

Fact Sheet 8

LASS Junior Information Sheet

LASS (Lucid Assessment System for Schools) Junior is a fully computerised multifunctional assessment system for use with students in the age range 8 years 0 months to 11 years 11 months. LASS was created by Lucid in conjunction with the same research team from Hull University that collaborated in the development and validation of the *Lucid CoPS Cognitive Profiling System, CoPS Baseline Assessment, and LASS Secondary (11-15)* software. The full suite of eight computerised modules takes about 30–45 minutes to administer. Most of the modules are adaptive tests – that is, the computer automatically adjusts the difficulty of the items to suit the ability level of the student. This means that assessment is faster and more efficient, and also prevents students becoming bored by items which are too easy or frustrated by items that are too difficult.

The tests in LASS Junior

LASS Junior comprises the following eight assessment modules that can be used individually or in combination:

Auditory memory ('Mobile')	Single word reading
Visual memory ('Cave')	Sentence reading
Phonic skills: non-word reading ('Non-words')	Spelling
Phonological processing ability: word segmentation ('Segments')	Reasoning

LASS Junior enables teachers to obtain a reasonable estimate of the student's intelligence, to assess the student's attainments in reading and spelling, to measure discrepancies between actual literacy attainment and expected literacy attainment, to identify underlying problems in memory or phonological processing skills that might be the cause of any discrepancy, to diagnose dyslexia (specific learning difficulty), to monitor development in reading and spelling on a regular basis, and to assess improvements in memory, phonological and phonic decoding skills brought about by appropriate training or remediation.

Standardisation

The eight tests were standardised, so that teachers using the system would be able to establish where any given student fell on any of the components of the suite, in relation to the population norms. This means that direct and meaningful comparisons can be made between the individual tests that a single student takes. In addition direct and meaningful comparisons can be made between students and between the student and the national norm. The standardisation was carried out using children from 50 schools in different parts of the UK. Results are analysed in relation to norms in 12-month age bands, and are shown as centile (percentile) scores (or standard deviations) on a graphical profile that can be printed out. In addition, detailed results from every item delivered to the student are accessible to the teacher. The system is maintained under password security, so that the teacher is in complete control of what tests the students are permitted to do, and only the teacher has access to results.

Interpretation of LASS Junior

Interpretation of results obtained from LASS Junior is straightforward. It is easy for teachers to spot students who are under-performing in literacy in relation to their age and/or intellectual potential. It is also straightforward to verify if any difficulties are likely to be of a dyslexic nature – i.e. caused by underlying cognitive problems in phonology and/or memory. All this information can be used in formulating Individual Education Plans (IEPs) and is valuable when deliberating whether or not to request a formal assessment by an Educational Psychologist. LASS Junior can also be used on a regular basis (e.g. every term) to monitor progress in reading and spelling, or check development in phonic skills. The following sections give some examples of the ways in which LASS *Junior* can be used effectively by teachers.

Routine profiling with LASS Junior

Many schools routinely assess the general abilities of pupils – especially in verbal and non-verbal abilities – but sometimes in literacy attainment as well as mathematics and quantitative reasoning skills. LASS can fulfil several of these functions, including the non-verbal ability and literacy attainment components. When used for this purpose, it would not normally be necessary to administer the modules assessing memory (*Cave* and *Mobile*) or phonological skills (*NonWords* and *Segments*), because these are essentially diagnostic tests.

Special educational needs screening with LASS Junior

LASS also provides schools with a straightforward screening system for special educational needs, which can be an adjunct to routine on-entry profiling or used at any time between the ages of 8 and 11. When used for this purpose, students who obtain low scores on any of the routine profiling modules (*Reasoning*, *Single Word Reading*, *Sentence Reading* and *Spelling*) or who display a significant discrepancy between the score on *Reasoning* and the score(s) on *Single Word Reading*, *Sentence Reading* or *Spelling*, would automatically be administered the diagnostic modules. The procedure then becomes the same as for diagnosis and assessment of specific learning difficulties and dyslexia (see below). Details of calculating discrepancy and determining thresholds for low scoring are provided later in this section.

Diagnosis and assessment of specific learning difficulties and dyslexia with LASS Junior

Two main theoretical models may be used: the *Cognitive Discrepancy Model* and the *Phonological Deficit Model*.

The *Cognitive Discrepancy Model* has the following principles:

1. a significant discrepancy between intelligence and literacy skills is *prima facie* evidence for specific learning difficulty; and
2. in cases of specific learning difficulty where there is also evidence of cognitive deficits in memory and/or phonological processing, this is *prima facie* evidence for dyslexia; and
3. if a student also has poor phonics skills this provides further support for a diagnosis of dyslexia.

This model embodies the view that diagnosis of dyslexia is based on the notion of *discrepancy* between what the student *is* achieving in literacy and what they can reasonably be *expected* to achieve on the basis of age and intellectual ability. It is assumed that the student has experienced

normal education and that the problems are not primarily due to any emotional or medical cause. This discrepancy accounts for the fact that dyslexia is typically characterised by serious and unremitting literacy problems in children who otherwise would be expected to make reasonable progress in the acquisition of literacy.

The *Phonological Deficit Model* is based on the preponderance of phonological difficulties in dyslexia. It is well accepted that the discrepancy criterion is problematic when it comes to *early* identification of dyslexia, which has led to the development of alternative systems such as *Lucid CoPS*. The term ‘specific learning difficulty’ means little more than a discrepancy between ability and attainment. The principal difference between ‘dyslexia’ and ‘specific learning difficulty’ is that dyslexia presupposes the existence of certain cognitive deficits, which are believed to underpin the condition. Such cognitive deficits (e.g. in phonological processing, memory, visual processing, or motor co-ordination) are believed to be either inherited or due to neurological anomalies which have arisen before (or during) birth or in early childhood.

Monitoring of literacy progress with LASS Junior

The two main literacy modules in LASS (*Sentence Reading* and *Spelling*) are both adaptive tests that can be used at regular intervals to monitor progress. The minimum interval between administration of the same module on a second or subsequent occasion should be about 4 months (i.e. other than in exceptional circumstances, LASS should not be given more than once in a school term).

Evaluation of response to intervention with LASS Junior

When a particular problem (e.g. specific learning difficulties or dyslexia) has been identified and intervention such as specialist teaching has been implemented, teachers will naturally wish to evaluate the student’s response to that intervention. LASS can be used for this evaluation, again bearing in mind that the minimum interval between administrations of any given LASS module should be about 4 months (i.e. other than in exceptional circumstances, LASS should not be given more than once in a school term).

The literacy attainment modules (especially *Sentence Reading* and *Spelling*) are obvious candidates for use in this process, but *NonWords* may also be used to monitor development of phonics skills. It is unlikely that the *Reasoning* module would need to be repeated (little change would be expected on this module) unless there were suspicions that the first assessment using *Reasoning* had given an unreliable result (e.g. because the student was unwell or was greatly lacking in confidence, or misunderstood the requirements of the task). The memory modules (*Cave* and *Mobile*) would be useful for evaluating growth in memorisation ability, especially where a memory training programme has been used.

For more information about Lucid or the developments or research please visit the Lucid web site www.Lucid-Research.com. The Lucid staff can be contacted by email info@lucid-research.com, telephone +44 (0)1482 862121 or fax +44 (0)1482 882911.

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