

Developmental Dyslexia: Perspectives on Teacher Training and Learning Disabilities in Portugal

Lénia Carvalhais*
Carlos Fernandes da Silva
University of Aveiro, Portugal

The focus of this study was to explore primary teachers' attitudes and perceptions toward their training experiences, instructional practices, and supports received in their schools toward working with students with dyslexia in Portugal. Primary school teachers from the centre of Portugal, working with children between the first and fourth grades, were asked to complete a questionnaire, organized into two parts: the first part, consisted of 5 questions related to teachers personal information; while the second part, included 7 questions, which related to teachers knowledge and training experiences toward working with children with dyslexia. Results indicated from the questionnaire that teachers believe there is a significant gap in their training needs and further in-service trainings are warranted to working with children with dyslexia to promote their academic success in the classroom.

Keywords: Dyslexia; Specific Learning Disabilities; Portugal; Pre- and In-Service Teacher Training; and Special Education Teachers

Developmental dyslexia is a reading disability which affects literacy acquisition in 5.4% of school-age students between second and fourth grade in Portugal according to a study developed by Vale, Sucena, Viana and Correia (2010). Considering that reading and writing are not the consequence of a natural process, but of learning, researchers have verified that most children learn to read and spell easily while others have extraordinary difficulties. In 2003, Lyon, S. Shaywitz, and B. Shaywitz presented the following definition:

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (p. 2)

According to this definition, dyslexia is a specific learning disability characterized by reading, spelling, and phonological awareness difficulties. This definition puts forward neurodevelopmental causes as the explanation for developmental dyslexia, excluding environmental factors. This conclusion is based on several studies, both genetic (Fisher & DeFries, 2002; Grigorenko et al. 1997), and neurological (S.

*Please send correspondence to: Lénia Sofia de Almeida Carvalhais, Department of Education, University of Aveiro, Campus Universitário de Santiago, 3810-193, Aveiro, Portugal, Phone: +351 234 370 353, E-mail: leniacarvalhais@ua.pt.

Shaywitz et al., 1998). Through computer images of the brain in activity, S. Shaywitz and colleagues (1998) reached the conclusion that dyslexics reveal abnormal activation patterns of the posterior and anterior regions of the brain. Therefore, although the theories that explain the causes of dyslexia put forward intrinsic factors, it is important to acknowledge that environmental factors are also important, as they may imply an early evaluation and an adequate intervention.

Because developmental dyslexia is considered a learning difficulty, it is fundamental for the teacher to be attentive of the behavior of students, intervening as a promoting agent for an early diagnosis. The school has a primary role in the education of a child, from the first years of his/her life. It is increasingly open to more heterogeneous children; this will demand of teachers a reflection on their practices and training, with the aim of making school truly more inclusive. According to Baroja and Fernanda (1989), 73% of children with dyslexia showed three basilar types of behavior: (1) stubbornness, (2) presumption, and (3) insecurity. In this sense, the motivation of the student and his/her emotional well-being will depend, to a great extent, on the relationship that the child establishes with his/her teacher. To the teacher falls the role of awakening an interest for learning in the child, raising his/her curiosity and helping him/her to overcome obstacles in the development of activities.

In face of the demands of our time, the teacher acquires a decisive and, at the same time, very demanding role. According to Howe (2001), "It is highly desirable that individuals are encouraged to be aware that they may repeatedly be required to engage in learning and studying activities . . ." (p. 4,189). This holds especially in the context of learning disabilities. In this sense, integrating individuals with learning and developmental difficulties into the general education means accepting them and adapting the educational organization and instruction (Stevens & Werkhoven, 1997). This led to the need to redefine the goals of teachers' initial and lifelong training, the intentions of the participants, the contents, and the evaluation carried out. Furthermore, an inclusive school demands a broad knowledge of several and different special education needs. In this sense, it is up to the primary school teacher (in the Portuguese context, primary school comprises the first four years of compulsory education) to make an early diagnosis of learning difficulties, including dyslexia. Therefore, the role of the teacher is broader; this makes lifelong training an urgent need, according to Aisncow (1995).

The questions related to training and teacher qualifications have been a matter of considerable interest during the last decades (Correia, 1999; Sá-Chaves & Madanelo, 2010). In this way, the teacher who decides to undertake training must feel it as a need (Stevens & Werkhoven, 1997), trying (1) to find acting strategies and (2) to develop materials that will answer to the needs diagnosed, in a constant relationship between action, research and training (Correia, 1999, Sá-Chavez & Mandanelo, 2010). Forte and Flores (2010) also explain the impact of the continuing professional development of teachers and of teacher collaboration at the workplace in a Portuguese sample. The results obtained from this study suggest that teachers attribute great importance to formal training and collaborative work with other colleagues. Nevertheless, although teachers mention its importance, the research team verified a lack of actual collaborative work. According to this study, they concluded that the

subjects understand collaborative work as a formal act and do not use it at the level of the classroom. So, the results prove that it is crucial to promote a culture of collaboration not only in schools but also in teacher training, both initial and in-service. Therefore, in light of this situation, the purpose of this study was to examine primary teachers' attitudes and perceptions toward their training experiences (initial or in-service), instructional practices, and supports received in their schools toward working with students with dyslexia in Portugal.

METHOD

Participants

The sample consisted of 50 participants, selected by *purposeful sampling* (Patton, 1990), among teachers from the center of Portugal. In this sample, 10 (20%) teachers were male, and 39 (78%) were female (one participant did not indicate gender status). The average age of these teachers was 40, with ages ranging between 29 and 58. In terms of education/training, 9 (18%) held a bachelor's degree, 3 (6%) held a "Magistério Primário" (a degree given by an institution, now discontinued, which offered teacher training, before the use of higher education institutions to obtain a teaching degree became widespread), 34 (68%) had a degree in education, 3 (6%) had a master's degree, and 1 (4%) a post-graduate degree. The average years of teaching service was 15 years. In terms of types of teaching, 34 teachers taught in general education classrooms, and 16 teachers taught in special education classroom settings. Of these 16 teachers, only 8 decided to invest in specialized training, to work in different domains of special education.

Instruments

The questionnaire consisted of two parts: the first concerned the teachers' personal information; the second focused on questions about the training and work undertaken with children with dyslexia. In the first part, the teachers were asked to answer five items about their gender, birth date, academic training, the length of time they have worked as teachers, and the type of teaching they were currently undertaking. In the second part, the questionnaire was organized into seven questions.

Question 1 was a closed-ended item (yes/no), and the teachers were questioned about whether they had already had, in their professional careers, students with formally diagnosed dyslexia.

In Question 2, (closed-ended item), the teachers were asked whether they had received some kind of support. If they answered "yes," they had to select in Question 2.1 the observations they had made: namely, the support (1) of their colleagues (2) of the School Center, (3) of the Special Education Teams or (4) others.

Question 3, (yes/no), concerned education about dyslexia; teachers were questioned on whether they had received training on this subject. If they reported that they did have such training, they were asked to specify whether such training occurred during their initial training as teachers or during in-service training (Question 3.1). When teachers answered that the training was conducted during in-service training, they were asked to indicate, in an open-ended question, the motives that led them to undertake this type of training (Question 3.2). We also asked why some

teachers never had in-service training in the area of dyslexia (Question 3.3). They were asked to select one (or more) items from the given options: (1) lack of training offered; (2) difficulties of access (e.g., time, resources, support); (3) the belief that such training is unnecessary; or (4) others.

In Question 4, teachers were asked to define dyslexia. In Question 5, teachers were asked to identify the signs that can help detect dyslexia. In Question 6, teachers were asked to identify which difficulties students face. Questions 4–6 were all open-ended questions. Last, with Question 7, teachers were questioned on whether they believed dyslexia to be a conditioning factor of academic success (yes/no item).

Procedures

The study was conducted in the academic year of 2007–2008. The participants were primary school teachers from the center of Portugal and were selected from schools that collaborated in projects with the researchers. The questionnaire was given in a paper/pencil format, and teachers were asked to answer the following questions and return the questionnaire to the researchers. We collected the questionnaires and the analysis of the data was conducted using the SPSS 15.0 program for PC. We determined frequencies, percentages, means and standard deviations. We also used sample distribution analyses between independent variables and dependent variables; for example, the open-ended questions were codified and analyzed.

RESULTS

In response to Question 1, 23 of the 50 teachers (46%) indicated that they had already worked with children with dyslexia. As for Question 2 (yes/no), we asked whether teachers received support during their professional career. Of the 50 teachers questioned, 37 (74%) were never supported in the work developed with children with dyslexia and 13 (26%) received support. Taking into account these 13 teachers, the minimum number of the years of teaching service was 6 years and the maximum was 33 years. With regard to the independent variable “years of teaching service” linked to the dependent variable “have or not received support,” we verified that there was no statistically significant difference in the sample distribution ($p > .05$). As for the 23 teachers who had worked directly with students with dyslexia (Question 1), 10 stated that they had never received any support to organize an evaluation or intervention program to work day-to-day with children with dyslexia in the classroom.

In Question 2.1, the teachers who had answered positively in Question 2, had to specify the kinds of support they had mostly received, based on the following list of supports: (1) colleagues; (2) the school; (3) the Special Education Team; or (4) others. Only one participant had received support from a colleague. As for school support, none of the teachers in the sample mentioned having received support from their institution. As to the support from the Special Education Teams, only 39% (9 individuals) stated they had received support, and 2 stated that they had received support from the instructor/lecturer during training. The results obtained in Question 3 (the training of teachers in the area of dyslexia) were as follows: 66% (33 teachers in the sample) never received any training, and 34% (17 teachers in the sample) stated they had received training in this area. We also verified that there were no statistically significant differences in terms of sample distribution with regard to “initial/

in-service training* years of teaching service” ($p>.05$). We verified that the minimum number of teaching service years that the teachers possessed, when they had received training in this area, was 4 years and the maximum was 32 years. We also sought to determine what kind of training was received (Question 3.1): namely, initial training or in-service training. Only one teacher received training in this area during his/her initial training, while 16 decided to invest in in-service training. When we ask why they had invested in in-service training (Question 3.2), they mostly answered that this training is useful in tackling some difficulties in terms of programming adequate and effective work with the children. In response to Question 3.3, concerning the motives that led the 33 teachers not to invest in in-service training, 22 (66.7%) stated that this was due to the lack of training offered, 9 mentioned difficulties of access (e.g., time, resources, support) and 2 stated that they did not feel the need for training. As for the results obtained in Question Four, about the definition of the term dyslexia, we came to the conclusion that teachers recognize (1) that dyslexia as a reading and writing difficulty results from neurological problems and (2) that it brings with it implications in terms of academic production and results. In this sense, several teachers identified spelling errors and the switches in the position of letters and syllables as the most common mistakes. They also identified questions connected with laterality.

As for the indicators of dyslexia (Question Five), which are important for a precocious identification and evaluation, 9 (18%) identified laterality as one of the symptoms associated to dyslexia, and 10 (20%) identified the difficulties in terms of spatial orientation. With regard to the difficulties in reading and spelling, 32 (64%) associated this symptom to the symptomatic pattern of dyslexia, and 36 (72%) mentioned that the symptom more commonly found in children with dyslexia is the switch in the position of letters and syllables in words. The results obtained in Question 6, about the implications of dyslexia, 11 teachers (22%) mentioned self-esteem problems, namely inhibition, isolation, feeling of revolt, and 37 (74%) mentioned that dyslexia implies difficulties in reading and spelling that may condition the academic progress of students. As for other implications, 13 (26%) mentioned comprehension problems, which consequently lead to complications in terms of academic assessment. Only 3 (6%) mentioned difficulties in terms of laterality. Last, with Question 7, (whether dyslexia affects the academic success of students) 39 individuals (78%) answered affirmatively and 9 (18%) answered negatively.

DISCUSSION

Although the questionnaire used in this study was applied to a small sample, we can come to some conclusions with the data obtained and compare them to studies carried out previously in Portugal. Even though 46% of the sample had already taught students with diagnosed dyslexia, only 13 individuals stated having received support in terms of intervention to work with children with dyslexia. In relation to the type of support given, only one of the teachers answered having had received help from colleagues. The results obtained led us to believe that teachers prefer to look for support in Special Education Teams. This led us to conclude that teachers do not see partnership work with colleagues or with the elements that constitute the school management board as a way to solve their problems, although schools con-

tinue to increasingly integrate students with special education needs. On the other hand, teachers stated having received support from school colleagues from their sixth teaching service year onwards. This led us to ponder the question about teachers (at the beginning of their career) who do not receive any kind of support that helps them in their daily teaching practices. In fact, as the studies by Forte and Flores (2010) show, teachers recognize the importance of collaborative work, but do not practice it daily. In response to teacher training in the area of dyslexia, it is still incipient, as 66% of the teachers stated they have never received any kind of training. Of the 16 participants who attended some kind of training, only one stated having received academic training on how to work with children with dyslexia. This aspect should raise some discussion on the initial training currently received by students who are studying to become teachers. In this way, we aim to alert future teachers to eventual difficulties experienced by students in order to avoid a perpetuation of the negative consequences of dyslexia in the children who begin their alphabetization process. Because of these conclusions, we began promoting some modules on dyslexia directed at students (i.e., primary school teachers) in the Department of Education at the University of Aveiro in Portugal.

Of the teachers who decided to receive in-service training, the majority answered that the reason behind their decision was to improve their knowledge of dyslexia in order to help them attain their goals and to devise intervention and evaluation strategies adequate to each individual. As to the teachers who had not invested in such in-service training, most mentioned the lack of offerings in this area. Because of this situation, it is necessary to ponder the lifelong training that is offered to teachers, as well as its quality. Another issue that arose was the following: Although some teachers seek such training in order to answer the problems that they encounter in their day-to-day teaching roles, other teachers seek such training to enhance career advancement and not to enhance their skills, especially in working with special education needs students. In this sense, in-service training is not always the result of an intrinsic learning desire (Matos, 1999; Carvalho & Ramoa, 2000). This may raise questions on the applicability of knowledge acquired through in-service training. Therefore, one needs to take into account that the process of in-service training is complex and implies several variables, with different implications for teaching practices.

To promote training in the area of dyslexia, we started developing workshops/seminars with teachers, with the aim of alerting them to the learning of difficulties and to the support that should be provided to children with dyslexia and their parents. These workshops have contributed to raise awareness among teachers, as schools nowadays incorporate a greater diversity of social and individual realities. A widespread knowledge of dyslexia, namely, of the definition, tautology, etiology and educational implications, avoids situations of discrimination, blame and consequent lack of interest of school-aged children. In the future, we aim to continue to invest in this training and in making public the data, which more recent research brings to society. The questions connected with the well-being of the student and his/her satisfaction, in terms of academic success, are also seen by the teachers questioned as a concern to take into account, when working with these children. As mentioned before, children with dyslexia have a tendency to feel demotivated, with low self-esteem

and inhibited with their difficulties. Therefore, when asked about the influence of dyslexia, most of the teachers (64%) mentioned that it is determinant; this shows the importance of this theme and the need to invest more extensively and consistently in the training and in the making public of this reading disability.

CONCLUSION

According to the research findings presented in this paper, we can conclude that it is crucial to obtain a national report about teachers' initial and in-service training in areas that concern learning disabilities, more specifically, dyslexia. Furthermore, teachers expressed the need for in-service training. So, the next phase of this research aims to promote teacher in-service training, questioning each step of the process. It is important to observe the adequacy of the training course, the relationship of content and practices and its usefulness to teachers. This paper attempted to identify some of these questions about teacher training and collaborative work and initiated a discussion about teachers' practices with children with dyslexia in Portuguese schools, a reality that has increased during the last decades.

REFERENCES

- Aisncow, M. (1995, April). *Education for all: Making it happen*. Paper presented at International Special Education Congress, Birmingham, England.
- Baroja, F., & Fernanda M. (1989). *La dislexia: Orígenes, diagnóstico y recuperación*. Madrid: Ciencias de la Educación Preescolar y Especial.
- Carvalho, A. & Ramoa, M. (2000). *Dinâmicas de formação: Recentrar nos sujeitos, transformar os contextos*. Lisboa: Edições ASA.
- Correia, J. (1999). *Os «lugares-comuns» na formação de professores*. Lisboa: Edições ASA.
- Fisher, S. & DeFries, J. (2002). Developmental dyslexia: Genetic dissection of a complex cognitive trait. *Nature Reviews/Neuroscience*, 3, 767- 780
- Forte, A. & Flores, M. (2010). *Colaboração e desenvolvimento profissional de professores: Perspectivas e estratégias: um estudo realizado numa EB 2,3*. Unpublished PhD thesis.
- Grigorenko, E. L., Wood, F. B., Meyer, M., S., Hart, L. A., Speed, W. C., Shuster, A., et al. (1997). Susceptibility loci for distinct components of developmental dyslexia on chromosomes 6 and 15. *American Journal of Human Genetics*, 60, 27-39.
- Howe, M. (2001). Education and learning: Lifespan perspectives. *International Encyclopedia of the Social Behavioural Sciences*, 4189-4192.
- Lyon, G., Shaywitz, S. & Shaywitz, B. (2003). Defining dyslexia, comorbidity, teacher's knowledge of language and reading. *Annals of Dyslexia*, 53, 1-14.
- Matos, M. (1999). *Teorias e práticas da formação*. Lisboa: Edições ASA.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, London, New Delhi: SAGE Publications
- Sá-Chaves, I. & Madanelo, O. (2010). *Formação contínua de professores dos 2º e 3º ciclo do ensino básico: Requalificação de competências*. Unpublished PhD thesis.
- Shaywitz, S., Shaywitz, B., Pugh, K., Fulbright, R., Constable, R., Mencl, W et al. (1998). Functional disruption in the organization of the brain for reading in dyslexia. *Proceedings of the National Academy of Sciences*, 95, 2636-2641.
- Stevens, L. & Werkhoven, W. (1997). Teacher education for special needs in Europe. *Teacher and Teacher Education*, 13(4), 459-466.
- Vale, A., Sucena, A., Viana, F. & Correia, I. (2010). *Prevalência da dislexia entre Crianças Portuguesas do 1º Ciclo do Ensino Básico*. Poster presented at the 5º Encontro Nacional da Associação Portuguesa de Psicologia Experimental. Braga, 26 e 27 de Março de 2010.

Copyright of Learning Disabilities -- A Contemporary Journal is the property of Learning Disabilities Worldwide and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.