

## **The Problem of Distinguishing Between Learning Disabilities and Intellectual Disability**

Distinguishing between learning disabilities (LD) and intellectual disability (ID) is a significant issue in special education and presenting evidence to confirm the discrepancies between LD and ID should be useful for a better understanding of them. Defining a firm boundary between learning disabilities and intellectual disability can result in valid and reliable testing of these problems as well as a change in attitude. In order to accomplish this task some historical and modern facts need to be mentioned.

### **The genesis of learning disabilities**

The term “learning disability”, abbreviated to LD was first used by Samuel Kirk in 1962. It has always been linked with the concept of unexpected underachievement (Denton, 2006). However it was only in the middle of the 1960s that researchers, educators, teachers and parents in the US realised that certain children attending mainstream schools, who were not intellectually disabled, experienced learning difficulties that they had not been able to overcome. At that time children with LD were not qualified for special education as their problems could not be qualified under any well-known categories of disability (for example blindness, deafness, physical handicap). In the US LD has been a formal special education category since the late 1960s. (Lyon, 1996).

It should be noticed that the concept of LD has changed since 1962. Nowadays it refers not only to unexpected underachievement, but also to the disorders of specific scholastic skills (reading, writing, arithmetic) and cognitive as well as language abilities (listening, reasoning, remembering, speaking) (NJCLD, 1997).

### **The public perception of learning disabilities**

The negative public perception of LD can be associated with lack of understanding of special terminology. A public that is not adequately informed cannot distinguish between learning disabilities and intellectual disability. These terms are often misused as synonyms.

Thus, unexpected underachievement, reading, writing and calculating difficulties in the LD individual are being misinterpreted as serious learning disorders in the mental deficiency.

Despite the etymological difference between “learning disabilities” and “intellectual disability”, these terms seem to make even modern Americans confused. The national survey Roper – Starch Worldwide, performed in 1995, revealed that 85 percent of Americans believed that learning disabilities and mental retardation were related to each other (Viall, 2001). Americans could not have been proud of these results. However, five years after this survey, only 65 percent people thought that both concepts meant almost the same thing (Viall, 2001). Therefore, the situation improved. Thus, it is still necessary to take actions aiming at disseminating knowledge about distinguishing between LD and ID in the US, and probably in other countries as well.

Although we can talk about being successful in familiarising the society with LD, many parents, especially Americans whose children meet the definitional criteria for intellectual disability prefer the label “learning disabilities” which has less social stigma. This use of the diagnosis of LD can be misleading (Berninger, 2001). Moreover, it seems to be harmful to the concept of learning disabilities as it leads to misconceptions about the LD syndrome. It does not suggest that the LD student has normal or above average intelligence. It also ignores the fact that the LD individual can keep up with his/her peers in terms of school achievements and scholastic skills when he/she is provided with efficient instruction.

There are several reasons for the public inability to differentiate between learning disabilities and intellectual disability. Firstly, it is connected with the fact that not too many studies have been carried out in reading and writing difficulties of the intellectually disabled (Berninger, 2001). Much research attention has been directed to factors contributing to reading, writing and calculating disorders in students who are not intellectually handicapped. The second cause is the public ignorance of such issues in learning disabilities and intellectual disability as : illusory correlation, fuzzy sets, intelligence quotient (IQ), discrepancy model or adaptive behaviour.

### **Illusory correlation and fuzzy sets**

The root of the problem connected with the identification of LD can be explained by a peculiar phenomenon that is called “illusory correlation”. The first research study on this occurrence was done by Chapman in 1960s and 1970s (see Gnyss et al., 1995). “Illusory correlation is the tendency to assume falsely that a relationship exists between two variables,

such as an observed symptom and a diagnostic classification” (Gnys et al., 1995, p. 60). However, the relationship perceived by the researcher does not truly exist. The correlation may even show a relation inverse to that which is perceived. The facts observed by Chapman were also witnessed in many other studies concerning this phenomenon (Gnys et al., 1995). Illusory correlation is not known in the intellectual disability researchers. It is similar to another occurrence called “fuzzy sets”, the focus of attention for some LD researchers (Pennington after Gindrich, 2002). To explain this special term we may use the following citation : “The calculus of fuzzy sets is a relatively recent innovation in mathematics dealing with domains and concepts the boundaries of which are not sharply defined” (Reber, 1985, p. 292). For instance, we may say “approximately equal” which makes human cognition fuzzy (Reber, 1985).

The phenomenon of illusory correlation proves that LD identification is much more difficult than ID diagnosis. It also makes professionals conscious of the risk of false identification. It is sometimes true that school specialists diagnose too many children as learning disabled. LD may also be undiagnosed in certain pupils who actually do have it.

## **IQ**

IQ is also an important aspect of the differentiation between LD and ID as it is a common measure of intelligence. According to Reber, LD can be found in children of normal or above average intelligence and is characterised by specific difficulties in learning to read (dyslexia), to write (dysgraphia) and to do mathematics (Reber, 1985). Such an LD concept is present in the literature as “gifted LD” or “high functioning LD” with an IQ score of 130 (Gordon et al., 1999). Among the LD population there are also students with an IQ score within the range of between 70 and 80 points (Fletcher et al., 2004). Deficiencies in complex skills (such as reading, writing, counting) in LD children with an IQ below 80 can be ascribed to the child’s cognitive capacity, but deficits in those with an IQ of 80 or higher may refer to failures in specific component skills, behaviours, experiences and attitudes that determine successful performance of that skill. However, this opinion still cannot be regarded as valid and the cut point of 80 is arbitrary (Fletcher et al., 1998). An IQ score of the intellectually disabled is usually below 70 points. It must be said that some definitions do not make it clear whether the LD label involves only children of normal or at least “dull normal” intelligence (Gindrich, 2002). Furthermore, in some school districts in the US there is an apparent tendency to classify some children with mild intellectual disability under the alternative

conceptualisation of LD. Surprisingly, pupils showing an IQ ranging from 71 to 84 (borderline intellectual functioning in DSM-IV) might be qualified for intellectual disability under the classification of IDEA (House, 2002). These facts might hinder the ability to distinguish between intellectual disability and learning disabilities.

### **Discrepancy model**

The discrepancy model of testing IQ, ability, the cognitive and language dimension, as well as specific scholastic skills has been used in LD identification for many years (Fletcher et al., 1998; Fletcher, 2003). A common example could be a student with a full scale IQ of 135 but a standard score in reading comprehension of 100. Such a difference between both standard scores would mean an LD label (Gordon et al., 1999). Moreover, discrepancies in testing can be visible as :

- the difference between verbal and nonverbal intelligence;
- low achievement (the LD student scores lower in tests than his/her peers of the same age and educational level);
- unexpected underachievement (LD students are not achieving at what is considered their full potential, there is a severe discrepancy between the IQ and achievement test score).

Taking into consideration this paper's title it is important to realise that learning disabilities could be recognised when underachievement is not caused by intellectual disability. It is also true that the IQ discrepancy model has limited utility for the identification of children with LD (Fletcher et al., 1998; Fletcher, 2003). Specialists in the United States recommend including a new identification model called "response to instruction" (RTI) as it immediately provides students with well targeted and much needed intervention (Fletcher et al., 2004). Besides RTI we should also focus our attention on adaptive behaviour when differentiating between LD and ID.

### **Adaptive behaviour**

Researchers put emphasis on adaptive behaviour as it is a crucial aspect of distinguishing between LD and ID. The basic reason for identifying a student with intellectual disability is a pervasive deficit in adaptive behaviour-socialisation, self-care skills, and independent living capabilities. Learning disabled students may have selective deficits in

adaptive behaviour, but not a pervasive one (Fletcher et al., 2004). Thus, adaptive behaviour can be more helpful in separating lower IQ learning disabled and mildly intellectually deficient children (Gresham, MacMillan, & Bocian, after Fletcher et al., 1998; Berninger, 2001).

## **Conclusion**

To sum up, the literature on LD and ID reveals some marked issues in distinguishing between learning disabilities and intellectual disability. A special focus of attention might be the following aspects :

- Colloquial usage of the term “learning disabilities” can lead to negative attitudes towards the problems this paper concerns;
- An IQ of 70 or a higher level can demarcate LD from ID, but this cut point is completely arbitrary;
- Unexpected underachievement and the IQ discrepancy model exclude intellectual disability as a causal factor;
- LD is accompanied by selective deficits in adaptive behaviour while ID co-occurs with a pervasive deficit in this domain;
- Unlike ID conceptions, LD definitions focus on specific scholastic skills (reading, writing, arithmetic), school achievements and psychological tests scores;
- Learning disabilities do not exclude giftedness, talent and high intelligence test achievements;
- Learning disabilities are difficult to identify as an illusory correlation can be present;
- The variability of medical and non-medical classifications used for identification and assessment (eg. DSM-IV, ICD-10, IDEA) interferes with distinguishing between LD and ID.

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