What are the main differences between screening and assessment?

Assessment and screening are essentially different psychometric procedures with different design and outcome aims. The primary aims of screening are to be quick (relatively), time and cost efficient and to categorise people into groups (risk groups) with good accuracy. Screening reports should ideally be available immediately and they should be simple, clear and uncomplicated. (Some diagnostic information can be included in screening reports but it is not the aim primary aim of screening.) This permits the screening of large numbers of people with maximum efficiency and impact. Assessment is a much lengthier and more complex process and although labelling is not always essential, assessment generally has the aim of reaching a diagnosis with advice. In order to achieve this, assessment should examine both a pattern of strengths and weaknesses. (Note – The use of terms such as 'diagnosis' and 'labelling' within education are not without controversy.)

Screening
Screening is a quick process that categorises people into mutually exclusive groups – dyslexic or not dyslexic for example – and will give a reasonably good indication of whether the person is likely to have dyslexia. Screening can be computerised and performance based, requiring no involvement of human judgement and therefore can be objective and comparatively low-cost.
Similar to other types of screening, dyslexia screening tests are not 100% accurate. There are several reasons for this. Dyslexia is actually a continuum (it is not a true categorical condition i.e. it is not simply 'black or white'), there are wide variations in the extent to which different people show the effects of dyslexia, criteria for classification varies, definitions of dyslexia can vary, even between experts and screening devices will inevitably have their own inherent error rates.
Usually, the screening categories are those that meet certain criteria, the **target group** that you are screening for (called '**the positives**' e.g. dyslexic group), and those that do not meet the criteria, the **non-target group** (called '**the negatives**' e.g. the non-dyslexic group). These should then be broken down into those whose group membership the screener accurately identified and those whose group membership the screener inaccurately identified. **Correct classifications** of both group memberships are referred to as '**true positives**' (e.g. true dyslexics) and '**true negatives**' (e.g. true non-dyslexics). Whilst incorrect classifications, or **misclassifications**, of both group memberships are referred to as '**false positives**' ('false alarms' e.g. those who are not dyslexic but who were wrongly included in the target dyslexic group) and '**false negatives**' ('missed cases' e.g. those dyslexics who were missed i.e. not identified or included in the dyslexic group). (Note - 'Sensitivity' (or 'true positive rate') and 'specificity' (or 'true negative rate') are terms often encountered, especially in medicine. There are many other terms such as 'power', 'recall rate', 'precision' and so on, but all of these are simply different ways of considering at the same basic four elements of accurate and inaccurate classification into the target and non-target groups.)
There will always be a 'grey' area where categorisation can never be completely certain. Screening should not be regarded as a substitute for more comprehensive assessment.

Assessment
Assessment is a much lengthier and complex process by which a diagnosis of dyslexia is reached. This requires use of several tests, usually takes several hours and requires the judgment of an experienced and appropriately qualified professional. For these reasons, assessment is usually very expensive. However, there is no definitive or universally accepted method of diagnosing dyslexia, nor is there a generally agreed set of tests for dyslexia. This means that

even amongst qualified professionals, opinions sometimes differ not only regarding what are the best or most appropriate tests to use, but also what results genuinely indicate dyslexia. It is arguable that there is no single universal 'gold standard'.

Assessment is generally a process that enables the performance of individuals to be compared to that of their peers. The peer group may be a **group** of individuals (e.g. a whole school class or year) or the **whole population** of the same age. Since assessment of a whole population is impractical, estimates of the performance of the population are arrived at by sampling the performance of a sizeable, representative cross-section of that population. This is the process of standardisation and norming (using norms). (There is some confusion in the marketplace and education with the term 'standardisation'. Some use it to mean that the test materials are the same, or that the test is scored and administered in a consistent and 'standard' manner. This is opposed to the statistical or psychometric meaning for 'standardisation' which is that the test is 'norm-referenced' or 'normative' – i.e. one that uses norms.) The data from assessment can be used for various purposes, including evaluating attainment and learning, monitoring progress, determining competency, diagnosing a learning problem such as dyslexia, and screening.

Assessment tests used for screening
When assessment tests are used for screening, however, the teacher or psychologist must generally decide (using the norms) where the cut-off separating the positive cases from the negative ones should be placed (e.g. bottom 10%, bottom 5%). This is distinct from a test that has been designed *specifically* for screening, which is developed in a rather different way because it has to distinguish between negative and positive cases in a manner than minimises both **false positives** ('false alarms') and **false negatives** (missed cases). A screening test should therefore be tuned or calibrated to achieve this specific end result. This is not a straightforward process, because simply moving the cut-off point on an assessment test will usually have the effect of reducing the incidence of one type of misclassification while simultaneously increasing the other (e.g. reducing false positives while increasing false negatives, or vice versa).

Educationalists should always be mindful of relative advantages and disadvantages of both screening and assessment, but both have their value.

Lucid's **dyslexia screening** systems are **Lucid Rapid** (ages 4 to 15) and **LADS Plus** (ages 15 to adult). These systems have been scientifically validated and are norm-referenced.

Lucid ViSS is a **visual stress** (aka Irlen Syndrome) screener for ages 7 to adult. This system has been scientifically validated and is ipsative assessment.

Lucid's **dyslexia assessment** systems are **Lucid CoPS** (ages 4 to 8), **LASS 8-11** and **LASS 11-15** covering ages 4 to 15 years. These systems have been scientifically validated and are norm-referenced.

Lucid Ability (ages 4 to 16) assesses **non-verbal and verbal ability** (doesn't depend upon reading skills) and also provides a general conceptual ability score. This system has been scientifically validated and is norm-referenced.

Lucid Exact (ages 11 to 24) provides detailed **assessment of literacy** – especially useful for exam access arrangements. This system has been scientifically validated and is normative.