



The Child Development Network

Scientifically Proven Principles for the Development of Reading Interventions for the Dyslexic. (Lyon 1998 Torgensen 2002, Shaywitz 2002)

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Research into the effectiveness of remedial reading programs has taken place over many years. Numerous programs aimed at remediating Dyslexics and others with reading delays and learning disorders have been scientifically analysed and tested. This extensive body of research has consistently shown that if a remedial literacy program is going to be effective than it must be based on at least seven fundamental principles.

That is the program must be:

- 1 Multisensory
- 2 Alphabetic and Graphophonemic
- 3 Direct, Explicit Repetitive Instruction
- 4 One on One
- 5 High Intensity, High Frequency, Moderate Duration
- 6 Systematic and Cumulative
- 7 Goal Driven

The Principles are discussed below.

Multisensory

If a program is Multisensory then it means that it utilizes the four main senses of the human body to deliver information and illicit responses. Those senses are:

1. Visual
2. Auditory
3. Kinaesthetic
4. Tactile

Visual

The visual system is made up of the ocular and processing areas. Ocular refers to the physical vision of the eye while processing refers to the neurological circuitry that interprets what the eye is seeing.

Auditory

The Auditory system is made up of the auricle and processing areas. The auricle area refers to the physical hearing mechanism while processing refers to the neurological circuitry that interprets what the ear is hearing.

Kinaesthetic

The kinaesthetic system relates to movement. That is, the involvement of the body in physically moving as a response to instruction or stimulus.

Tactile

The tactile system relates to touch and feel. This generally involves the physical manipulation of resources by the hands in response to instruction or stimulus.

The most effective multisensory programs are those that have the highest integration of the senses at one time relative to an identified teaching point. For example if a student was learning the letter /p/ and could see, hear, feel and draw the letter /p/ simultaneously than there would be a significantly better chance of the student developing automaticity relevant to that letter and its sound.

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Alphabetic and Graphophonemic

The English language is based on an alphabetic code, of which the 26 characters of our alphabet are the base. From these characters the 44 phonemes (single sounds) of English are evident. Combinations of these characters produce more and more synthesized sounds and of course many different ways of writing these sounds out is also evident. If a student learns to crack this code by mapping single sounds and complex sounds onto letters and sequences of letters then there will be a significantly greater mastery of the sound symbol association of English

Direct, Explicit Repetitive Instruction

It is essential that the program be presented one teaching point at a time. It may in some cases be necessary to teach one sound and one symbol only at any one time. It is vital that each component is taught in the simplest terms in the most direct and uncomplicated way possible and that this process is constantly revised.

One on One

The more serious the learning disorder the more reason to make all session's one on one. This is the best way to maintain attention span and on task behaviour. It also allows for the fullest possible attention to each and every detail by the teacher as it is presented to the student.

High Intensity, High Frequency Moderate Duration

High intensity refers to how hard and consistently a student works for during a session. High frequency refers to how often a student participates in a session. Research shows that up to one hour each day for five days a week is needed for success. Moderate duration refers to how long the program lasts for at any one stint. In other words a student may work for one hour a day for five days a week for 12 weeks. This is not a really brief period of time but it is not very long either. It may be useful then to have a short break of two or three weeks before resuming for a second period of 12 weeks if that was necessary.

Systematic and Cumulative

Systematic refers to the fact that the program should be so arranged that it forms a complete methodology in a succinct and progressive way. Cumulative refers to the concept that each successive step is only possible if all previous steps have been accurately completed. That is step two is dependent on the accurate completion of step one and step three is dependent on the accurate completion of steps one and two and so on.

Goal Driven

It is important that there are a clear set of goals or achievement outcomes that have been predetermined and if appropriate put in writing prior to the commencement of the treatment plan. These goals need to be Specific, Measurable, Achievable, Realistic and Time-based. Goals should be divided into short term and long term considerations and the measurable component should be both a qualitative and a quantitative consideration.

This type of intervention is not one that can be easily administered within the school environment. So a decision about the amount of school versus private practitioner involvement must be made before any treatments commences.