

Identifying and overcoming the barriers to learning in an inclusive context

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The two key phrases in the title of this article ‘barriers to learning’ and ‘inclusive context’ are of considerable significance in meeting the needs of learners with dyslexia. Most education systems throughout the world are attempting to include children with dyslexia within the mainstream curriculum. This can only be really effective if additional support, or training for teachers is available. It is also important to shift from the ‘mind set’ of viewing dyslexia as a ‘disability’ or a ‘deficit’ to a more positive and pro-active perspective.

Barriers to learning

When identifying the barriers to learning it is important to look at students’ holistic needs. This would include: cognitive (learning skills) environmental (learning experience) and progress in basic attainments (literacy acquisition). These factors highlight a number of key factors relating to the learner, the task and the learning experience. This highlights the need not to solely focus on the child, and what he or she can or cannot do, but to look at the task that is being presented, the expectations being placed on the learner and the learner’s readiness for the task. From that premise the first step is to identify those factors – cognitive, educational, environmental and social / emotional that can be presenting barriers to the learner acquiring competent literacy and other skills. It is important that learners with dyslexia gain some success as this will help to develop a positive self-esteem. This is crucial for successful learning. Success can usually be acquired if the learner achieves so it is important to ensure the task is achievable.

Dealing with difficulties experienced by the learner

It is important to obtain an understanding of the type of difficulties experienced by learners with dyslexia and to identify how these difficulties can be minimised. Some of the potential difficulties are discussed below.

Understanding

Often the learner with dyslexia may not actually understand the task. This can in fact offer a reason why they can answer a seemingly different question to the one intended. Understanding the task therefore can be a barrier that confronts the student with dyslexia in most subjects. It is not because they do not have the necessary cognitive skills to understand the task but it is because the task is presented in a manner that makes it very challenging for the dyslexic student.

Identifying the key points

Dyslexic students may have difficulty in recognising what the task, or the text, is suggesting because they have not been able to identify the key issues. They may pick up some tangential issues that side track them into a different path and this can lead to a different type of response from that intended. It is crucial to highlight the key points rather than expect learners with dyslexia to identify these themselves.

Processing information

Two of the key components that need to be considered in relation to identifying and dealing with the barriers for learners with dyslexia relate to the distinction between processing and reasoning.

Often the person with dyslexia will have good reasoning ability – given that the barriers have been removed they will be able to access thinking skills and show good comprehension. The processing of information however which is often noted in the output –that is the written work may be more challenging. Processing involves :

Comprehending the task - that means the learner has to be able to access the vocabulary and the purpose of the task - for some learners with dyslexia this can be demanding. This highlights the importance of pre-task discussion. During that time the teacher would discuss the task, the vocabulary, the concepts and the purpose of the task with the learner. This is essential to ensure that learner has an appropriate schema for the task as this will assist in the access and utilisation of background knowledge and existing skills. This indicates that one of the key issues is not the 'what' question but the 'how' question - that is how do I do this – what information do I need and what do I do first. This means that the learner with dyslexia needs support in the actual learning process. This will be time well spent as it has been indicated that often learners with dyslexia can have low metacognitive awareness (Tunmer and Chapman 1996) indicating the they find the process of learning challenging and once they receive support in this area they can usually deal with the task more competently.

Implementation of the task – that is being able to use the information provided to assist in the answer to the question. This would have implications for being able to identify the key points and focussing on the actual task. It is possible for learners with dyslexia to be side tracked and look at issues –that may be important but may not directly relate to the task.

Autonomous learning – it is often the case that students with dyslexia become dependent on a teacher or support teacher when they are tackling questions. This means they are leaning towards a dependency culture and becoming too dependent on another person. This in the short term may be exactly what they need but it has dangers. One danger inherent in this can be gleaned from 'Attribution Theory'. This would imply that if learners' become dependent on support they will attribute their

success to the presence of the teacher. It is important that this attribution is shifted in order that they attribute success to their own efforts. This is the first and essential step to becoming an independent learner.

Reporting on the task – this is an important factor as this is the final component of learning that is often seen as a measure of competence. Yet learners with dyslexia can often have competence but not be able to display that either in written form or indeed orally. This can be frustrating so it is important that support is available to help with organising, sequencing and structuring the key points to assist in the reporting process.

Anticipating and Dealing with the Barriers

Some key points

- **Balance** – try to ensure that teaching and planning incorporates a range of learning and teaching styles and that there are activities that can accommodate to visual, auditory, kinesthetic and tactile learners. It is also important to identify different areas of the classroom that can accommodate to the different learning preferences of the students. This is particularly important for students with dyslexia as often they are not as flexible or versatile as some other learners and may need to use their preferred learning style more often, particularly with new learning.
- **Planning** – Meeting the needs and dealing with the barriers need to be identified at the planning stage. This is crucial and the important factor in this is knowledge of the child. Planning should not take place in isolation but needs to be contextualised to the learning environment, the anticipated learning experience and the actual learner. It is important therefore to have pre-knowledge of the individual learner when engaged in planning (see Fig 2). This can also be achieved through developing an observation schedule or framework that can help to inform both planning and teaching.
- **Differentiation** - differentiation is really about good teaching and advanced planning. If the curriculum is effectively differentiated to take account of the task, the input, output and the resources that are to be used then it is likely that all students will be catered for in some way. Differentiation is about supporting the learner and guiding him/her from where they are now to where they should be. In other words it is about helping to make all curricular materials accessible.
- It is also important to look at the assessment materials as these may also have to be differentiated for learners with dyslexia. Differentiation therefore needs to consider the learner, the task and the outcome as well as the resources.

- **Learner awareness/ learning style** – it is worth while spending time with the learner so that he/she will be aware of their own learning preferences. It will be useful to help them understand that there are advantages and disadvantages to every learning style and help them to identify their own particular style of learning and how they can use that style effectively.
- **Acknowledging creativity** – There has been a great deal written on creativity and dyslexia (West 1997). While a number of students with dyslexia will have natural creative abilities this will not apply to all. At the same time it is important that every student is provided with opportunities and support to develop and utilise creativity and individual ways of using information. Some self-talk tactics are described below.
- Acknowledging
 - That's a new idea
 - I see
 - Interesting point
- Restating
 - You want to know...?
 - Does that mean...?
 - Are you saying....?
 - So you are disagreeing with.....?
 - You think.....?
- Clarifying
 - Why do you say that?
 - I don't quite understand what you mean
 - What are we really discussing here?
 - That seems to relate to....
- Disagreeing
 - You make an interesting point, have you considered...?
 - Is it possible that..?
 - Here's another thought...
- Challenging Thinking
 - I wonder how we know..?
 - Can you give some reasons for..?
- Redirecting
 - How does that relate to...?
 - Good point but have we finished discussing.....
- Expanding
 - I wonder what else this could relate to...?

Planning

- **Knowledge of the child's strengths and difficulties** – this is essential particularly since not all children with dyslexia will display the same profile. This is therefore the best starting point as often strengths can be used to help deal with the weaknesses. For example dyslexic children often have a preference for visual and kinesthetic learning and a difficulty with auditory learning. Therefore phonics which relies heavily on sounds, and therefore the auditory modality, needs to be introduced together with visual and experiential forms of learning. The tactile modality involving touch and feeling the shape of letters that make specific should also be utilised, as well as the visual symbol of these letters and letter/sound combinations.
- **Consultation** – the responsibility for dealing with children with dyslexia within the classroom should not solely rest with the class teacher. Ideally it should be seen as a whole school responsibility. This means that consultation with school management and other colleagues is important, and equally it is important that time is allocated for this. Information from previous teachers, support staff, school management and parents are all important and such joint liaison can help to ensure the necessary collaboration to provide support for the class teacher. Importantly this should be built into the school procedures and not be a reaction to a problem that has occurred – such collaboration can therefore be seen as preventative and proactive.
- **Current level of literacy acquisition** – an accurate and full assessment of the child's current level of attainments is necessary in order to effectively plan a programme of learning. The assessment should include listening comprehension as well as reading accuracy and fluency. Listening/reading comprehension can often be a more accurate guide to the abilities and understanding of dyslexic children than reading and spelling accuracy. Indeed it is often the discrepancy between listening or reading comprehension and reading accuracy that can be a key factor in identifying dyslexia. Information on the level of attainments will be an instrumental factor in planning for learning.
- **Cultural factors** – Cultural factors are important as these can influence the selection of books and whether some of the concepts in the text need to be singled out for additional and differentiated explanation. Cultural values are an important factor. It has been suggested that the 'big dip' in performance noted in some bilingual children in later primary school may be explained by a failure of professionals to understand and appreciate the cultural values, and the actual level of competence of the bilingual child, particularly in relation to conceptual development and competence in thinking skills. In order for a teaching approach with bilingual students to be fully effective it has to be comprehensive which means that it needs to incorporate the views of parents and the community. This

requires considerable preparation and pre-planning, as well as consultation with parents and community organisations.

Developing Learning skills

Learning is a developmental process that takes place over time. There is evidence that learners with dyslexia do need more time to consolidate new learning. The key word here is 'developing' as this encapsulates that learning is a process and for learners with dyslexia that process may need to be individualised.

Bransford, Brown and Cocking (2000) suggest that the word 'development' needs to be more firmly understood in educational terms. They maintain this term is critical to the understanding the changes to children's conceptual growth. This implies that cognitive development does not result from the gathering of knowledge, but from the processes involved in cognitive reorganisation. One of the underlying points from their expanded edition of *How People Learn* (National Research Council 2000) is that we do not give young children enough credit for their ability to develop metacognitive skills. They suggest that children can develop metacognitive skills very early on and are able to plan and monitor their success and correct errors when necessary. These abilities however need to be nurtured and are dependent on mediation from the teacher. This is important in relation to dyslexia. The role of the teacher in promoting and developing metacognitive learning is crucial. Often competence in learning can only be fully acquired when learners are able to transfer what they have learned to new situations. In order to facilitate transfer of learning students need to monitor their own learning and actively consider how they are progressing with the task, and the strategies they are using. Many students with dyslexia may be unable to do this and will need monitoring and guidance to achieve this.

The key question therefore for the student with dyslexia in relation to developing learning competencies is 'how do I know this?' This is the question the learner needs to ask him/herself throughout the learning experience. This can help to develop self-awareness and metacognitive skills. This will help learners transfer learning and assist them in finding out about themselves as learners. It is this self-knowledge that will provide the most useful and effective tool in future learning for students with dyslexia as it will promote learner independence.

Brown and Campione (1994) highlight this when discussing the key principles of effective teaching and learning. They suggest that students should be encouraged to be self-reflective. The environment they argue should be designed to foster intentional learning to encourage student reflection and should focus on the students' ability to discover and use knowledge. Again this is crucial for learners with dyslexia as often they are not able to utilise previous learning without guidance

and support from the teacher. This means that every learning situation is in fact a new one. This can cause fatigue and certainly necessitates additional time to be spent on the new learning.

The role of Schema

It is important that children with dyslexia are supported to develop new concepts and ideas and to incorporate these into their existing understanding. This is essentially the development of schema which is a conceptual framework that can help the learner organise information into a meaningful context. This can aid understanding and recall. This can also aid comprehension and recall as the new knowledge is being assimilated into the students current schema or re-framed and accommodated into a new schema.

When children read a story or a passage, they need to relate this to their existing framework of knowledge – i.e. their own schema. So when coming across new knowledge, learners try to fit it into their existing framework of knowledge based on previous learning. The development of a schema can help the learner:

- attend to the incoming information;
- provide a scaffolding for memory;
- make inferences from the passage which also aid comprehension and recall;
- utilise his/her previous knowledge.

When considering the barriers to learning experienced by children with dyslexia it is important to acknowledge the importance of developing concepts and recognizing the level of the child's schema for the new learning.

Scaffolding

It is important to consider the scaffolds that will be used to assist the learner develop new schema. When considering the needs of learners with dyslexia it is also important to recognize multi-sensory principles and practices. Ideally a range of learning modalities should be used when developing scaffolds but it is important to see these not as a special form of provision but as a learning toolkit that can be utilized by most learners as well as those with dyslexia.

Dyslexia, Learning and self-esteem

A positive self-esteem is crucial for learning as this can provide the learner with confidence and motivation enabling learners to utilise learning approaches, such as those mentioned earlier in this chapter. A child with dyslexia with a low self-concept will very likely have a cautious approach to learning and will have an over reliance in the structure provided by the teacher. It is unlikely that such learners will develop a risk taking approach to learning as they will not have the confidence to take responsibility for their own learning. Yet it is important that students with dyslexia assume responsibility for their own learning and in time develop their own

strategies and structures and eventually have the skills to assess their own competencies in tasks.

It is important that tasks, indeed all learning and learning experiences are directed to developing the student's self-esteem. In order to develop self-esteem the learner with dyslexia must have some perception of success. It is obvious that if a learner is continually in a failure situation this will in turn have some influence on the learner's self-esteem. It is crucial that tasks are developed to ensure that the learner will succeed. This will require tasks to be broken down into manageable units for the learner. This would ensure that the child with dyslexia will achieve some early success when undertaking a task and this will provide motivation for subsequent learning.

Burden (2002) refers to Kelly's Personal Construct theory (Denicolo and Pope, 2001) as a means of helping students develop an awareness of their own perception of themselves as learners. This relates to how the individual sees him/her self as a learner and importantly the attributions that they make for their successes and failures in learning. If learners constantly fail at learning they will attribute this failure to themselves and their lack of ability. In fact they may be failing because the task or the learning environment is not conducive to the learner's current level of knowledge or his/her learning style. The attributions, that is the reasons children give for failure are important and can provide useful information on the learner's self-perception and self-esteem. If learner have negative perceptions of their learning abilities this can give rise to feelings of low self-worth and any repeated failure can result in situation that can be referred to as 'learned helplessness' (Smiley & Dweck, 1994). This means that the student loses motivation to learn as a result of an accumulation of failures.

It is important that this situation is prevented for learners with dyslexia. It is for that reason that the barriers to learning need to be identified at an early stage and strategies are in place to prevent failure. One of the main means of doing this is by ensuring the student has some early success. A base line assessment is crucial for that and Came and Reid (2008) have developed a set of materials that can help to identify both concern and need. They suggest that it is crucial for teachers in the classroom to be the first to identify concern. This can be done through observation and from checklists and other proforma materials looking at skills and attainments and checking on progress in the sub skills of literacy and in other areas of learning.

Identifying at risk children requires planning and being aware of the need for and planning for both assessment and intervention is essential. This can help the teacher recognise if there are concerns and pinpoint precisely which aspect of learning should be prioritised in a learning programme. This helps to both identify and deal

with the barriers to learning – crucial if all students with dyslexia are going to be equipped to deal with the challenges of learning effectively in an inclusive educational setting.

How dyslexia affects children's learning

One of the key factors about learning is that learning is a process. This process can be described as dynamic one. This means that different parts of the brain interact with other parts and each relies on and interacts with the other. For example the various parts of the brain that deal with visual/ auditory/memory/understanding/co-ordination may all be used simultaneously to tackle a task. It is often this simultaneous use of learning skills that is challenging for children with dyslexia. For that reason tasks need to be structured, clarified and preferably focussed towards the student's stronger areas of learning. Children with dyslexia are usually stronger visually or kinesthetically, as opposed to auditory. That means initial learning will be more meaningful if presented visually or through the experience of learning (kinesthetic).

Kinesthetic experiences can be helpful to re-inforce learning. Kinesthetic means experiencing learning. Activities that involve drama and role playing, or investigation and enquiry activities, such as in a survey, interview or questionnaire, all utilise kinesthetic skills. Each of these activities involves experiential learning and this can help to create a positive learning experience for the child with Dyslexia (Reid 2008).

An understanding of the role of Metacognition is also very important for positive learning experiences.

Metacognition

Metacognition means learning to learn. This implies that children can be taught to be more effective learners. They may be weak in metacognitive awareness and have difficulty in knowing how to go about tackling a problem. This means they may not be sure on **how** to, for example, interpret a question or to work out the most efficient way of answering it, or in fact to remember any piece of information. The development of metacognitive skills can be aided by programmes that are essentially 'study skills' programmes. Often study skills are seen to be part of examination preparation, but in fact this is too late. Study skills, particularly for learners with dyslexia should be provided as young as possible. Becoming efficient in studying and learning helps the learner make connections between different pieces of information and this can help with transfer of learning and generally more efficient use of information.

Encourage creativity

It is interesting to reflect on the fact that many creative people can only take control of their own learning after they leave school. Many fail at school, or certainly may not shine. This is because the examination system often does not encourage creativity. There are certainly signs that progress is being made in this area but often the pace of learning to ensure that all examinable areas of the curriculum are covered is fast. This means that there is little scope for digressing and indeed for encouraging creativity. For many learners creativity is the principal motivating factor. For example the young, rising pop singer who is directed by his record company to record covers by other artists all the time may soon tire of this and become demotivated. Artists in particular need to be encouraged to use their creativity and this can in fact apply to all learners. Many when asked if they are creative would quickly reply - no - that is because they have not had the opportunity to be creative.

Provide feedback to students about their own personal progress

Progress is personal - progress for one may not be progress for someone else. It is important that the criteria for progress is not generalised but instead it should be individualised. Once it is decided what exactly constitutes progress for the individual this should be discussed and negotiated with the learner and then personal goals can be established and progress more easily identified.

Encourage self assessment

This is important as it helps children take control of their own learning. They should be encouraged to assess their own progress and this can be a motivator in itself. The key point is that they should be able to decide what they want to achieve and the teacher's role in this is to guide and monitor their progress. Self-assessment encourages self-reflection and this helps to develop higher order thinking skills (Reid and Green 2011).

Develop student responsibility

The key to successful learning is student autonomy. This is important as it provides the learner with some control over his/her learning. It is this control that fosters responsibility and makes it possible for the student to move from extrinsic to intrinsic motivation.

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