

Representations of Learning Disabilities in Portugal

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Abstract

It is essential to study learning disabilities (LD) representations by education professionals since they are the ones who are more directly involved in their identification and intervention. This research analyzes the representations of the concept of LD of 310 Portuguese education professionals (regular education teachers, special education teachers, and psychologists). Through a questionnaire that consists of three parts, we examine the perspectives of the professionals regarding: 1) the identification criteria (e.g., exclusion; discrepancy; RTI) and the phenomenology of LD (manifestations; specific nature of LD); 2) the use, broad or narrow, of the LD term; and 3) the Portuguese legislation regarding LD. The results obtained indicate the agreement with the manifestations of LD (e.g., low achievement), with the criterion of discrepancy and with a dimensional view of LD. The professionals considered that LD may be due to contextual factors (e.g., socioeconomic disadvantage, family interactions, and inadequate teaching conditions). Participants also expressed agreement with a very comprehensive use of the term (e.g., in the absence of a diagnosis, in school failure situations). Education professionals also expressed a negative perspective regarding the educational support given to LD in Portugal. The comparisons between professional groups have documented the existence of certain significant differences.

Keywords: Learning disabilities; representations; education professionals; Portugal; identification

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Representações de Dificuldades de Aprendizagem em Portugal

Resumo

É essencial estudar as representações de Dificuldades de Aprendizagem (DA) dos profissionais de educação, uma vez que eles estão diretamente envolvidos na respetiva identificação e intervenção. Esta investigação analisa as representações do conceito de DA de 310 profissionais de educação portugueses (professores do ensino regular, professores de educação especial e psicólogos). Através de um questionário constituído por três partes avaliam-se as perspetivas dos profissionais em relação: 1) aos critérios de identificação (e.g., exclusão; discrepância; RTI) e à fenomenologia das DA (manifestações; natureza específica); 2) ao emprego, amplo ou restrito, do termo DA; e 3) à legislação nacional relativa às DA. Os resultados obtidos expressam acordo em relação às manifestações das DA (e.g., baixo desempenho), ao critério da discrepância e a uma visão dimensional das DA. Os profissionais consideraram que as DA se podem ficar a dever a determinantes contextuais (e.g., desvantagem socioeconómica e condições de ensino inadequadas). Os participantes também expressaram acordo com um emprego muito abrangente do termo (e.g., na ausência de diagnóstico, em situações de insucesso escolar). Os profissionais de educação também exprimiram uma perspetiva negativa em relação ao apoio educativo dispensado às DA em Portugal. As comparações entre grupos profissionais documentaram a existência de algumas diferenças significativas.

Palavras chave: Dificuldades de Aprendizagem; representações; profissionais de educação; Portugal; identificação

INTRODUCTION

The definition of learning disabilities (LD), or Specific Learning Disabilities according to the DSM-5 (APA, 2013), has been complex, as evidenced by the numerous definition proposals that have been developed over time (Flanagan, Ortiz, Alfonso, & Dynda, 2006; Kavale & Forness, 2000). This diversity indicates ambiguity, inconsistency and controversy regarding the nature of LD, and particularly regarding the respective identification criteria (Büttner & Hasselhorn, 2011; Grünke & Cavendish, 2016; Poch, 2018). Thus, because LD emerged from the recognition that there are students who reveal an unexpected or discrepant underachievement in comparison with what would be expected, the operationalization of this discrepancy criterion has been shrouded in controversy. Actually, this criterion's assessment as a dis-

crepancy between the intellectual functioning and the academic performance has proved to be highly variable (Bradley, Danielson, & Hallahan, 2002) and irrelevant from the perspective of the intervention (Fletcher, Stuebing, Morris, & Lyon, 2013). Therefore, the discrepancy criterion has been operationalized through alternative means, particularly in terms of intraindividual cognitive variability (Cottrell & Barrett, 2017; Flanagan et al., 2006) or in terms of low academic performance when compared to peers of the same age (APA, 2013; IDEA, 2004). However, none of these operationalizations is free from criticism (Fletcher et al., 2013).

Another identification criterion of LD, which has also proved to be controversial, is the exclusionary clause, which, as the name implies, determines that the LD cannot be attributed to a number of conditions, i.e., negatively delimitates the LD. Thus, the LD cannot be due to visual and auditory impairments or intellectual disabilities (APA, 2013; IDEA, 2004), which is accepted without reservation, but also cannot be due to other conditions that are less acceptable and defensible, such as cultural factors and socio-economic disadvantage (or psychosocial adversity; APA, 2013; IDEA, 2004), inadequate educational instruction (APA, 2013) or emotional and behavioral disorders (IDEA, 2004). Regarding any of these latter conditions, it has been noted that the empirical basis that supports their exclusion is restricted (Fletcher et al., 2013), and that they are common in comorbidity with the LD and should not prevent the identification of the last (Dombrowski, Kamphaus, & Reynolds, 2004). Critics have also been directed towards a medical or deficit based model of LD which assumes that student failure can be attributed to differences located within individuals and ignores the contexts where learning takes place (Dudley-Marling, 2004; Riddle, 2017). With particular reference to the teaching conditions, its importance would actually be recognized in the United States' legislation (IDEA, 2004) because it was stipulated that the student must have had adequate and quality education in the context of the classroom to be possibly identified as having LD (criterion of the Response to the Intervention).

In addition to the controversies previously noted, there are others related to other parameters of LD, such as that regarding the non-categorical and dimensional perspective of the LD, i.e., in terms of a continuum of degrees of severity or increasing intensity of symptoms (Fletcher et al., 2013; Lyon & Weiser, 2013).

Thus far, we have addressed LD from the perspective of laws, diagnostic manuals, formal classification, and researchers, predominantly of North American origin. Nevertheless, there are other LD levels of analysis, for example, the level of its identification in schools and/or countries other than the United States of America (USA), and the level of informal labeling of students as learning disabled. Regarding schools, it has been noted that these tend to use the term very broadly, therefore ignoring the discrepancy and exclusion criteria and covering children with very different problems

(for example: low academic performance, mild intellectual difficulties, emotional and behavioral problems; MacMillan, Gresham, & Bocian, 1998; MacMillan & Siperstein, 2002). Although this generic and pragmatic use of the term LD was noticed in the US, there is sparse evidence that the same may also occur in other countries (Anastasiou & Polychronopoulou, 2009; Correia & Martins, 2007; Elkins, 2007).

The fact that the LD research is primarily North American highlights the importance of examining this construct in other socio-cultural contexts, given that, as emphasized by Lloyd, Keller and Hung (2007), understanding how LD are conceptualized in other countries can help to identify their core elements. However, the available cross-cultural research is restricted and documents on the one hand the existence of different terms in certain countries (Elkins, 2007; Oakland, Mpofu, Grégoire, & Faulkner, 2007) such as Australia, in which there is the use of both “learning disabilities” and “learning difficulties”. On the other hand, the available evidence confirms that the definitions adopted in different countries reflect, simultaneously, the North American influence and political, cultural and social specificities (Grünke & Cavendish, 2016; Sideridis, 2007).

In the particular case of Portugal, to which this research relates, there are three general remarks. The first is that there is no official definition of LD. The second remark is that, according to Correia and Martins (2007), there are two meanings of LD, of which one is stricter and the other is broader. The stricter meaning is limited to a smaller number of experts and professionals, and the broader is used by most schools and professionals. In the narrower meaning, LD constitutes a specific impairment for learning in one or more than one academic area, which would not result from intellectual disabilities, sensory impairments or emotional disorders. In the broader meaning, LD encompasses the full range of learning problems that are common in schools, of a temporary or permanent nature, and of intrinsic or extrinsic origin to students. Because this broader meaning would be predominant, the use of the term LD in Portugal would encompass a great diversity of problems. However, it should be noted that this dichotomy of meaning is based on the experience of Correia and Martins (2007) and is not supported by research findings.

The third general remark concerning LD in Portugal is that these are heavily neglected by the national legislation. In fact, the main legislative documents related to special education does not mention LD, as shown by the law that was in place when this research was carried out (DL 3/2008) and by the current and most recent law (DL 54/2018). Thus, LD tend to be unidentified, or if they are identified, they tend to be considered as ineligible for special education (Simeonsson et al., 2010). In the latter case, LD may or may not benefit from other supports that schools may have, which are restricted and insufficient according to the research (Simeonsson et al., 2010).

PRESENT STUDY

This research's objective is to identify the representations of the concept of LD by Portuguese education professionals, namely by regular education teachers, special education teachers and psychologists. These professionals were selected because they are the ones who, in their daily life, are more involved in the identification and intervention within LD. First, and specifically, this research is intended to know the perspectives of these professionals in relation to the traditional criteria of LD (discrepancy and exclusion); the recent criterion of the Response to Intervention (RTI); the specific nature and manifestations of LD; and the LD as a permanent Special Educational Need and as having different degrees of severity. This aim addresses traditional/clinical criteria, educational criteria (e.g., RTI; different degrees of severity) and the phenomenology of LD (manifestations; specific nature). Second, this research's objective is to determine whether these professionals consider that there is a broad or narrow use of the LD term. The focus is in everyday or informal use of the term LD by the education professionals, and so a broad use of the term is predicted. Third, this study's objective is to know the perspectives of these professionals regarding the Portuguese legislation and the support available in Portugal for students with LD. A negative perspective is expected. Finally, we also intend to understand whether there are differences between the perspectives and opinions of different professionals in relation to LD. It is predicted that psychologists will express greater agreement with the traditional criteria of LD than either regular education teachers or special education teachers. Psychologists will also hold a more negative view of the supports available in Portugal due to their role in the identification of LD. No differences are expected regarding the use of the term by different professionals.

METHOD

Participants

The sample includes 310 participants, 165 regular education teachers (RET), 85 special education teachers (SET) and 60 psychologists. All the professionals were graduated. The sample was collected in the central and northern areas of the country, and through a random sampling process, 25 school groups/units from several

cities of these geographic areas were selected (for example: Coimbra and Leiria in the center; Ovar, Santa Maria da Feira and Vila Nova de Gaia in the north).

An invitation letter was sent to the school principals of the school groups/units in which the above noted professionals were invited to participate in the study. The total number of 310 professionals corresponds to those who were willing to participate.

Approximately half of the sample (147 professionals; 47.4%) originated from the northern area of the country, whereas the other half originated from the central region (163 professionals; 52.6%).

The average chronological age of the RET ($M = 44.34$; $SD = 8.13$) and the SET ($M = 43.01$; $SD = 7.54$) was very similar. The psychologists were younger, with an average age of 37 years old ($M = 37.58$; $SD = 9.85$). Regarding gender, there was a clear predominance of female participants in the professional groups (81.2% in RET, 90.6% in SET, and 78.3% in the psychologists).

Similar to what was noted regarding the chronological age, the number of years of professional activity was identical for the RET ($M = 19.77$; $SD = 8.49$) and for the SET ($M = 18.06$; $SD = 7.57$) but lower for the psychologists ($M = 12.57$; $SD = 9.23$). Regarding the school levels that the participants were teaching, the group of RET included members from all levels: 36 (21.8%) were part of the elementary education, 45 were from junior high schools (27.3%), 58 were from high schools (35.2%), and 26 were from secondary education (15.8%). The SET participants were primarily teaching at two or more school levels simultaneously (56.5%), and some (43.5%) were dedicated to a single school level.

The three professional groups had equivalent gender distribution ($\chi^2(2) = 4.808$, $p = .90$). Regarding the age ($F(2, 307) = 14.590$, $p < .001$) and the number of years of professional activity ($F(2, 307) = 16.179$, $p < .001$), there were significant differences. A Hochberg *posthoc* test showed that the differences concerned the psychologists, on the one hand, and the RET (age - 95% CI [-3.74, -9.77]; $p = .000$; professional activity - 95% CI [-4.16, -10.24]; $p = .000$) or SET (age - 95% CI [-2.14, -8.88]; $p = .000$; professional activity - 95% CI [-2.09, -8.89]; $p = .000$), on the other hand.

Instrument

Given the objectives of this study, we realized that there was no available assessment tool that could be used. Therefore, we decided to develop a questionnaire, which covers three different dimensions of LD: 1) the concept of LD in terms of its identification criteria (e.g., discrepancy, exclusion, and RTI), its specificity and its manifestations; 2) the usage (broad or narrow) of the term in Portugal; and 3) the national legislation on the LD. Consequently, a multidimensional question-

naire was developed, composed of three distinct parts, each related to one of the specified dimensions.

In its final version, the questionnaire begins with an item related to the frequency with which the professionals deal with children and young people with LD, rated with a 5-point scale (from Never to Very Often). The following is the 1st part which includes 18 items about the concept of LD, rated on a numerical scale of 5 points (from Totally Disagree to Totally Agree). These 18 items refer to the identification criteria and the manifestations of LD; in terms of content, they can be described as follows: four items are related to the criterion of discrepancy (e.g., item 1 - "Students with LD present an academic achievement lower than expected, given their intellectual potential"); one item refers to the criterion RTI (e.g., item 10 - "A student with LD makes little progress when receiving an appropriate regular education"); four items refer to contextual factors and the exclusionary clause (e.g., item 4 - "Socio-economic and cultural disadvantages can cause Specific LD"); two items address the specificity of the LD (e.g., item 6 - "The LD involve circumscribed deficits in specific cognitive processes necessary for the acquisition of academic skills"); and the remaining seven items relate to the manifestations of LD (e.g., item 8 - "The LD present several degrees of severity") or to the differentiation within LD.

In addition, in the final version, the 2nd part of the questionnaire is composed of seven items related to the use of the term LD and are rated with a numerical scale of 5 points (from Not Common to Very Common). All of the items report a comprehensive and widespread use of the term (e.g., item 6 - "LD is synonymous for school failure"). Nevertheless, one of the items focuses on the less stigmatizing nature of the term LD in cases of intellectual deficits (item 3), and the other focuses on its usage when the RET are not prepared to meet the students' needs (item 5).

The 3rd part of the questionnaire contains four items, rated on a scale of 5 points (from Totally Disagree to Totally Agree). Three items reflect a negative perspective regarding the legislative and educational support provided to LD, whereas one item (item 2) expresses a positive perspective, particularly in relation to the early identification.

In the following, we will describe the three phases of the procedure for questionnaire development that led to its final version.

Questionnaire development - phase 1

The items were selected from the literature review and the consultation of experts and professionals with experience in the field of LD. Regarding the 2nd and 3rd parts, the understanding of the Portuguese reality and listening to potential respondents to the questionnaire were also very important.

The questionnaire was composed of 22 items in the 1st part, seven items in the 2nd part and four items in the 3rd part. To analyze the content validity, the items were qualitatively assessed by five experts in LD and by five possible respondents (teachers). The qualitative assessment included the instructions, the item content and the rating scale; in addition, all of the observations of the judges were considered.

Questionnaire development -phase 2

A pilot study was conducted with a sample of 140 individuals (54 RET, 62 SET and 24 psychologists). An exploratory factor analysis and the psychometric analysis of the items led to the exclusion of four items in the 1st part. These items did not load in any factor and had low average inter-item correlations (inferior to .20) and low correlations with the total score (inferior to .20).

Questionnaire development -phase 3

This phase is based on the sample of 310 individuals (see Sample). The 1st part of the questionnaire was subjected to an exploratory factor analysis, with extraction of the factors by the method of Principal Components. The Kaiser-Meyer-Olkin measure was acceptable ($KMO = .652$), and the Bartlett sphericity test indicated that the items correlated ($\chi^2 (153) = 771.128, p < .001$); thus, factor analysis was appropriate. To define the number of factors to extract, the following criteria were considered: eigenvalue greater than 1; Scree plot; and percentage of variance explained. These criteria indicated a structure of five factors (refer to Table 1); a Varimax rotation was chosen, given the weak correlations between the factors. Due to the size of the sample (Stevens, 1992), factor loading values higher than .30 were considered.

Table 1
Factor loadings of the five factors solution

| Item | Factor loading |
|---|----------------|
| Factor 1: Context | |
| 9. LD (...) can be due to family interaction factors | .75 |
| 4. Socio-economic and cultural disadvantages can cause LD (...) | .70 |
| 5. Inadequate teaching practices can cause LD (...) | .70 |
| 16. Specific LD are permanent SEN | -.47 |
| Factor 2: Differentiation | |
| 14. (...) intrinsic LD identical to extrinsic LD | .73 |
| 15. LD are a category irrelevant for educational intervention | .71 |

Table 1 (continued)
Factor loadings of the five factors solution

| Item | Factor loading |
|--|----------------|
| 11. Cases of intelligent students are similar to those of the less intelligent (...) | .62 |
| 3. LD are unexpected (...). | .52 |
| Factor 3: Manifestations | |
| 17. Evidence in the developmental history (...) | .68 |
| 10. Little progresses with appropriate regular education (...) [RTI] | .64 |
| 18. LD occur in several academic areas (...) | .59 |
| 8. (...) several degrees of severity | .36 |
| Factor 4: Discrepancy | |
| 2. (...) intelligence lower than the mean | .63 |
| 13. LD include (...) low IQ and achievement | .62 |
| 12. (...) difficulties in certain types of learning and facilities in others | -.56 |
| 1. (...) achievement lower than expected | -.52 |
| Factor 5: Specificity | |
| 6. (...) deficits in specific cognitive processes | .77 |
| 7. (...) biomedical factors | .53 |

The first factor explained 11.88% of the variance, and its items refer primarily to the exclusion of environmental factors as causes of LD. Thus, this factor was designated as Context. The second factor explained 10.58% of the variance and, despite its hybrid nature, refers mainly to the differentiation within LD; thus, it received this designation (Differentiation). The third factor explained 10.33% of the variance and was named Manifestations because it reports current or early manifestations of LD. The fourth factor explained 9.08% of the variance and was entitled Discrepancy because it combines items related to the presence (items 1 and 12) or absence of this criterion (items 2 and 13). The fifth factor explained 8.41% of the variance and concerns the intrinsic and specific nature of LD and was named Specificity. Cronbach's alpha for this part was .80.

The 2nd part obtained a Cronbach's alpha of .75 and the 3rd part obtained an alpha of .70.

RESULTS

Frequency of Contact with the LD

The professionals noted frequent contact with the LD (corresponding to four points in the rating scale: $M = 4.16$; $SD = 0.85$).

Identification Criteria and Manifestations of the LD

Table 2
Identification criteria and manifestations of LD

| Items | RET ¹ (n = 165) | | SET ² (n = 85) | | PSI ³ (n = 60) | | F(2, 307) |
|---|-------------------------------|------|------------------------------|------|------------------------------|------|-----------|
| | M | SD | M | SD | M | SD | |
| 1. Achievement lower than expected | 3.48 _a | 1.13 | 3.71 | 1.19 | 4.13 _a | 1.10 | 7.16** |
| 2. Intelligence lower than the mean | 2.76 _a | 1.19 | 2.48 _b | 1.03 | 2.00 _{a,b} | 1.09 | 10.12*** |
| 3. LD are unexpected | 2.19 | 1.19 | 2.11 | 1.18 | 2.52 | 1.13 | 2.38 |
| 4. Socio-economic disadvantages | 3.19 | 1.28 | 3.38 _a | 1.33 | 2.83 _a | 1.34 | 3.14* |
| 5. Inadequate teaching practices | 3.20 | 1.24 | 3.24 | 1.15 | 2.98 | 1.36 | 0.86 |
| 6. Deficits in specific cognitive processes | 3.51 | 0.98 | 3.87 _a | 0.96 | 3.43 _a | 1.10 | 4.74** |
| 7. Biomedical factors | 3.01 | 0.95 | 3.14 | 1.10 | 3.12 | 1.33 | 0.50 |
| 8. Several degrees of severity | 4.39 | 0.90 | 4.58 | 0.62 | 4.48 | 0.83 | 1.52 |
| 9. Family interaction factors | 3.82 _a | 0.93 | 3.58 _b | 0.89 | 2.95 _{a,b} | 1.47 | 15.24*** |
| 10. RTI | 3.32 _a | 1.28 | 2.89 _a | 1.36 | 3.34 | 1.26 | 3.39* |
| 11. Intelligent similar to less intelligent | 2.15 | 1.06 | 2.32 _a | 1.14 | 1.87 _a | 0.98 | 3.15* |
| 12. Difficulties and facilities in learning | 3.71 | 0.99 | 3.78 | 0.90 | 3.78 | 0.97 | 0.20 |
| 13. LD include low IQ and achievement | 3.07 _a | 1.23 | 2.59 _a | 1.26 | 2.09 _a | 1.22 | 15.04*** |
| 14. Intrinsic LD identical to extrinsic LD | 2.36 _a | 1.02 | 2.35 _b | 0.98 | 1.94 _{a,b} | 0.87 | 4.31* |
| 15. Category irrelevant for intervention | 1.62 | 0.97 | 1.44 | 0.98 | 1.37 | 0.82 | 2.05 |
| 16. Permanent SEN | 2.82 | 1.21 | 2.84 | 1.40 | 3.15 | 1.48 | 1.48 |
| 17. Evidence in the developmental history | 3.34 | 0.89 | 3.22 | 1.06 | 3.43 | 1.06 | 0.84 |
| 18. Occur in several areas | 4.12 _a | 0.88 | 3.87 | 0.90 | 3.78 _a | 1.04 | 3.96* |
| Factors | | | | | | | |
| Context | 13.39 _a | 2.85 | 13.36 _b | 3.10 | 11.61 _{a,b} | 4.53 | 6.93*** |
| Differentiation | 8.32 | 2.87 | 8.22 | 2.79 | 7.69 | 2.34 | 1.15 |
| Manifestations | 15.17 | 2.64 | 14.58 | 2.54 | 15.04 | 2.63 | 1.53 |
| Discrepancy | 13.37 _{a,b} | 2.52 | 14.41 _{a,b} | 2.72 | 15.82 _a | 3.04 | 19.00*** |
| Specificity | 6.52 | 1.52 | 7.01 | 1.63 | 6.55 | 2.07 | 2.64 |

* p < .05 ** p < .01 *** p < .001

Note: Means in a row sharing subscripts are significantly different.

¹RET= Regular Education Teachers ²SET= Special Education Teachers ³PSI= Psychologists

As shown in Table 2, the respondents predominantly expressed their agreement concerning the items of the 1st part because the average scores were above 3. For instance, this agreement regards the items that refer to the fact that LD present several degrees of severity (item 8) or that can occur in several areas (item 18). In contrast, there was disagreement regarding the possibility of the LD to be an irrelevant category for educational intervention (item 15) or of the LD to be unexpected, emerging for no apparent reason (item 3). Regarding this last aspect, there was agreement on the perspective that LD are a developmental disorder and that there is evidence in the development history of students with LD that these could reveal academic difficulties (item 17). Another item that also showed less agreement was what refers to Specific LD as permanent Special Education Need (SEN; item 16).

Regarding the LD traditional identification criteria, the respondents agreed that LD can be expressed as an intra-individual discrepancy between the academic achievement and the intellectual potential (item 1), between cognitive processes (item 6) or among types of learning (item 12 – “A student with LD manifests difficulties in certain types of learning, but facility in others”). In contrast, the respondents disagreed that there is an intellectual impairment in LD (items 2 and 13) and that LD cases are similar regardless of their level of intellectual functioning (item 11 – “The cases of the intelligent students who have learning disabilities are similar to those of the less intelligent students who have learning disabilities”).

Regarding contextual factors, the participants considered that LD are due to environmental determinants of a socio-economic (item 4), educational (item 5) and familiar nature (item 9). Thus, the role of the context in learning and in learning disabilities was recognized. Nevertheless, the participants also admitted the influence of biomedical factors (item 7).

Table 2 shows that the factors that obtained a greater agreement were Manifestations and Discrepancy. To determine whether the professional group significantly affected the representations of the concept of LD, we used a *one-way* ANOVA. When there were significant differences, we used the Hochberg *posthoc* or the Games-Howell *posthoc*, depending on whether the variances were homogeneous (Wilcox, 2003).

In terms of the factors, there were statistically significant differences in the Context and Discrepancy factors. Effect sizes were small in the Context ($\eta^2_p = .01$), Manifestations ($\eta^2_p = .01$) and Specificity factors ($\eta^2_p = .02$), but medium in the Discrepancy factor ($\eta^2_p = .11$). The Games-Howell *posthoc* indicated that the psychologists differed significantly from the RET (95% CI [-.28, -3.27]; $p = .016$) and the SET (95% CI [-.14, -3.35]; $p = .030$); that is, the psychologists were the professional group who expressed less agreement regarding an extrinsic determination of LD. In addition, an item analysis indicated that the significant differences were located in the items related to socio-economic disadvantages (item 4) and

family interactions (item 9), which received less support from the psychologists. Regarding the Discrepancy factor, the Hochberg *posthoc* test showed significant differences among the three professional groups; the psychologists expressed greater agreement with the criterion of the Discrepancy, differing significantly from the RET (95% CI [1.48, 3.42]; $p = .000$) and SET (95% CI [.32, 2.49]; $p = .006$). Following the psychologists were the SET, whose degree of agreement also diverged significantly from that of the RET (95% CI [.18, 1.90]; $p = .011$). Comparisons of the items showed that the differences between the professional groups occurred in the “(...) academic achievement lower than expected, given their intellectual potential” (item 1), which was more strongly supported by the psychologists, and in the items that note a low IQ (items 2 and 13), which raised more pronounced disagreement from the psychologists.

In the items, in addition to the differences already noted, there were others in one item of the Specificity factor (item 6), two items of the Manifestations factor (items 10 and 18), and two items of the Differentiation factor (items 11 and 14). Among these items, the one that obtained a higher significance level is that which concerns the specific deficits in cognitive processes (item 6): although all professional groups expressed agreement, it was more pronounced in the SET. It should also be noted that, although all respondents disagreed that the cases of LD with different levels of intellectual functioning (item 11) or different etiology (item 14) are identical, such disagreement was more pronounced among the psychologists.

Table 3
Use of the term LD and educational support

| | RET ¹ (<i>n</i> = 165) | | SET ² (<i>n</i> = 85) | | PSI ³ (<i>n</i> = 60) | | <i>F</i> (2, 307) |
|--|---------------------------------------|-----------|--------------------------------------|-----------|--------------------------------------|-----------|----------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| Use of the term LD | | | | | | | |
| 1. LD when there is no diagnosis | 3.78 _a | 1.01 | 4.19 _a | 0.78 | 4.05 | 0.79 | 6.05** |
| 2. LD includes all the learning problems | 3.77 | 0.99 | 4.01 | 0.98 | 4.00 | 1.02 | 2.12 |
| 3. LD is less stigmatizing | 3.72 | 0.96 | 3.64 | 0.99 | 3.55 | 1.14 | 0.63 |
| 4. LD includes behavior problems | 2.59 | 1.25 | 2.68 | 1.16 | 2.28 | 1.11 | 2.11 |
| 5. LD when teachers are not prepared | 3.43 _{a,b} | 1.09 | 3.87 _a | 1.07 | 4.02 _b | 0.93 | 8.99*** |
| 6. LD is synonymous for school failure | 3.30 | 1.16 | 3.54 | 0.96 | 3.65 | 1.19 | 2.67 |
| 7. LD when academic achievement is low | 2.95 | 1.14 | 3.09 | 1.04 | 3.10 | 1.16 | 0.65 |
| Total | 23.55 _a | 4.58 | 25.02 _a | 4.02 | 24.65 | 5.18 | 3.37* |

Table 3 (continued)
Use of the term LD and educational support

| | RET ¹ | | SET ² | | PSI ³ | | F(2, 307) |
|-----------------------------------|--------------------|-----------|--------------------|-----------|----------------------|-----------|--------------|
| | (<i>n</i> = 165) | | (<i>n</i> = 85) | | (<i>n</i> = 60) | | |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| National legislation on LD | | | | | | | |
| 1. Legislation neglects LD | 3.08 _b | 1.27 | 3.76 _a | 1.12 | 3.82 _b | 1.08 | 13.56*** |
| 2. Early referral | 3.04 _a | 1.10 | 2.81 | 1.35 | 2.53 _a | 1.08 | 4.24* |
| 3. Lack of educational supports | 4.02 _a | 1.01 | 4.21 | 0.95 | 4.38 _a | 0.85 | 3.46* |
| 4. LD not identified | 3.82 _a | 1.08 | 3.51 _b | 1.18 | 4.13 _{a,b} | 0.77 | 6.3** |
| Total | 13.88 _a | 2.83 | 14.67 _b | 3.12 | 15.80 _{a,b} | 2.40 | 10.24*** |

* p <.05 ** p <.01 ***p <.001

Note: Means in a row sharing subscripts are significantly different.

¹RET= Regular Education Teachers ²SET= Special Education Teachers ³PSI= Psychologists

Use of the Term and Support Available

Table 3 shows the results obtained in the 2nd and 3rd parts of the questionnaire. Regarding the 2nd part, respondents expressed agreement with a comprehensive use of the term (average scores higher than 3), namely in the absence of a diagnosis (item 1 – “When a student does not learn what is expected for its age, and there is no diagnosis for the situation, there is a tendency to identify him/her with LD”); in school failure situations (item 6); or regarding all learning problems that arise in schools (item 2 – “LD is a broad term that encompasses all learning problems that arise in schools”). Support for the possibility of using the LD term was obtained when the student has a deficit in intellectual functioning because it is less stigmatizing (item 3). Support for the use of the LD term was also obtained when teachers are not prepared to meet the needs of students (item 5). Conversely, the item that obtained less agreement regarded the possibility of LD to include behavior problems that occur in the school context (item 4). In terms of comparative analysis, the RET had the lowest average scores in all items, whereas the SET achieved the highest scores in the first four items. The difference was statistically significant in the total score of the 2nd part but the effect size was small ($\eta^2_p = .01$). A *posthoc* Hochberg highlighted a greater agreement with the widespread use of the term by the SET than by the RET (95% CI [0.02, 2.94]; $p = .046$). In the items, we observed differences identical to those just described in items 1 and 5.

In the 3rd part of the questionnaire, there was agreement on the items that expressed a negative perspective regarding the legislative support (item 1 – “The national educational legislation neglects students with LD”), the identification (item

4 – “Many students with LD are not identified as such”), and the educational support (item 3) given to LD in Portugal. In accordance with this negative perspective, there was disagreement in item 2 that notes that the early referral is a reality concerning the LD. When comparing the different professional groups, it was observed that the psychologists adopted a more unfavorable view of the Portuguese legislative and educational framework, and its total score significantly differed, according to a Games-Howell *posthoc*, from that of the SET (95% CI [0.03, 2.23]; $p = .043$) and RET (95% CI [1.02, 2.82]; $p = .000$). The effect size was small ($\eta^2_p = .06$). The same pattern was evident in various items in this part of the questionnaire.

DISCUSSION

This research documents LD representations of Portuguese education professionals and addresses the concept, the use of the term and the national legislative context. Therefore, this research seeks to expand the restricted cross-cultural research related to LD, which is, as far as we know, virtually non-existent regarding Portugal (Correia & Martins, 2007).

Regarding the concept of LD, the participants expressed a pronounced agreement with the fact that LD present several degrees of severity and can occur in various domains. These observations are consistent with a dimensional view of LD, according to which they occur throughout a continuum of severity, instead of being a clearly defined explicit category (Fletcher et al., 2013; Lyon & Weiser, 2013).

The criterion of the discrepancy also obtained significant agreement, regardless of the manner in which it was operationalized. This finding may appear surprising, given the many criticisms directed at this criterion (Bradley et al., 2002; Fletcher et al., 2013). However, it should be noted that LD emerged from the recognition that there were students who encountered obstacles in their learning, despite an average or above average intellectual functioning. In other words, the concept of underachievement or of a performance lower than expected is the original nucleus of LD. Therefore, it has imposed itself through the experience of professionals on various continents and in various countries (Agaliotis, 2016; Oakland et al., 2007; Sideridis, 2007), including Portugal. Besides, classification systems, such as the DSM-5 (APA, 2013), continue to include this criterion as low achievement in comparison to peers of the same age. The fact that DSM-5 is widespread in Portugal may also justify the prominence of this criterion.

As we had the opportunity to highlight, a more recent criterion of LD identification is the Response to Intervention (RTI). The Portuguese education professionals

were also asked about it, through an item that received moderate or reduced support. In our opinion, this modest agreement is rooted above all in an insufficient diffusion of this criterion at the time that this research was undertaken. A new law relative to inclusive schools is now in force (DL 54/2018) that stresses the implementation of a multi-tiered system of support and the identification of special needs when the students lack responsiveness to measures intended to support learning. Therefore, it is expected that the criterion of Response to Intervention will become better known in the near future. Anyway, it should also be noted that the implementation of this criterion will be difficult for the national education system, given the gaps in human resources (e.g., lack of psychologists, SET and other specialized technicians in schools) and the insufficient training of the RET regarding special education needs and pedagogical differentiation.

Regarding the determinants of LD, the education professionals have admitted the influence of both those of a biomedical nature, as well as those of environmental origin related to family interactions, socio-economic disadvantages and inadequate teaching practices. Therefore, participants partly disagreed with the exclusion criteria because this stipulates that the LD cannot be attributed to a diverse set of conditions including most of those noted above. Thus, contextual factors, which interfere with achievement, would be inclusionary conditions or alternative explanatory factors (Dombrowski et al., 2004) instead of exclusionary conditions. In this regard, it should be noted, first, that the reference to both biomedical and environmental factors is in accordance with an interactive perspective of the individual development and functioning (Cottrell & Barrett, 2017). Second, a deficit based model of LD derives mainly from the medical model of disability (Grünke & Cavendish, 2016) and considers erroneously that learning and the context where learning takes place can be separated (Dudley-Marling, 2004; Riddle, 2017). Contextual barriers to learning should not be discarded or ignored, as the education professionals that participated in this study recognized. Third, and as previously noted, the empirical evidence that supports the exclusion of the environmental determinants is restricted (Flechter et al., 2013). Fourth, it has also been emphasized that the exclusion of the environmental factors is ignored in practice, particularly in regard to identifying the LD (Dombrowski et al., 2006; Grünke & Cavendish, 2016).

One item that also raised disagreement from the Portuguese education professionals was the one noting that specific LD are permanent SEN. This disagreement may initially be surprising because LD have been considered persistent lifelong difficulties, although their manifestations may be variable depending on the development stage and the life requirements (Bradley et al., 2002; Poch, 2018). Nevertheless, this perspective is easily explained due to the legislation and the special education system in Portugal. Indeed, the special education law (3/2008)

that was in force at the time this research was carried out, abundantly used the term permanent SEN but did not mention LD, referring to other permanent SEN instead (deafness; blindness or low vision; autism spectrum disorders; and multiple disabilities or deaf blindness). This fact may have contributed to the professionals' view of LD as not related to the permanent SEN.

The comprehensive use of the term corroborates our prediction and proves empirically what had already been noted by Portuguese authors (Correia & Martins, 2007), as well as by authors of other nationalities (Anastasiou & Polychronopoulou, 2009; MacMillan & Siperstein, 2002). However, the comprehensive use of the term does not necessarily reflect the concept that underlies it because they may be different. This finding is illustrated by the fact that the participants expressed agreement with the criterion of discrepancy and disagreement regarding an intellectual impairment in the LD cases or of the similarity of the LD cases with different levels of intellectual functioning or etiologies. These statements mean that a diffused employment of the term may coexist with a narrow concept. The very wording of the items concerning the use of the term obtaining greater agreement provides an indication of the circumstances in which it occurs: in the absence of a diagnosis; when teachers are not prepared to meet the needs of students; and in cases of school failure. Therefore, it is assumed that a detailed assessment, the allocation of teachers and other professionals with knowledge regarding LD, and a timely intervention targeted at the prevention of school failure could contribute to a more informed use of the term.

The unfavorable view of the Portuguese legislative and educational context regarding the LD confirms our prediction and mirrors reality. In fact, a non-governmental advisory body, *Conselho Nacional de Educação* (Grácio, 2014), emphasized that schools do not support a considerable number of students and recommended that measures should be implemented for LD. The situation is more paradoxical if we consider that in other countries, LD represents the group that most benefits from special education services and that its prevalence has been increasing (Büttner & Hasselhorn, 2011; Dombrowski et al., 2006).

When the representations of the professional groups were compared, we registered certain differences between them, which emphasize the importance of auscultating them all. Regarding the LD identification criteria, we realized that it was the psychologists who supported the most criteria of exclusion and discrepancy because these criteria are in diagnostic and classification manuals (for example, DSM-5). In addition, the psychologists also highlighted the most differentiation of the cases of LD, depending on the intellectual level or the etiology. These academic perspectives most probably derive from the training in psychology, which accords great importance to processes of identification, assessment (including intellectual functioning) and differential diagnosis, in accordance with international guidelines. It was also the psychologists

who expressed a more negative outlook on the legislative and educational support provided to LD, which may result from the functions they usually perform concerning the screening and identification of LD. In this context, psychologists can more easily realize that the referral is delayed or that the cases of LD can be considered ineligible for special education and/or not benefit from educational support. Thus, our predictions regarding differences between professionals were confirmed.

Regarding the use of the term, and contrary to our expectations, the SET were the professionals who most perceived it as being comprehensive. In Portugal, the support provided to students with SEN remains focused on these professionals; there is minimal support provided by RET or other technicians. Moreover, there have been no initial or continuing training processes targeted to RET to help them respond to the diversity that they deal with in schools (Grácio, 2014). In our opinion, this context helps to explain why SET agreed more with the possibility of the term being used when there is no diagnosis or when RET are not prepared to meet the needs of the students.

The results obtained have necessarily been influenced by the participants and the research instrument. Thus, in the future, it would be important to have a larger sample both in global terms and in terms of the different professional groups, as well as to have a sample that is distributed throughout the country. Regarding the research instrument, we chose a questionnaire, given the advantages of this methodology; however, the use of other data collection instruments could also be beneficial. For example, an interview or focus group used in addition to or alternatively to the questionnaire could allow access to the LD representations in a more spontaneous and detailed manner. Furthermore, given the lack of a questionnaire that would correspond to these research objectives, it was necessary to develop one. This questionnaire had acceptable indicators of internal consistency and construct validity. However, the analysis of the psychometric properties of the questionnaire should obviously be continued.

Notwithstanding the foregoing, this research extends the cross-cultural research on LD and does it, to the best of our knowledge, with two innovations. First, by listening directly to the education professionals who are more involved in attending to the LD. Second, by inquiring about multiple features of LD (both formal and informal) and thereafter circumscribing perspectives that the Portuguese professionals share or do not share with other countries.

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