

Dysfunctional vs. Functional Difficulties: a new perspective on learning disabilities.

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Abstract

This study was developed as part of an exploratory work on concepts and common sense beliefs about learning difficulties in the Portuguese educational community. Lay conceptions of college students were analyzed in a qualitative study in order to identify different ways of understanding learning difficulties. Students from different courses and levels of training, without specific information in this field of educational psychology, responded by writing to four open questions about learning and learning disabilities. Data were analyzed to identify the range of personal conceptions. Written responses were subjected to content analysis. Multiple categories emerged and were grouped into four main perspectives, incorporating nine different lay conceptions of learning difficulties. These common sense conceptions corresponded in a very precise way to the scientific conceptions of “learning disabilities” which were successively developed in recent decades (Poplin, 1988). Besides, more than distinguish between two types of students, *with* and *without LD*, results suggest a new distinction between two kinds of difficulties, dysfunctional versus functional difficulties. Functional difficulties are needed and should be promoted to enhance the quality of learning.

Keywords: Learning Disabilities; Alternative Assessment; Epistemology; Folk Psychology; Individual Differences

1. Introduction

Since the emergence of the concept of *learning disabilities* in 1963, it remains an intense scientific debate around issues of definition, classification and differential diagnosis: which students have or have not a specific learning disability, that is the question (Adelman, 1992; Kavale & Forness, 2000; Kavale, Spaulding & Beam, 2009; Stanovich & Stanovich, 1996; Siegel, 1988; Sternberg & Grigorenko, 1999). More radically, some authors even claim that learning disabilities do not actually exist as a separate category due to lack of definition, insufficient grounds and inconsistency of results (Coles, 1987; Finlan, 1994). Even the most accepted definitions seem to place specific learning disabilities in a class almost residual, defined more by the systematic exclusion of other types of problems, rather than by an objective and insightful characterization (Hammill, 1990).

With the development of models of metacognition and self-regulation in recent decades (e.g. Flavell, 1987; Zimmerman & Schunk, 1989), the study of learning difficulties received very significant contributions that may have an impact to radically change models, taxonomies, and research methods (Dockrell & McShane, 1992; Poplin & Cousin, 1996;

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Reid, Hresko & Sawson, 1996; Wong, Graham, Hoskyn & Berman, 2008). The latest proposals are centred more and more on the study of intrapersonal variables, cognitive, metacognitive and motivational factors. The assessment and diagnosis can be based on an ever-wider set of variables (Lyon, 1994; Shapiro, 2011). Problems are subject to functional analysis in context. Quality of teaching, instructional effort, developmental aspects and personal learning objectives, are considered. Learning difficulties are defined not as specific and intrinsic to the student, more like the result of the interaction between learner and his context of learning. In view of that, it is important to identify attitudes, values, beliefs, personal conceptions and "*habits of the mind*" (Bernard, 1997, p.126-145) which may influence dysfunctional thinking, inappropriate behaviour and the prevalence of adjustment problems in each learning situation (Ashman & Conway, 1997; Bandura, 1986; Bard & Fisher, 1983; Blankstein, 2010; Dweck, 2006; Harris, Graham & Deshler, 1998; Thomas, 2000).

The study of intrapersonal thinking aiming at a better understanding of learning difficulties, can be summarized in three lines of research: (1) the development of theories of mind in childhood (Astington, Harris & Olson, 1988; Bartsch & Wellman, 1995); (2) the study of personal thought on psychological concepts, including the psychology of common sense (e.g. Ferguson, 1989), implicit theories (e.g. Faria & Fontaine, 1997; Sternberg, 1985), lay beliefs (e.g. Furham, 1992; Furnham & Henley, 1988), inert knowledge (Bereiter & Scardamalia, 1996), learning conceptions (e.g. Klatter, Lodewijks & Aarnoutse, 2001; Pramling, 1988) epistemological beliefs (Schommer, 1990, 1993; Schommer, Calvert, Gariclietti & Bajaj, 1997); (3) and studies on science education (Welford, Osborne & Scott, 1996).

Moreover, the student interaction with learning tasks is influenced by intuitive theories about the learner, about his mental functioning, about learning and teaching (Hofer & Pintrich, 1997; Jehng, Johnson & Anderson, 1993; Schommer-Aikins & Easter, 2006; Pramling 1996). In the perspective of the teacher "*the general point is clear: Assumptions about the mind of the learner underlie attempts at teaching. (...) teacher's conception of the learner shapes the instruction.*" (Bruner, 1996, p. 48). The concept of "folk pedagogy", emphasized by Bruner (1996), extends this effort of self-reflection to new areas. It is not sufficient that teachers know what kids do (or should do) to learn better. They also need to reflect on what students think they do, be in the student's perspective, and try to understand as much as possible the source, potential and limits of their own conceptions (Gardner, 1991). Students can take more responsibility for their thoughts, for their learning, if they are helped to evolve from a naive realism to a greater understanding of the role of beliefs and conceptions, about themselves and about the world.

In summary, learning difficulties have been studied in many ways and in very different theoretical frameworks. In this case, the author tries a slightly different perspective,

which evolves from the study of student epistemological beliefs about knowledge and learning, and from previous qualitative studies of personal conceptions about learning. The way scientists, educators and students think about learning difficulties, influences how they study, intervene or cope when it becomes more difficult... Every person has some kind of personal ideas regarding learning and education, about what to teach and what to learn (or not!). Those notions influence how they respond when facing problems and failures. For a better assessment and intervention, to better teach all, we need to better understand how people think and perceive both learning and difficulties. Folk psychology can be a new and insightful approach to this field of research, towards interventions focused on cognitive restructuring and conceptual change.

1.1 Objectives and research questions

The present study is part of a broader work intended to describe personal views, intuitive or common sense perspectives about *"learning disabilities"*. How do students, parents and teachers think about the obstacles in the learning process? How do they define and explain the difficulties? How do they establish a connection between difficulties and success? What does it mean for a student to feel some difficulty in learning? What do they believe about the origin, the persistence and expected evolution of a learning difficulty?

2. Methods

Four open questions were initially placed to a sample of college students from different backgrounds, for an exploratory analysis of concepts and beliefs about learning difficulties.

The set of open questions originally formulated was based on previous studies with university students (e.g. Berry & Sahlberg, 1996; Lonka, Joram & Brysom, 1996). Results show that even college training in a particular subject does not always modify previous ideas and naive conceptions.

These questions were translated and applied in a similar manner to a small sample of Portuguese college students for a pre-test examination. The extent of written responses obtained suggested a focus just on a central question: *"If you had to explain to someone what is a learning difficulty, what would you say?"* Other three additional questions were retained to a better characterization and a cross-responses attempt: a personal reflection on the concept of learning, *"I think that learning is..."*; on individual differences in learning, *"why some people learn better than others?"* and on coping personal strategies, *"what is necessary for a student to overcome his difficulties?"*.

The final sample of responses was collected in the University of Lisbon, including 252 undergraduate students of History, Literature, Psychology, Medicine, and Science Education. All responses were obtained in class, with teacher collaboration. Students were informed of

the purpose of the study, confidentiality was assured and participation was always voluntary. Given the nature of the study, it was necessary to ensure motivation and honesty in the answers.

Table 1 – Open Questions used for an exploratory analysis of concepts about learning difficulties

Q1 - "I think that learning is..."

Q2 - "In your opinion, why some people learn better than others?"

Q3 - "If you had to explain to someone what is a learning difficulty, what would you say?"

Q4 - "In your opinion, what is necessary for a student to overcome his difficulties? "

All responses were transcribed and analyzed with WinMax. Since this is a program specifically prepared for qualitative analysis of open questions, the analysis procedures developed following the guidelines proposed by the author (Kuckartz, 1998). All responses were transcribed, read and reread, analyzed text-by-text, to a first extraction of excerpts (units) integrated into a set of categories that would account for the diversity and range of all the perspectives observed in this sample. A first exploratory analysis resulted in over fifty categories and subcategories. What is now reported is the result of multiple subsequent analyses in search of a classification system more intelligible and useful, by finding meaning clusters and common denominators. This preliminary analysis was successively reviewed for more precise criteria (*interrater reliability* of .83) until the formulation of a hierarchical scheme of categories that could describe clearly the full range of responses analyzed.

3. Results

By analyzing the set of responses and personal testimonies, four ways of approaching the concept of *learning difficulties* were identified. They act as four different perspectives, four different personal views, ranging from a focus on the learner, to a focus on learning.

In a *dysfunctional perspective*, the difficulty is conceived as a structural feature of the learner, as an intrinsic problem or a permanent limitation. The difficulty is conceived as a disease, disorder or disability, which characterizes the student permanently.

In a *procedural perspective*, the student continues to be the main focus of analysis. But in this case, the difficulty is not perceived as a personal characteristic, rather as something that interferes with or intervenes in the learning process, preventing the student from achieving the results that he could otherwise obtain.

In an *interdependent perspective*, the difficulties are no longer defined according to the particular characteristics of the learner or how the learning proceeds, rather as something that

depends on the interaction of each student with the context of learning. In this case, every difficulty is described in terms of at least two orders of variables (personal and situational). The individual process of learning influences and is influenced by the context of learning. We go from a perspective of linear causality to one of reciprocal determinism. In this perspective, the difficulty characterizes not the student himself, rather the way the learner interacts with a specific learning situation, which is not always successful.

In a *functional perspective*, difficulties are not seen as the result of unsuccessful interaction between learner and learning process or learning environment. Instead, the difficulties are understood as a natural feature of the learning process itself. From this perspective, difficulties are considered common, frequent, normal or even necessary. They are the rule, not the exception. Difficulties are not seen as mistakes or failures, not as something strange or unusual, because they are part of almost every learning process. They can happen to anyone, anywhere and anyway. They are inherent to learn, as they are inherent to life. From this perspective, experiencing difficulties may also contribute to discovery, encouraging personal development and even increase the quality of learning.

Each one of these perspectives can be further subdivided into different conceptions as shown in Table 2.

Table 2 – Major commonsense perspectives and conceptions about learning difficulties

<i>Major perspectives</i>	<i>Conceptions about learning difficulties</i>
1. <i>Dysfunctional perspective</i> (focus on the learner)	1.a. Deficiency 1.b. Pathology
2. <i>Procedural perspective</i> (focus on the learning process)	2.a. Impediment or obstacle 2.b. Insufficiency 2.c. Interference
3. <i>Interdependent perspective</i> (focus on the interaction between learning process and learning context)	3.a. Difference or discrepancy 3.b. Maladjustment
4. <i>Functional perspective</i> (focus on the outcome, on everything into which it can lead, in the context of the learning process or in the context of life itself.)	4.a. Inherent to learning and life 4.b. Challenge or opportunity

Table 3 provides a more detailed analysis of some excerpts of the categorized responses to illustrate each one of the conceptions of learning difficulty suggested.

Table 3 – Illustrative excerpts of lay conceptions about learning difficulties

<i>Conceptions about learning difficulties</i>	<i>Examples</i>
<p>1.a. Deficiency Assumes the existence of deficits or developmental delays, bounds or limitations on basic skills.</p>	<p><i>"I think some students are unable to overcome certain difficulties because they have innate problems (deficiencies) of learning."</i> (TEXT: univ.CE12)</p>
<p>1.b. Pathology Learning difficulty is understood as a disorder, problem or pathology of mental or physical nature.</p>	<p><i>"... I identify learning difficulties in the field of physical problems or when there are in fact disorders such as in a dyslexic child."</i> (TEXT: univ.CE20)</p>
<p>2.a. Impediment or obstacle Learning is a journey. Sometimes, the student "stops" or is forced to move more slowly and in effort. Learning difficulties are described as impediments along the way, obstacles, barriers or blocks.</p>	<p><i>"The student is unable to proceed"</i> (TEXT: univ.CE11)</p> <p><i>"Learning difficulty is always an obstacle that prevents us from achieving an idea or experience which we aspire."</i>(TEXT: univ.L25)</p> <p><i>"A learning disability is a "barrier" that prevents certain knowledge to be internalized by individual."</i> (TEXT: univ.H1-8)</p>
<p>2.b. Insufficiency Assumes that learning process is disrupted by several factors insufficiently developed or acquired. It is considered that the process may be adversely affected by failure or lack of very specific aspects.</p>	<p><i>"Difficulty is: - a lack of logical reasoning - not to understand the main purpose of the issue - lack of attention - not to understand what it is taught"</i> (TEXT: univ.H98-10)</p> <p><i>"... something in the process was not internalized and does not allow that knowledge transfer to learning."</i> (TEXT: univ.CE10)</p>
<p>2.c. Interference Learning process can be affected by factors that are interposed and interfere. Learning difficulties can arise due to interference of a multiplicity of factors internal or external to the learning process.</p>	<p><i>"A learning difficulty occurs when there is the intervention of some factor (inside or outside the individual) that interferes with the learning process."</i> (TEXT: univ.L20)</p> <p><i>"I think there are several factors that can interfere with learning. Common sense might find it a matter of more or less intelligence but in reality is not so. The intelligence factor is important but the will, persistence, study and attention are essential conditions."</i> (TEXT: univ.H1-10)</p>
<p>3.a. Difference or discrepancy Difficulties are viewed as individual differences among students (rhythm of work or learning, skills and interests) or as differences between the performance of each student and current legislation (objectives, evaluation criteria).</p>	<p><i>"Learning difficulty is an inappropriate behaviour compared to what is required as a standard."</i> (TEXT: univ.CE3)</p> <p><i>"Not being able to learn to the pace considered normal (of course what is considered normal is largely conventional, varying in space and time)."</i> (TEXT: univ.L38)</p>
<p>3.b. Maladjustment Conceived as personal adjustment difficulties (to the group, the educational system, to the requirements of each task and teaching methods) or as problems of reorganization of conceptual frameworks (schemas and preconceptions, assumptions and beliefs of the student).</p>	<p><i>"...a lack of direction, a lack of guidance, a "disorientation"."</i> (TEXT: univ.L17)</p> <p><i>"A great learning disability can be the departure of a reality we are experiencing, from what we already know, when things deviate greatly from our realm of experience."</i> (TEXT: univ.L25)</p> <p><i>"...the difficulty arises because the new character of matter to acquire, compared to our mental picture."</i> (TEXT: univ.H1-13)</p>
<p>4.a. Inherent to learning and life Assumes that difficulties can occur in all situations.</p>	<p><i>"...the difficulty is part of learning, it would probably be very boring if it was instant understanding; or we'd all be little genius, or what was learned it was certainly very poor."</i> (TEXT: univ.H1-21)</p>
<p>4.b. Challenge or opportunity Assumes that difficulties can be privileged moments of discovery and learning.</p>	<p><i>"But the difficulties can be important in order to force us to devote more deeply, more intensely and reflectively (although it might cost). It is imperative that we constantly surpass ourselves. Learning difficulties are so constant challenges that are part of our growth as people."</i> (TEXT: univ.H1-9)</p>

The conceptual categories identified are merely an attempt to a systematic analysis of the personal views expressed by each subject. Each small excerpt can be associated with a particular conception, but does not identify the conceptual perspective of each person. In reality, these perspectives and conceptions are linked or merged. Nothing prevents a person to include in the same answer, statements that appear to correspond to different conceptions, eventually to explain the same learning situation. The same problem can be analyzed by the same person from different perspectives. For example, a learning difficulty can be conceived as having its origin in a psycho-neurological impairment, a disorder or pathology, and still be regarded as an opportunity and a personal challenge. Meaning that a person may conceive a learning disorder (in a *dysfunctional perspective*) and even so, understand such a problem as an opportunity to learn and grow, with more or less functional adaptation and effectiveness (in a *functional perspective*). Therefore, these categories are not absolute or exclusive and do not seek the determination of individual types. Instead, they can help professionals to obtain a comprehensive assessment of individuals or groups (classes or institutions), providing a better understanding, communication and work.

Although it is huge, and almost surprising the variety of perspectives here observed, it is possible that other perspectives and commonsense conceptions about learning difficulties can still be considered in future studies.

4. Conclusion

When speaking of teaching and learning, researchers, teachers, parents, can be referring to very different ideas, based on different concepts and different epistemological principles. For example, the same curriculum reform can be understood and implemented very differently. Likewise some teachers expect students to learn as they teach, as the legislator believes in prescribing curricular reforms, as they are given. However, people are neither naive nor passive; learning is a personal construction, which involves beliefs, concepts, expectations and values. In classroom or in the educational system, if specialists, teachers or students do not make explicit their own way of thinking, if they do not share epistemological assumptions and core concepts, they can never be aware of different personal conceptions about learning, about assessment, what is a good student, what means to have difficulties, and so on... When so, everything can change in education, without really change almost anything. As so often seems to happen.

In this study, it was possible to identify different personal views on learning difficulties, suggesting a structure of multiple categories, hierarchical and non-exclusive. In this sample of college student responses, it was possible to identify multiple ways of conceiving and

describing learning difficulties, which correspond roughly to the range of scientific conceptions developed in recent decades (Poplin, 1988): the medical model, the model of psychological processing, the model of the cognitive strategies, even the notion of interference present in the definition of DSM-IV, and the notion of discrepancy as diagnostic criteria. Unexpectedly, we observed in the educational community almost everything that has been successively proposed by the scientific community on *learning disabilities*: from the traditional concepts of classification and separation of two kinds of students (*with* or *without* disabilities) to more recent conceptions, focusing on learning processes, assessment of the problems in context, mobility, functionality or modifiability of the student performance.

For decades, psychological research has attempted to distinguish between students *with* and *without learning disabilities*. Hundreds of studies and publications later, we have nothing concrete and specific that can be considered consensual, simple and useful. None of the current criteria or instruments, standards or procedures, can help us clearly to distinguish between students with (and without) intrinsic difficulties in specific areas. Many researchers agree that we will never reach a consensus, that a better definition may never be possible. And yet the search continues. Even recognizing how difficult it is to obtain an operational definition of learning disability, all efforts continue to focus on differential diagnosis. In my country, there are hundreds of children newly diagnosed every day. Children are classified, almost all problems considered intrinsic and permanent, determined by neurological factors. What is the purpose of such a diagnosis? We really do not know. Much too often, people believe that diagnose is a necessary (and sufficient) condition to help a learner in difficulty. In Portugal, diagnose is rarely use to really intervene. It seems to be just something necessary to do lots of paperwork, a label to explain failure, an administrative process that in some cases appears to pacify worries. *“Too often, labelling is used in place of understanding”* (Sternberg & Grigorenko, 2001, p.336). Too often, labelling is used in place of intervention, instead of helping the learner with different resources, changing educational strategies and practices. In some cases, diagnosis can even create a heightened concern that surrounds the student in a sphere of overprotection and lower demand about his results. When the child takes on board the difficulty, it is even less likely that he will continue to invest time and effort in learning.

Sometimes science can offer understanding and solutions. Or it can give us just a label. *LD* is an old label, waiting for a profound revision.

Some of the students surveyed in this study revealed personal conceptions ultimately modern, interdependent and more constructive than can be find in some members of the scientific community, which persist in defending previous positions. Some of these student's

responses even suggested a new possibility on defining the concept of *learning disabilities*. Seems possible to consider, not two types of students (with or without disability), but two types of difficulties: (1) *Dysfunctional Difficulties*, when difficulties lead to a maladjustment towards learning, diminishing efforts and results, undermining the learning process, creating, for example, reactions of denying or avoidance; (2) *Functional Difficulties*, when difficulties are experienced as a personal challenge or an opportunity, when they can help student growth while encouraging coping, resilience, persistence, greater effort or even more quality in learning processes and results.

This seems even more interesting because in a constructivist framework, there is no such thing as learning without difficulties, as suggested by some student responses (*functional perspective*). Learning is difficult. People can enjoy learning, but they should also expect difficulties as something natural and inherent to learning and to life. Difficulties can be more or less persistent, more or less extensive or severe, as well as students can be more or less prepared to confront them. But difficulties should be considered the rule, rather than the exception. Because learning is always a time for change, an opportunity of growth and discovery, difficulties should be expected as a normal element in any learning enterprise. Difficulties may even bring new insights to the student, and increase the quality of learning. Or they can be considered in a more classical, detrimental and pathological perspective. From a differential perspective, difficulties (often also labelled as “*disabilities*”) tend to occur only in a few unsuccessful cases, when students need specific and specialized help. On the contrary, from a *functional perspective*, difficulties can happen to anyone, they can be useful and helpful throughout the learning process. Difficulties can be understood as challenge, opportunity, stimuli to learning and development. The motivational and epistemological role of questions, doubts, problems and complexities, can be use in a more or less positive and functional mode, in every context of learning. All students and all teachers can learn how to use and understand difficulties in a more functional and constructive way. Psychological assessment and teaching methods must be reviewed. And because all learning is potentially difficult, most cases of learning difficulty should not be seen as caused by permanent features intrinsic to the student, more like something evolving from a specific interaction between a student and a learning context.

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