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Should we abandon the concept of mild learning disability?

By

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*It is argued that, as we are not able to measure IQ with sufficient accuracy to assign a large proportion as having an IQ either above or below 70, we should stop using IQ as a criterion for a learning disability service, and therefore abandon the concept of mild learning disability.*

## **Introduction**

The concept of learning disability has been consistently defined as involving both a deficit in intellect and a deficit in adaptive or social functioning. For example the British Psychological Society (2001) states:

“There are now three core criteria for learning disability:

- Significant impairment of intellectual functioning;
- Significant impairment of adaptive functioning;
- Age of onset before adulthood.”

(P. 4.)

Similar definitions are given by the American Association on Mental Retardation (AAMR) (1992), ICD-10, and DSM-IV. In order to be given the diagnosis of mental retardation the client must, therefore, have both an intellectual impairment and a deficit in adaptive/social abilities.

The pragmatic use of a definition is to enable us to differentiate one group from another. In the case of learning disability the major reasons for wanting to identify the group is so that they can be provided with a specialised service. This paper argues that, because of its reliance on intellectual deficit, this definition has very little practical use in enabling us to do this.

## **Intelligence and learning disability**

The concepts of intelligence and learning disabilities have been closely related at least since Binet began to measure the intelligence of French school children to identify which ones would not be able to benefit from the main stream school system.

It is generally accepted that someone with an IQ two standard deviations (SDs) below the norm falls within the learning disability range. This corresponds to a measured IQ below 70 on a recently standardised IQ test with a mean of 100 and a SD of 15. If it is assumed that IQ is normally distributed below IQ 70, it would include 2.28% of the population as a whole.

IQ is also integral to defining the various degrees of learning disability. Although there is some disagreement as to whether the dividing line between mild and moderate learning disability is IQ

50 (c.f. ICD-10) or 55 (c.f. BPS 2001) there is general agreement that it is approximately three SDs below the norm. For the purposes of this paper mild learning disability will be defined as IQs 70 to 50 or 2.23% of the population as a whole.

There seems to be an assumption that people with low intellectual abilities are in need of a specialized service and that we are able to identify them by means of intellectual testing. It is this assumption that I wish the challenge for the following reasons:

**Having an IQ below 70 tells us a limited amount about somebody's ability to cope**

**The IQ 70 point is arbitrary**

As an intellectual dividing line between mild and borderline learning disability IQ 70 is totally arbitrary and is chosen simply because it is 2 SDs below the mean. There is no suggesting that people with IQs of 69 are significantly less able to cope with the pressures of modern living than people with IQs of 71.

**The relationship between IQ and adaptive/social ability is moderate**

Although there is a relationship between measures of adaptive/social behaviour and IQ this relationship is only moderate. diSibio (1993) reports that the correlation between IQ and adaptive behaviour was between 0.4 and 0.6 in previous studies. A finding replicated by later work. Dacey et al (1999), for example, looked at the correlations between the Stanford Binet-IV and the domains of the Vineland Adaptive Behaviour Scale in people with mild to moderate learning disabilities and found the following correlations:

Communication	0.65
Daily living skills	0.37
Socialization	0.40
Adaptation component	0.52.

Therefore, IQ is not a particularly good predictor of adaptive behaviour.

It also seems likely that many and possibly the majority of people with IQs below 70 are able to cope without services. For example Whitaker and Porter (2002) reported that in West Yorkshire learning disability services have registered only about 0.25% of the population as having a learning disability, even though we would expect to have 2.28% of the population with IQs below 70. This suggests that, either there are a lot of people with IQs below 70 unable to cope who have not been identified by services, or most people with IQs below 70 are able to cope and so have not been identified as in need of a service. Also, the author's experience over the past 20 years working as a clinical psychologist in learning disabilities suggests that there are a lot of people who have acquired the label of learning disability and who are not able to cope but who have measured IQs above 70. These people often have conditions such as an autistic spectrum disorder or other non-intellectual disabilities such as epilepsy or have failed to gain skills in childhood. Similar findings are reported by Mercer (1973) who surveyed various agencies in the community to find people with the label "mental retardation" and found that just fewer than 40% of the people identified had an IQ above 70. Therefore, at least in the mild learning disability range, IQ is not a very good predictor of ability to cope or need for a service.

**We cannot identify people with IQs below 70 with sufficient accuracy**

#### **The standard error of measurement of IQ**

Even tests as well standardised as the WISC-III and the WAIS-III given under ideal conditions do not measure to within one point but have a standard error of between 3 and 4 points. The 95% confidence interval for IQ 70 on the WAIS-III is 67 to 75. Because IQ is normally distributed and theoretically only 2.23% of the population as a whole have IQs below 70, this error has a major effect on proportion of people with mild or borderline learning disability who could be classified as having an IQ below 70.

First, as it is possible for people with measured IQs as high as 75 to be regarded as having a learning disability rather than those with IQs below 70, then potentially the number of people who could be regarded as having a mild learning disability is more than doubled from 2.23% of the population to 4.73%. Second, as people with IQs between 70 and 67 make up 39.91% of people with mild learning disability, it is only possible to confidently classify 60% of people with mild learning disability as having an IQ of below 70. There is therefore a large proportion of the people who potentially have a mild learning disability who cannot be confidently classified as such and the chances of both type 1 and type 2 errors are unacceptably high.

#### **The gradual increase in IQ over time**

The IQ of the population as a whole is reported to be increasing (Flynn 1984, 1985, 1987, 1998, 2000), so that tests that were standardised several years ago would produce a mean IQ of above 100 and place far less than 2.3% of the population below IQ 70. Flynn (1985) has estimated that by the time the WISC-R was standardised in 1972 the WISC (standardised in 1948 on White Americans only) was only measuring 0.54% of the US White population as having IQs below 70. This raises the question as to whether the IQ level required to be classified as having a learning disability should be below 70 on a test which was standardised some years ago or one that falls two standard deviations below the mean of the population as a whole. In making this decision it should be borne in mind that the next time the test is standardised then the proportion of the population with IQs below 70 will return to about 2.28%. It is therefore uncertain if we should be using IQ 70 as the criterion or some other higher IQ figure.

### **The disparity between different IQ scales**

Both Flynn (1985) and Spitz (1986; 1989) have pointed to differences between the WISC-R and the WAIS-R for IQs of 70 and below. Flynn (1985) suggests that the WAIS-R will score as much as 13 points higher than the WISC-R in this range. Similarly Spitz (1986) reports data showing that the WAIS-R score 10 to 19 point higher than the Stanford-Binet and the WISC-R for IQs of 70 and below. In a more detailed analysis of the literature Spitz (1989) compared the WISC-R and the WAIS-R and found the WISC-R scores 15 point lower at IQ 60 (on the WAIS-R). As both assessments cannot be correct there must be some error in the standardisation in one or both of them. The author is not aware of any comparison between the WAIS-III and WISC-III in this IQ range so it is unclear if this problem still occurs. It is clearly possible, however, that it does. This uncertainty means that measured IQ on the WAIS-III could correspond to a true IQ of between 75 and 55 and a measured IQ of 70 on the WISC-III to a true IQ of between 85 and 66. It is also possible that a child with a measured IQ on the WISC-III of 65 (below the 95% confidence level for IQ 70) and a learning disability label, when reassessed on the WAIS-III on reaching adulthood, could be found to have an IQ of 78 (above the 95% confidence level for IQ 70) and losing the label. This level of potential error in IQ tests and the possibility of people being mislabelled seems to be too great for IQ to be used as a defining criterion.

### **Conclusions**

From the above it is apparent that there are practical problems with the "impairment of intellectual functioning" part of the definition of learning disabilities. It is only possible to measure IQ to a limited accuracy due to the error in the test. It is also unclear what the IQ score below which someone could be regarded as having a learning disability due to the gradual increase in measured IQ in the population as a whole and to the large potential difference in the results of different IQ tests. Also, even if we could accurately distinguish between people with IQs of above and below 70, this does not seem to tell us a great deal about whether a client is in need of a service. It is therefore the contention of the present author that the continued use of IQ as a defining criterion will lead to many people being mislabelled as having a learning disability and others denied services as their measured IQ is above 70. This may well have

happened a great deal in the past due to us having too much faith in the ability of IQ tests to measure IQ and our assumption that IQ told us something important about a client's ability to cope.

Without the use of IQ it would not be possible to use the term learning disability as this term seems to be so dependent on IQ, and we should search for another title and definition for the people to whom we provide a service. Space does not permit a full discussion of this, however, possibly the term could "Environmentally Challenged" be used to describe people who are not able to cope with the demands of their environment on either a permanent or temporary basis. This would have a number of advantages: First, it would take the emphasis away from the individual and put it on the environment that is designed in such a way that prevents some people from coping. Secondly, people would not be given labels that could have a detrimental effect on their self-esteem or ability to cope (c.f. Whitman 1990). Thirdly, people who otherwise would be denied a service on the grounds of having a tested IQ above 70 would get the service they need.



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