparisons to be made between the four different groups of pupils in their functioning that is relevant to the aims of the study.

Participating teachers were provided with the census definition of MLD and asked to consult with the SEN coordinators in their schools about how they identified the case pupils for the Lesson Studies as having MLD. The proposed working definition of MLD for each school was whether these pupils had been recorded in the school’s annual return for the national school census. For the contrast pupils, teachers were asked to nominate those identified as having a SpLD through the same means and those with low or average attainment, but not SEN, in terms of their typical attainment levels. It is clear from this selection method that the study was focusing on how schools and teachers were using these categories in practice by comparison with an epidemiological survey.

Though MLD should be identified only at SA+ and Statement levels for census purposes, some schools identified pupils as having MLD at SA level (see Table 2). This is likely to have occurred because schools can find it hard to distinguish between SA and SA+ as this depends on the involvement of an outside professional, which is not always possible to secure.

**Measures and analysis**

A short questionnaire was designed to find out how the schools identified pupils as having MLD. Five options were provided: (i) low attainment only, (ii) low attainment and low intellectual levels, (iii) as not having a SpLD nor SLD, (iv) do not know; identified by SEN staff/department and (v) as specified on a Statement. Participating teachers could tick those options which applied in their school. Out of the 14 schools that completed the Lesson Study over two terms, responses to the questionnaire were received from teachers at 12 schools. The instructions were for the teachers to consult the school’s SEN coordinator in completing this questionnaire so that the responses reflected school identification practice.

All pupils were assessed individually at the pupils’ own school by two qualified educational researchers, who had been trained and had prior experience in using these kinds assessments, before the start of the Lesson Studies using a range of measures to cover:

(i) Reasoning: through the British Abilities Scales (BAS II) Matrices (figural analogies) and Similarities (verbal concepts) scales (Elliott, Smith, and McCulloch 2004).

(ii) Literacy: British Abilities Scales Word reading and Spelling scales (BAS II).

(iii) Dispositions:

(a) Learner self concept: using Myself-as-a Learner Scale (MALS) which assesses beliefs and evaluations about the self as a learner (Burden 2000).

(b) Resilience: using the Mastery and Agency scales of Resiliency scales (Prince-Embury 2007). The Mastery and relatedness parts of the scales focus on optimism, adaptability, sense of trust and comfort with others.

(c) Attitudes to Class Learning and School: These aspects were measured with two scales developed from using statements derived from research-based studies about pupil attitudes on five-point rating scales. Attitudes to class learning scales consisted of five-statements asking pupils’ opinions
on the following kinds of statements: ‘I avoid doing class work because it is too hard’\textsuperscript{1} (Cronbach’s alpha from the current study = 0.77). Attitudes to school scales had seven statements, for example, asking pupils to state whether they agree or disagree with statements like: ‘my school gives me useful skills and knowledge’ and ‘I get enough help at school with learning’ (Cronbach’s alpha from the current study = 0.84).

This set of measures was used to assess current intellectual functioning, current word level literacy attainments and current learning-related dispositions. The intellectual functioning and literacy measures were selected because of their relevance to various conventional indicators of MLD, while the dispositional measures are relevant to other associated aspects of MLD, such as self-esteem – the references to the BAS and disposition measures above show that they are designed and validated to a high standard. While using the psychometric measures of intellectual functioning, we are aware that these cannot be interpreted as valid measures of intelligence. The participating pupils could underperform on the scales, though the use of individual assessment and the building of personal rapport by the assessors makes this less likely than group-based cognitive ability tests. We are aware of the issues in interpreting scores in terms of national norms of cognitive functioning and the variability in cognitive scores over time and do not assume that once-off scores indicate fixed level of intellectual functioning or potential.

Parents of the participating pupils and the pupils themselves gave informed consent to take part in the study. They were assured that their identities would not be disclosed to anyone else and that data used would be analysed and reported as part of grouped data. Data have been stored electronically and are password protected. Where norms were used to interpret BAS scores, this involved either using T-scale scores (scales with means of 50 and standard deviations of 10, or standard scale scores with means of 100 and standard deviations of 15). After scoring the responses using the appropriate procedures, data were analysed using analysis of variance with Tukey post hoc tests from the SPSS package. In the analysis of the difference between literacy and reasoning scores, simple difference scores were used rather than a regression method. This was done in line with the BAS technical manual (Elliott, Smith, and McCulloch 2004).

Findings

The key findings are presented in relation to the above research questions.

School identification of MLD and level of SEN

Table 3 below summarises the findings from this questionnaire.

‘Low attainment only’ was chosen by teachers in three schools, while ‘low attainment and low cognitive ability’ by teachers at another three schools. Only one school selected ‘not SpLD and not SLD’ (school 14 chose this with ‘low attainment only’). Teachers at four schools indicated that MLD had been identified by school’s SEN department. In two of the special schools the pupils had statements (schools 4 and 12) while in one special school (school 7) ‘low attainment and low cognitive ability’ were said to be the deciding factor (however, from other sources we know that these students also have statements of SEN). Some schools/teachers gave fur-
Table 3. Assumptions made in identifying MLD by Lesson Study schools.

<table>
<thead>
<tr>
<th>School</th>
<th>Low attainment only</th>
<th>Low attainment + low cognitive</th>
<th>Not SpLD/SLD</th>
<th>Not known: identified SEN dept</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>MD</td>
</tr>
<tr>
<td>School 2</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>School 3</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Special school 4</td>
<td></td>
<td>X</td>
<td></td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>School 5</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>School 6</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Special school 7</td>
<td></td>
<td>X</td>
<td></td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>School 8</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>MD</td>
</tr>
<tr>
<td>School 9</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>School 10</td>
<td></td>
<td></td>
<td></td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>School 11</td>
<td></td>
<td>X</td>
<td></td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Special school 12</td>
<td></td>
<td>X</td>
<td></td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>School 13</td>
<td></td>
<td>–</td>
<td></td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>School 14</td>
<td></td>
<td>X</td>
<td>X</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: MD: missing data.

er explanation. Teachers at school 2 reported that in addition to students having low attainment and cognitive ability, they could also have low self-esteem and behavioural problems which all contribute to them being identified as having MLD. In school 14, on the other hand, teachers suggested that low-level literacy skills and students not contributing to lessons would result them in being identified as having MLD in addition to low attainment and not having SpLD or SLD. It can be seen that there is wide scope for identifying MLD from the findings: there was considerable variation about what MLD is and how students are/have been identified as having MLD in these schools. Although teachers were requested to consult the school’s SEN coordinator (SENCO) to get an accurate picture about how MLD is identified, it could be that in some schools the teachers did not consult their SENCO and used their own judgment alone.

Of the 61 pupils identified as having MLD in these schools, 22 were recorded at SA, 8 at SA+, 12 had Statements (eight of whom were in special schools and four in ordinary schools) and for 19, the details could not be recorded as the schools/teachers did not provide data of the method of identification of MLD.

**Reasoning and literacy for MLD group**

Figure 1 shows the percentage of pupils reasoning T-scores (the average of Matrices and Similarities scores) for the four groups. This shows that about 17% of those pupils identified as having MLD were in the below 2nd percentile with scores of under 30, using the BAS norms (i.e. equivalent to less than 70 using standard score scale). A higher percentage of pupils, about 25%, were between the 2nd and 16th percentile with scores between 31 and 40 (i.e. equivalent to standard scores between 70 and 85), while just over 30% were in below average/average range (standard scores between 85 and 100, the mean score). The remain-
ing 25% were in the average/above average range (standard scores above 100). This shows that over half of the MLD group had reasoning T-scores above 40, equivalent to standard scores above 85. A minority had scores in the lowest 2%, which corresponds with the traditional cut-off for mild intellectual disability, as defined above.

By comparison with the MLD group, the pupils with identified SpLD and those nominated as having low attainment, both were less represented in the low reasoning score ranges and more represented in the higher reasoning score ranges.

Figure 2 shows that pupils with these three designations have literacy scores (average of word reading and spelling) across the ranges: from the below 70 range (standard score scale) to the above average range (above 100). However, more pupils identified with MLD and SpLD were represented in the below 70 range (below 2nd percentile) than those with low attainment. More pupils identified with MLD had literacy scores in the 70–85 score range than the other two groups. Also, pupils identified with MLD were less represented in the 100+ range compared to those with SpLD and low attainment.

Figure 3 shows distribution of the difference scores between literacy and reasoning scores for the three groups (using T-scale scores). The difference score represents the literacy scores minus the reasoning scores for each pupil. It can be taken as a measure of the degree of evenness–unevenness of literacy and reasoning levels. Where the scores of negative, this means that literacy is well below reasoning levels, a pattern sometimes taken to represent a specific literacy difficulties. Where the scores are low and close to 0, this represents literacy and reasoning scores being

![Figure 1. Distribution of BAS reasoning T-scores for MLD, SpLD and low attaining pupils.](image1)

![Figure 2. Distribution of BAS literacy T-scores for MLD, SpLD and low attaining pupils.](image2)
evenly low, a pattern associated with MLD. The pattern of differences scores shows that most pupils identified with MLD (about 40%) were in the expected low difference range, but that some had literacy levels well below reasoning levels, like the expected SpLD pattern. By contrast, most of the SpLD group were in the expected large difference score range (about 44%), though there were some (about 23%) with the pattern expected for MLD. The group with low attainment showed a similar pattern of scores to the MLD group.

**MLD compared to low attaining and SpLD groups**

Figure 4 shows that the MLD group has the lowest mean reasoning and literacy scores of the three groups. In this comparison the group of pupils with average attainments was included and they had the highest means for reasoning and literacy. The means for the SpLD and low attaining group were between the MLD and average attaining groups. It is notable that the mean reasoning score for the MLD was slightly above 40, about one standard deviation below the mean, but above the traditional cut-off for mild intellectual disability/MLD, i.e. 30 in T-scale or 70 in standard scale terms.

Figure 4 also shows that the mean score for reasoning is above that for literacy for the MLD group. This difference was statistically different ($t=5.4$, df=56, $p<0.01$).
Table 4 shows that the MLD group is significantly below the other three groups in mean reasoning scores, while the MLD group is only significantly below the average attaining group in mean literacy scores (at the 0.05 level). There were no significant differences between the groups in the difference scores (literacy minus reasoning).

Figure 5 shows that when breaking down the MLD group into the three levels of SEN (SA+ and Statement) the mean reasoning and literacy scores decrease as the severity of SEN increases. It also shows that the mean reasoning and mean literacy scores for the Statement group are significantly below those for the SA group (reasoning: $F=8.98$, df=2.41, $p<0.01$; literacy: $F=5.73$, df=2.40, $p<0.01$). It is notable that the mean reasoning and literacy scores for the 12 pupils identified with MLD and who have a Statement were close to the T-score of 30, the 2nd percentile level.

Figure 6 shows that the differences in the mean learning attitudinal scores between the four groups are small. There were no statistically significant differences in attitudes in the mean survey scores between the pupils identified with MLD and those with SpLD, low attaining and average attaining pupils (see Table 4). There were, however, statistically significant differences between the SpLD group and the average attaining group in the following: class attitudes, school attitudes and the relatedness element of the Resiliency Scales (see Table 4). In all three, the differences were significant at the 0.05 level. The pupils who had SpLD had the most negative attitudes towards education and themselves as learners whereas the average attaining pupils had the most positive attitudes overall. A key finding is that pupils identified with MLD do not ‘stand out’ from the other groups in terms their attitudes to class/school, learner self-concept and resilience scores.

**Discussion and conclusions**

This paper set out to examine the problematic nature of the concept of MLD with the aim of throwing some light on the question of its usefulness. The research has examined three distinct areas: how MLDs were identified in the case study schools; what the normative pattern of reasoning and literacy BAS scores were for pupils identified as having MLD and how these contrasted with other pupils not having MLD; and how the pupils’ academic self-concepts, attitudes to school and class and their resilience compared and contrasted with others.

Though there was some missing data due to incomplete returns from schools, it emerged that the project schools used varied ways to identify MLD. In some schools, low attainment only was the basis for identification, while in others low attainment and low cognitive abilities were the basis. This finding is in line with the other UK studies about how MLDs are identified at local authority level (Norwich and Kelly 2005; Frederickson and Cline 2009). Though MLD is expected by Government guidelines to be recorded only at SA+ and Statement level, in some schools pupils who were recorded at SA level were also identified as having MLD. Though this was not examined directly in this study, follow up enquiries indicated that teachers used the MLD category in some schools because pupils at SA level of SEN were deemed to have MLD like those at SA+. Also, SA+ is defined officially in terms of a pupil having SEN and having had some outside support service involvement. In some schools, this kind of involvement was not available, so pupils may stay recorded as being at SA level when they might, were outside support...
Table 4. Means and standard deviations of reasoning, literacy and dispositional scores for the four groups.

<table>
<thead>
<tr>
<th></th>
<th>MLD (n = 58)</th>
<th>SPLD (n = 25)</th>
<th>Low attaining (n = 19)</th>
<th>Average attaining (n = 13)</th>
<th>F-value</th>
<th>df</th>
<th>p value</th>
<th>Post hoc significant differences p &lt; 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Reasoning (SD)</td>
<td>41.9</td>
<td>48.3</td>
<td>48.3</td>
<td>52.8</td>
<td>F = 6.84</td>
<td>(3/118)*</td>
<td>p &lt; 0.05; ** p &lt; 0.01; NS not significant.</td>
<td>MLD &lt; average attaining = low attaining = SPLD</td>
</tr>
<tr>
<td>Average Literacy (SD)</td>
<td>35.6</td>
<td>38.9</td>
<td>41.4</td>
<td>46.2</td>
<td>F = 4.74</td>
<td>(3/114)*</td>
<td>MLD &lt; average attaining</td>
<td></td>
</tr>
<tr>
<td>Difference score (SD)</td>
<td>-6.9</td>
<td>-9.4</td>
<td>-7.0</td>
<td>-7.2</td>
<td>F = 0.37</td>
<td>(3/114) NS</td>
<td>No significant difference</td>
<td></td>
</tr>
<tr>
<td>Class attitude (SD)</td>
<td>18.8</td>
<td>16.5</td>
<td>18.4</td>
<td>20.3</td>
<td>F = 3.07</td>
<td>(3/113)*</td>
<td>SPLD &lt; average</td>
<td></td>
</tr>
<tr>
<td>School attitude (SD)</td>
<td>28.0</td>
<td>25.7</td>
<td>26.6</td>
<td>27.6</td>
<td>F = 1.38</td>
<td>(3/112)*</td>
<td>SPLD &lt; average</td>
<td></td>
</tr>
<tr>
<td>Mastery T-score (SD)</td>
<td>42.6</td>
<td>39.5</td>
<td>43.1</td>
<td>48.1</td>
<td>F = 1.46</td>
<td>(3/114) NS</td>
<td>No significant difference</td>
<td></td>
</tr>
<tr>
<td>Relatedness T-score (SD)</td>
<td>44.4</td>
<td>38.2</td>
<td>45.9</td>
<td>50.1</td>
<td>F = 3.12</td>
<td>(3/113)*</td>
<td>SPLD &lt; average</td>
<td></td>
</tr>
<tr>
<td>Myself as Learner (SD)</td>
<td>65.9</td>
<td>61.7</td>
<td>65.9</td>
<td>68.8</td>
<td>F = 1.20</td>
<td>(3/113) NS</td>
<td>No significant difference</td>
<td></td>
</tr>
</tbody>
</table>
available, be identified at SA+. The fact that teachers in some schools also reported that the SEN department identified pupils as having MLD suggests that some teachers may not understand the practice of MLD identification. Overall, these findings provide further evidence that the concept of MLD in the English school system is in practice, used in different ways. This ambiguity is not surprising since the concept of MLD is not clearly understood in theory or practice as discussed previously. This state of affairs reflects a national definition of MLD that is loosely formulated.

Table 5. Average reasoning and literacy and difference scores for pupils with MLD by level of need.

<table>
<thead>
<tr>
<th></th>
<th>MLD: SA (n=22)</th>
<th>MLD: SA+ (n=8)</th>
<th>MLD: statement (n=12)</th>
<th>F-value (df)</th>
<th>Post-hoc comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average reasoning T-score (SD)</td>
<td>47.1 (9.9)</td>
<td>43.3 (8.8)</td>
<td>33.5 (7.1)</td>
<td>8.98 (2/41)**</td>
<td>SA &gt; statement</td>
</tr>
<tr>
<td>Average literacy T-score (SD)</td>
<td>39.3 (6.0)</td>
<td>36.1 (7.8)</td>
<td>29.5 (11.0)</td>
<td>5.73 (2/40)**</td>
<td>SA &gt; statement</td>
</tr>
<tr>
<td>Difference score (SD)</td>
<td>-7.7 (9.8)</td>
<td>-7.1 (5.9)</td>
<td>-5.2 (12.2)</td>
<td>0.24 (2/40) NS</td>
<td></td>
</tr>
</tbody>
</table>

**p<0.01; NS: not significant.

Figure 5. Mean BAS reasoning and literacy T-scores for pupils with different levels of SEN.

Figure 6. Mean learning disposition scores for the four groups.
and has no clear operational details. The authors are unaware of any other research in the UK about how the MLD category is used in schools.

The second main finding of this study was based on the use of the BAS norms, to examine the normative position of those identified as having MLD in terms of reasoning and literacy levels. If reasoning scores below the 2nd percentile are taken as indicating mild intellectual disability or MLD, as discussed above, then only 17% of the MLD group in these schools was in this range. Over half of the MLD group had reasoning scores in the below average/average ranges. This is consistent with the above finding that in some schools MLD is not identified in terms of low cognitive abilities. It is also reflected in the finding that the mean reasoning scores for the MLD was just above 40 on T-scale, well above the T-scale score of 30 or 2nd percentile. It is also notable that only those with MLD who had a Statement had reasoning scores at the T-scale 30 or 2nd percentile level. The majority of pupils identified as having MLD in these schools were at SA and SA+, with mean reasoning scores in the below average range; T-scale 40–50 range.

A third main finding from this study was that the mean literacy scores for the MLD group were much below their mean reasoning scores. This was also shown in the finding that about 65% of those identified with MLD had literacy scores below the T-scale level of 40 compared to about 42% for reasoning scores. The fact that these pupils’ literacy scores were much lower than their reasoning scores can be seen as consistent with the use of attainment in literacy as a basis for identifying MLD in the sample, especially for those at SA and SA+ levels of SEN.

The fourth main finding of this study was that though the MLD group had lower mean scores for the reasoning and literacy scores than the other groups (SpLD, low attaining and average attaining), most were not statistically significant. Only for reasoning was the MLD group significantly below the other three groups. The MLD group was only significantly below the average attaining group for literacy, but not significantly below the SpLD or low attaining groups. For the dispositional scores, the only significant differences were between the SpLD group and the average group for school and class attitudes and resilience-relatedness. In terms of the analysis of the difference score (the difference between literacy and reasoning scores), though a higher percentage of pupils identified with MLD had small difference scores compared to those with SpLD, this was not statistically significant. Therefore, the overall pattern of scores suggests that, although the MLD is towards the lower end of the range of measures used in this study, apart from in reasoning, there is no basis for distinguishing between the MLD and the SpLD and low attaining groups.

Though the findings of this study show how the MLD category is used and how the pupils so identified compare in terms of their current functioning in a range of areas in a sample of English secondary schools, the study does not involve primary schools nor are the secondary schools representative of secondary schools nationally. However, given that the study was part of a Lesson Study development programme, the participating schools were interested and committed to developments in teaching pupils identified with MLD. The measures of literacy and reasoning were limited to two scales each because of time and resources. And, as discussed previously, it was not assumed that the single assessments of performances on the reasoning scales are indicative of long-standing intellectual abilities, only current functioning.

As discussed previously, the national definition of MLD which is designed for use in the annual school census states that pupils identified with MLD have much greater difficulty than pupils of their age in understanding concepts, in addition to
very low attainments across the curriculum. However, this is a definition for national reporting purposes only and not for teaching and learning or resource allocation purposes, for which there have been no national definitions formulated. This study shows uncertainty and important differences in how the MLD category is used in the project schools, which is reflected in the wide range of functioning for pupils identified as having MLD. The loose operational approach to identifying MLD and the variability in functioning of those so identified could be seen to be consistent with recent conclusions that there is an over-identification of SEN in the England (Ofsted 2010). However, whether SEN is over-identified generally and MLD over-identified specifically depends on the purposes of using such a category. If MLD is taken as equivalent to mild intellectual disabilities as used in health service classifications such as DSM, then the study shows that only those identified as having MLD and with Statements came close to meeting these criteria. And, as Simonoff et al. (2006) comment, it is unknown whether identifying pupils with mild intellectual disability is helpful to these pupils and their parents. In this study, only mean reasoning scores were significantly below those of pupils identified as low attaining (and without SEN), but even here the mean score was well above the mild intellectual disability cut-off.

When only low attainment is used as the definition of MLD, this represents a more educational definition and avoids the problematic issues, discussed above, about the biases in methods of assessing intellectual functioning and identifying pupils in categoric terms. However, the findings in this study show that in terms of literacy and other learning-related dispositions, those identified as having MLD were only different by degree along a continuum of functioning. The contested and uncertain position of the MLD category as used in schools, as shown in relation to pupils seen as ‘low attaining’, was also evident in relation to pupils identified as having SpLD. Though pupils identified with MLD had much lower reasoning scores than those with SpLD, there were no statistically significant differences in literacy levels, difference scores (literacy minus reasoning scores) nor any of the learning-related dispositions scores. Hence, there was no secure basis for distinguishing between MLD and SpLD in terms of the measures in these schools. This reflects on school procedures for distinguishing between MLD and SpLD in these schools, which has a bearing on the debate about the basis for defining a SpLD/dyslexia (Gibbs and Elliott 2010).

MLD is an area and category of special educational needs that has been much neglected in educational research and development in England, despite its uneasy but continuing use and the high proportion of pupils identified under this category. The relatively high incidence in England compares with a much lower incidence of mild mental retardation, the US counterpart to MLD (MacMillan, Siperstein, and Gresham 1996). Mild mental retardation, which is now called mild intellectual disabilities, made up 8.6% of all pupils identified as having disabilities in education in the USA in 2007 (US IDEA statistics: this covers mild, moderate and severe intellectual disabilities with mild being the largest sub-group). This is partly to do with the tighter US definition in terms of both intellectual functioning below 70 on standard scale (IQ scale) and low adaptive functioning outside school. The lower US incidence is also associated with higher percentages of children being identified as having specific learning disabilities, the counterpart to SpLD in England. MacMillan, Siperstein, and Gresham (1996) question the basis for a reliable distinct category of mild mental retardation (mild intellectual disability) in terms that are relevant to the
use of MLD in England. They recommend that intellectual disabilities should be reserved for more severe forms of difficulties and that a more descriptive term should be used for those currently identified with mild intellectual disabilities. In England, there is the equivalent issue of whether pupils identified as having MLD are to be considered as at the lowest end of the continuum of lower attaining pupils or whether they have a mild-moderate intellectual disability. This is the fundamental issue raised by the research discussed in this paper. What are the boundaries of SEN and how do we define SEN – what counts as a disability in education?

The rationale for using a learner category, like MLD, is usually justified in terms of whether the categories:

(i) are reliable and valid in terms of distinguishing the group from other groups,
(ii) are informative in understanding those identified and
(iii) have positive consequence in terms of:

(a) resources allocation and
(b) specific teaching approaches.

The research reported here relates to the first rationale and suggests that there is no evidence base for using the MLD category in some secondary schools. Whether this limited conclusion can be generalised to other English schools depends on further research. However, other research from this project calls into question whether there are specific MLD teaching approaches (Ylonen and Norwich 2012). The direction of this combined research is to call into question the current MLD category system and consider alternative more refined classifications. It has been argued elsewhere (Norwich 2007) that one alternative can be provided by the development of a sophisticated multi-dimensional category system based on the International Classification of Functioning (ICF: WHO 2002). This framework integrates the medical and social models of disability and distinguishes between impairment and the other personal and social factors that impact on activity and participation in different social contexts. As Hollenweger (2011) has shown this requires further national and international commitment to research and development work about classification systems within an educational framework.

Note
1. For data analysis these statements were reversed.

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Ruth Gwernan-Jones, PhD, is an associate research fellow at the Peninsula College of Medicine and Dentistry at The University of Exeter. Her research interests include inclusion and special educational needs, particularly in relation to learning difficulties.
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Appendix 1. Outline of the system of SEN in England

<table>
<thead>
<tr>
<th>Level of need</th>
<th>Nature of intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>Additional to or different from the usual (differentiated) curriculum of the school. External agencies not involved. Recorded without categories in annual census.</td>
</tr>
<tr>
<td>SA+</td>
<td>External support services are involved when the child does not make expected progress despite school interventions. Recorded with specification of categories.</td>
</tr>
<tr>
<td>Statement</td>
<td>A local authority, after undertaking statutory assessment, despite interventions at previous levels, issues a Statement (or record) of SEN and provision. Provision may be in ordinary or special schools. Recorded with specification of categories</td>
</tr>
</tbody>
</table>

Source: DfES (2001) and Special Educational Needs Code of Practice.