

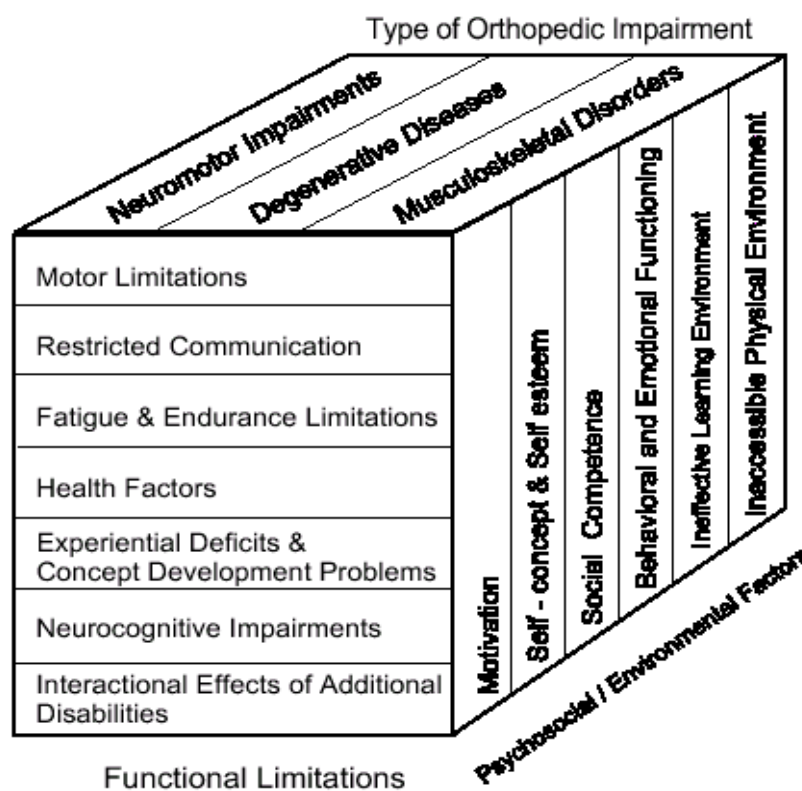
## Impact of Physical Disabilities on Literacy

Students with physical disabilities (also known as orthopedic impairments) often encounter several barriers that interfere with effectively and efficiently learning to read and write. These factors are:

- Type of physical disabilities (or orthopedic impairments)  
(e.g., student who has severe cerebral palsy may be unable to access a keyboard or sound out words; student with Duchenne muscular dystrophy will frequently need writing modifications and modifications to hold books as the disease progresses.)
- Motor limitations  
(e.g., some students will have difficulty holding a pencil, some students will have difficulty turning the pages of a book, some students will be unable to physically pick up desired books, or point to pictures or words on a page)
- Restricted communication  
(e.g., some students will not be able to sound out words aloud or read aloud; some student will be unable to ask questions or ask for clarifications due to inability to speak and not having enough skills with augmentative or alternative communication (AAC) devices.)
- Fatigue and endurance limitations,  
(e.g., some students will tire while reading, some students will tire after a short period of time due to the effort it takes to use a keyboard or switch)
- Health factors  
(e.g., some students will be absent frequently due to health issues; some students will take medications or treatments that interfere with learning due to side effects of distractibility or fatigue).
- Experiential deficits and concept development problems  
(e.g., some students will lack common experience due to their physical disability which makes comprehension of some reading material difficult; some students will have incorrect concepts due to lack of motor ability to handle items).
- Neurocognitive impairments  
(e.g., some students will have perceptual difficulties, learning disabilities, or intellectual difficulties in addition to their physical disability that will affect learning to read and write.)
- Interactional effects of additional disabilities  
(e.g., some students will have additional disabilities, such as visual impairments, that will further affect the child's ability to effectively and efficiently learn to read and write.

- Psychosocial and environmental factors (including motivation, self-concept and self esteem, social competence, behavioral and emotional functioning, ineffective learning environment, and/or inaccessible physical environment) (Heller, Swinehart-Jones, 2003).  
 (e.g., a lack of motivation or learned helplessness may interfere with the child trying to learn to read or write; a learning environment that does not set expectations for the child to learn to read and write will often result in the child not learning these skills).

All of these factors come together in an interactional manner to impact on the child's performance. (See cube).



The first step in addressing these factors is to identify them and determine the appropriate modifications or adaptations. The Literacy Profile, presented in the next section, is designed to assist the teacher in summarizing current factors that may affect student performance in the area of literacy and to determine possible strategies and adaptations to promote reading and writing skills.