

Specific Learning Disabilities

Characteristics

According to the final regulations of Public Law 94—142; Fed. Reg. (1977): 121a. 5(b) (9), *specific learning disability* means “a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental disability, of emotional disturbance, or of environmental, cultural, or economic disadvantage.”

Although this condition (learning disability) is usually characterized by perceptual deficiencies of some kind, the diversity of problems and manifestations defies generalization and, hence, a characteristic syndrome. The definition is so general, however, that *learning disabilities* has become an alternative term for labeling children whom teachers fail to reach in any academic area. It is estimated that many children currently being labeled as *learning disabled* are failing in school because of poor teaching rather than as the result of brain dysfunction. This is a serious problem, as all children occasionally experience learning difficulties in some area of the curriculum. The damage that can be done by labeling a child *slow learner* or a *learning problem* is often irreparable. Also, many children with learning problems due to environmental factors are being identified for programs meant to serve children unable to learn because of diagnosed organic brain dysfunction. Delayed development of perceptual skills, due to impoverished or ineffectual learning environments at home or school, probably accounts for a large majority of the children with learning problems in the public schools.

Children with perceptual problems have difficulty processing raw sensory data coming into the brain. Improper or inefficient reception, interpretation, or integration of information brought to the brain through the five senses results in learning problems that are most evident in the academic areas of reading, writing, and speaking (i.e., language) as well as computation and logic.

The following are some general characteristics of children with perceptual problems.

- It takes them longer to get meaning from looking, listening, touching, or moving.
- It takes them longer to learn to integrate information from two or more senses.
- It takes them longer to learn to remember what they've seen, heard, felt, or done.
- Many are slow and inefficient at visual judgments.
- Some get distorted information from listening and/or seeing.

- Some have imprecise control over body movements.

Perceptual difficulties tend to fall into three distinct areas. These are *spatial relations*, *quantity*, and *time concepts*. Some of the more specific problems and their manifestations in the music class or lesson follow. It is important to keep in mind that not all perceptually handicapped children have all these difficulties.

Space Children with problems in spatial relations have difficulties judging size, distance, or direction. However, they may be able to handle very abstract ideas that do not require too much visualization. Dealing with space is obviously closely related to visual perception. In body movement activities a child with faulty spatial relations will be noticeably clumsy, often bumping into things (including other children) and knocking over objects. Sometimes children feign being the "class clown" in order to cover up their ineptness, and the teacher is led to believe the problem is an "acting out" one. Also noticeable in movement activities is the inability to remember the direction and sequence of movements, as in a dance. Directions in general often impose limitations on a child's performance. Words or phrases such as *behind*, *next to*, *in front of*, and *back to back* are often meaningless to this child.

Manipulating objects in space will often be a frustrating and unsuccessful activity for a child with spatial problems. This is most evident when children are given balls, balloons, hoops, scarves, and so forth. Children who cannot throw a ball where they want it to go or catch one coming at them are at a definite disadvantage in many childhood games. Cratty has called attention to the importance of ball-handling skills to the "social success" of young children in the American culture.

Balance and agility are additional skills that can be observed in body-movement activities. Difficulties commonly encountered are the inability to balance or hop on one foot (with eyes closed and with eyes open), to hop or jump forward and backward, to go over and under things, and activities that require crossing the midline, such as crossing arms or legs.

Since perceiving space and one's relationship to it is a problem, organizing space is often a monumental task for a perceptually handicapped child. Keeping lockers neat, giving instruments good care and maintenance, and keeping music in good repair is not characteristic of this child. On the other hand, some may go to the opposite extreme and be so fastidious about these things that the slightest disturbance of their "everything-in-its-place" regime is extremely upsetting to them. When one appreciates the difficulty involved in bringing about some external order to things, it is easier to comprehend the emotional outbursts that may result when this order is disturbed.

One other obvious sign of faulty spatial relations is handwriting. In addition to writing letters and numbers backward, some children also make their letters noticeably irregular in size and spacing. The potential problems in teaching music reading and theory are readily seen, since size, position, and quantity are important in music symbolization.

It has been previously stated that reading is often an area of academic difficulty with the perceptually handicapped. Spatial relations are involved here, too, as a left-to-right eye movement across the page, back, and down to the next line is difficult for the individual lacking spatial clues. The music score is even more demanding in the area of spatial judgment. The child may experience difficulty with the basic discrimination of line from space, line from line, space from space. In addition, the look-alike characteristics of various symbols and the directional importance of others could be overwhelming.

Quantity It is often difficult for some children to do two things at once: look and listen, sing and play, look and play, and so forth. Activities in which we ask children to perform two perceptual motor tasks simultaneously may undo the perceptually handicapped child. For example, sing and clap, clap and walk, or sing and play. Similarly, children may struggle with the mechanics of reading music to the extent that they don't recognize what they've played, even if it is a familiar tune. Consider the rehearsal where we expect musicians to read, play, listen, and look at the conductor! It is simply impossible for some children to do or remember two things at once. If these children remember to bring their horn or trombone on lesson day, they often leave lunch or homework at home. Because of this inability to give attention to more than one thing at a time, they are often described as being inattentive, scatterbrained, and so forth.

Time Some perceptually handicapped children seem to learn more slowly than others. Demonstrations often go by them too quickly. Thus, by the time their turn to perform comes, they are unable to remember the new fingering, the ostinato pattern, or the proper way to hold an instrument. Comprehending the spoken word involves concepts of time, as discrimination of letter sounds is time-related. The difference between the sounds of *p* and *b*, for example, is temporal. In spoken language when the words go by too fast, the child tries to fill in what was missed, often with disastrous results. "Put the drum away" may be heard as "Take the drum and play." Obviously, giving multiple directions is not recommended. Perhaps one of the reasons that singing is so successful with language-handicapped children is that syllables, and hence words, are sustained longer in song.

The concept of time is intricately involved with seriation and sequencing skills. One must be able to remember the order of a series of events to master these skills. In language development, the sequence of sounds within a word, of words in a phrase, and of phrases in a sentence is basic to literacy. Mathematical processes are also dependent on these skills. Any children who seem to lack a sense of rhythm may have a more general problem with judging time intervals.

Time (rhythm) is a basic element in music. Many music educators will agree that in music, time concepts are the most difficult for children to grasp. Zimmerman reports that, for elementary and junior high students, maintaining the identity of a specific meter or rhythm pattern was more difficult than conserving a

tonal pattern. Rhythm discrimination improves "with the increasing attention span and the improvement of the memory function."

Learning Style

Just as we are unable to generalize regarding deficiencies or behavior, so also the learning style of each child must be considered unique. It generally will be true, however, that the child will show a preference for a particular sensory modality (i.e., seeing, hearing, feeling, or touching). This preference does not mean that we should work through that mode exclusively, but we can pair that mode with a weaker one to assure a degree of success for the child. Prescriptive teaching involves identifying weak skills, then planning activities to strengthen them. Every music class should include a variety of perceptual motor tasks such as singing, movement, and playing. A child's endurance level for any one area (e.g., listening) should be constantly monitored. Most activities will need to be very short. Continuing an activity past the point where it has interest and meaning for the child or class will only result in diminishing returns in both attitude and skill development.

Activities should be kept simple in the quantity and dimension of sensory areas utilized. Only when the child consistently handles one arrangement should there be an attempt to make an activity more complex by adding another modality, or more of the same modality. For example, sing a song (without accompaniment, clapping, instruments) until it is learned thoroughly. When the song is secure (i.e., when the child can sing it without help), one more thing can be added (e.g., clapping, one instrument). Gradually add new variations as each preceding one becomes automatic. This will take several sessions. Simultaneously singing, playing instruments, and moving is far too complex to achieve in a few lessons with perceptually handicapped individuals.

Exact repetition, although an effective technique in teaching children with cognitive disabilities, is not always helpful to a child with a learning disability. Drilling note values, key signatures, or even words to a song may result in a response as if the material was new each time. One solution is to try a different type of sensory input. For example, if the first approach was through the auditory mode, switch to a visual, tactile, or kinesthetic one. *Shaping* and *prompting* are techniques that have been successful with all children and can be used to good advantage with the learning-disabled child. Both of these techniques are related to *behavior modification* and involve changing and eventually phasing out the reinforcing stimulus.

Learning Needs

A good attitude, motivation, self-control, and ego strength are pre-requisites to benefiting from remedial academic programs. Music can be the preliminary experience that develops these fundamental requirements for learning. Music is fun, has intrinsic rewards, and is intrapersonal, noncompetitive, and ego-building. Some children with perceptual handicaps must be taught to become sensitive to sensory stimuli, while others must learn to integrate stimuli coming in through the various modes without becoming

overwhelmed. Learning-disabled children need highly structured activities if they are to be successful learners. Clear objectives and step-by-step directions, given slowly, and then repeated by the target child, are essential as well.

Although many children with learning disabilities tend to be quite verbal, their language is often fraught with mixed-up syntax, inaccurate grammar, and inappropriate word tense. These language problems reflect a lack of development in the more basic areas of discrimination, memory, and sequencing. Although they know what they want to communicate, their language is often not a reliable method of doing so. For this reason, it is advisable to offer the child alternative forms of response (e.g., "Show me.") or to ask for further explanation of an inappropriate verbal response.

Many children with learning disabilities are easily distracted by irrelevant auditory or visual stimuli and are sometimes referred to as *hyperirritable*. Keeping the learning environment as free of distractions as possible will help them focus attention on the task at hand. An ideal facility is a soundproof room with cabinets in which instruments and sound equipment can be kept out of sight when not in use. Sometimes the use of earphones is effective in blocking out external sounds when listening to recorded music.

All children with learning problems benefit from teachers with patience who

- Allow them to progress at their own rate
- Regularly give ego support
- Help them specifically evaluate their successful efforts
- Offer new ideas on how to improve less successful efforts

All children need reliable feedback to reinforce their self-concept of strengths and weaknesses.

The following are some techniques that may be helpful in teaching children who have specific learning disabilities.

1. Speak in short sentences.
2. When given directions,
 - a. be specific;
 - b. give one direction at a time;
 - c. speak slowly;
 - d. review direction exactly the same way each time; and
 - e. ask target child to review directions as he or she understood them or have the child answer Yes or No to your questions when reviewing directions.
3. Use nonverbal cues such as gestures.
4. Make extensive use of simple visual, tactile, and manipulative materials to reinforce concepts.
5. Prepare children for important information (e.g., "Listen carefully." "Eyes here.").
6. Wait longer for a response; don't pressure a child to give a response before ready.

7. Discourage impulsive responses by preceding your question or direction with confirmation that you will wait (e.g., "Now be careful; think for a minute...").
8. Use voice inflection and dynamics to dramatize, get attention, peak interest, motivate.
9. Keep procedures consistent (e.g., working with materials, equipment, passing out and collecting music).
10. Structure independent and small-group work.
 - a. Confine to clearly delineated work area.
 - b. Limit choices and have materials prepared and at hand when group arrives.
 - c. Avoid distracting or irrelevant verbal interaction while child is at work (e.g., conversation with another individual; asking child irrelevant questions).
11. In individualized learning situation, make use of audio aids, such as tape recorders and record players.
12. Simplify approaches that may be too "busy" or stimulating for the perceptually handicapped child.
 - a. Limit number of instruments used.
 - b. Reduce number of ostinatos or accompanying rhythm patterns.
 - c. Provide extra time for response in call-and-response or echo-type activities (e.g., measure rest after the *call*) to enable children who are slow in the area of processing to respond.
 - d. Simplify language and articulation in songs or chants to a level that target child can handle.
13. Select visual materials with care.
 - a. Use visuals that are large and uncluttered.
 - b. Frame (with colored paper, pen, or chalk borders) visual materials to which the child is expected to direct attention.
 - c. Mask out (with white paper or cardboard) everything on a page except the line the child is to read. (Note: Many instrumental method books have too many exercises on one page. A child with a visual-perception problem finds it difficult to focus on the appropriate line and/or is distracted by the proximity of other exercises.)
14. When playing instruments or moving to music, children with faulty kinesthetic perception may need to watch themselves in a mirror to get a more accurate feedback of how body parts are engaged.

Summary

Specific learning disability is the term used to describe a condition in which there is a large discrepancy between an individual's intellectual potential and actual achievement and one that is not attributable to causal factors associated with retardation or any physical impairment. The condition is

frequently characterized by a dysfunction in sensory processing resulting in faulty perceptions, particularly concerning space, quantity, and time. Although faulty perception may be one of many other handicaps in some children, a child of average or above-average intelligence can be singularly handicapped in processing sensory information. Difficulties are usually encountered in the academic areas that deal with language and computation. The only generalization that can safely be made regarding children with specific learning disabilities is that developmental patterns and subsequent behaviors are unique to each individual. A typical profile of the normally intelligent child with a specific learning disability shows a scattering of scores on standardized tests. The prognosis for those in whom the condition is diagnosed and treated early is very good. Determining the child's preferred learning mode and strengthening the weaker ones through that mode are among the most effective approaches in teaching the child with learning disabilities. Simplifying the learning environment is another. Highly structured activities with clear-cut objectives and individual alternative responses should all be considered.