Introduction: Learning disorders in a multilingual context – A challenge

Learning Disorders in a Multilingual Context: Diagnosis and Support

Sonja Ugen
Christine Schiltz
Antoine Fischbach
Ineke M. Pit-ten Cate

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Edited by Sonja Ugen, Christine Schiltz, Antoine Fischbach, Ineke M. Pit-ten Cate

Introduction: Learning disorders in a multilingual context – A challenge[1]

Sonja Ugen, Christine Schiltz, Antoine Fischbach & Ineke M. Pit-ten Cate

In order to be able to provide timely help and support to students experiencing learning difficulties, and especially those with specific learning disorders, it is crucial that these be identified and diagnosed at an early stage. Since the Law on Schools was amended in 2017 and 2018 (*Mémorial A, N° 617 of 5 July 2017; Mémorial A, N° 664 of 8 August 2018*), an official framework exists for the diagnostic process and the educational support to students with special needs in Luxembourg. That framework encompasses three levels: local (school), regional (education authority) and national (*Centre de compétences*). The 2018 Law also laid down the specific remits of eight *Centres de compétences*, including the *Centre pour le développement des apprentissages Grande-Duchesse Maria Teresa* (CDA). The CDA is responsible for specific learning and/or attention deficit disorders, and thus, amongst other things, for the implementation of the diagnostic process at the national level, in particular the use of specialised diagnostic tools to determine the nature of the learning difficulties (*diagnostic spécialisé*).

The aim of a diagnostic process should be to provide support as promptly as possible to students with special educational needs (Fletcher, 2019). Making an adequate diagnosis presents a challenge in clinical and educational contexts generally, but especially in a multilingual and multicultural context, such as in Luxembourg (Schuller et al., 2016). The fact that most diagnostic tools are language-based means that language may have an influence on the diagnosis itself. This is especially true for the diagnosis of specific learning disorders of scholastic skills (i.e., reading, writing and/or mathematical disorders). Although multilingualism is generally regarded as an asset (e.g., Hartanto et al., 2018), it presents a great many challenges in terms of academic performance or in the field of special education. The multilingual school system and the fact that the student body is multilingual complicate the validity of the diagnostic process (i.e., how well diagnostic tools actually measure what they are supposed to measure). In this regard, it is extremely important to assess specific processes and abilities as accurately as possible without mixing these up with students' proficiency in the language in which the test is carried out (American Educational Research Association et al., 2014). In the area of specific learning disorders (reading/writing/arithmetic), the chosen language for the diagnostic instruments should correspond to the teaching language (Schulte-Körne & Galuschka, 2019) in order to give the concerned students the best possible chances of success. However, the results of the Luxembourg school monitoring programme (*Épreuves Standardisées*; cf. LUCET, n. D.) show that significant differences in performance in the main teaching language (i.e., German) are already apparent after two years of formal schooling

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1   This text has been translated from the original version in German.

between students who speak different languages at home (Hoffmann et al., 2018). This may, in turn, compromise the validity of the diagnostic process and impede the interpretation of the test results.

This handbook is the first tangible outcome of a joint project between the CDA and the University of Luxembourg (UL), aimed to address the challenges which affect the diagnostic process in a multilingual context. In the handbook, the results of the initial phase of that collaboration are presented, namely a study on the use of (standardised) assessment tools currently applied by practitioners involved in the diagnostic process concerning specific learning disorders. The study further aimed at identifying possible needs in this domain.

Before providing a brief insight into the content-related structure of the handbook, we partially anticipate the results of the study in order to exemplify the challenges presented by the diagnostic process in the conventional Luxembourg school context in greater detail.

In the traditional public schools within the Grand Duchy, the classes are taught in several languages. While promoting multilingualism, Luxembourgish is the main language of instruction in the first cycle of primary school. From the second cycle on, German plays a significant role as the principal teaching language, as the children learn how to read, write and calculate in German. However, since only about 2% of students speak German as their main language at home (MENJE, 2019), most students learn German as a language in parallel to acquiring literacy and mathematical skills. In addition, the student population is characterised by its multilingualism, since only about 35% of the overall number of students attending traditional public schools speak Luxembourgish as their first language (MENJE, 2019). By way of example, we here illustrate the linguistic diversity within a 3.1. cycle with data from a study in which up to two languages spoken by the student body were considered. The largest "monolingual" language groups are made up of students who speak Luxembourgish (31%), Portuguese (23%), French (8%) or a south Slavic language (from the Balkan region) (4%) with both their parents. In addition, there are also students who speak a variety of languages at home, for example, Luxembourgish-French (5%) or Luxembourgish-Portuguese (4%) (Martini et al., 2021). This linguistic diversity has an impact on academic performance inasmuch as there are marked differences between the results achieved by students from different language groups in key subjects, such as German reading comprehension and mathematics (Hoffmann et al., 2018; Martini et al., 2021). Similar to academic performances, complex multilingual educational contexts are not often taken into account in most of the standardised diagnostic tools. Rather, the results achieved by native speakers are regarded as the reference norm and compared with those achieved by multilingual students, which often works to the disadvantage of students who are less exposed to the test language (Krumm, 2014). If children's multilingualism is not considered when interpreting the test results in relation to a monolingual reference norm, this can lead to an over-identification of learning disorders amongst multilingual students (Lenhard & Lenhard, 2018; Martini et al., 2021). Conversely, there is a risk of under-identification of learning disorders amongst monolingual children, when their results are compared with a multilingual reference norm (Lenhard & Lenhard, 2018; Limbos & Geva, 2001; Martini et

al., 2021). Ideally, there should be different reference norms for students depending on their respective linguistic backgrounds.

Specific learning disorders are usually diagnosed during primary education and it is considered most appropriate to test the student's specific abilities in the teaching language (Schulte-Körne & Galuschka, 2019). However, the results of the study described in this handbook (see Chapter 4) show that there are few diagnostic tools available that are developed in or for Luxembourg. Hence, the tests in use have predominantly been developed abroad and mostly in German-speaking countries. These tests have been developed for children whose native language is German and only rarely contain adaptations to suit children having German as their second or third language (Gogolin et al., 2004). This is problematic inasmuch as the language used in the test – both for the instructions and for the tasks themselves – is adjusted to the linguistic abilities of native speakers who have been exposed to that language from birth and who therefore, most probably, possess a larger vocabulary in that language. Moreover, the content of these tests may be partly based on the curriculum of German-speaking educational systems, which may not correspond entirely to the Luxembourg curriculum. As a result, the test reference norms, which are used to interpret the results, cannot be directly applied to the local population since they are based on performance data gathered abroad (Schroeder & Stölting, 2004). Practitioners, therefore, need to compromise when administrating such tests (e.g., translating instructions) or when interpreting reference norms (e.g., drawing comparisons with younger children). Such compromises do not in any way correspond to the standardisation of the test, which, in turn, jeopardises the objectivity of the diagnostic process. More specifically, the results of the diagnostic process should come about independently from the context in which the test is administered and evaluated (Gogolin et al., 2014). Moreover, it is crucial to determine whether potential learning difficulties are attributable to specific learning disorders or whether they are rather due to insufficient language skills to ultimately provide the most appropriate support. In this regard, the DSM-5 international classification system (American Psychiatric Association, 2013) defines an exclusion criterion, which specifically states that the learning disorder may not be attributed to inadequate language skills in the test language. Accordingly, the distinction between learning disorder and language proficiency is a decisive factor in the diagnostic process.

This handbook contains a theoretical and a practice-oriented part. The first three chapters provide a theoretical overview of reading and writing disorders (Chapter 1), mathematics disorder (Chapter 2) and differential diagnosis (Chapter 3). Chapters 1 and 2 describe the current state of research into specific learning disorders in general and within the Luxembourgish context. Moreover, various characteristics and internationally recognised classification and diagnostic criteria, which are also applied in Luxembourg are delineated. Chapter 3 goes on to address further aspects that need to be considered in the diagnosis of specific learning disorders, for example intelligence, (neuro-)psychological capabilities and social-emotional behaviour.

Whilst the handbook provides a brief insight into the relevant theory, its last four chapters have been prepared first and foremost from a practice-oriented perspective in close collaboration with, or by, practising specialists. Chapter 4 delineates the core el-

ement of the joint CDA-UL project, namely the study carried out on the use of tests and the current diagnostic procedures. The results are based on interviews and questionnaire data collected from practitioners at the local, regional and national levels. The resulting 20 steps of the diagnostic process are presented in detail while referring to precautionary measures and potential challenges in regard to educational and psychological test standards. Supplementary to this chapter, a list of the most commonly used tests as well as an exhaustive list of all tests used, are available online. Chapter 5 provides an overview of concrete pedagogical support and adaptive measures which can assist the children concerned in their everyday school life. In Chapter 6, the process of diagnosing a specific learning disorder is illustrated by two case studies in the areas of reading/writing and arithmetic, respectively. Chapter 7 contains a variety of ideas concerning possible pedagogic and didactic support and adaptative tools, which may facilitate learning for children with learning difficulties in traditional public schools. The final chapter is thus aimed primarily at teaching professionals.

The results of the study into the current use of (standardised) assessment instruments and the current diagnostic process show that, to date, only a few tests tailored to the needs of Luxembourg have been developed and are being applied. For the most part, the tests in use are German-based, have been developed abroad and do not take into account the particular characteristics of the Luxembourg context, such as the acquisition of literacy and mathematical skills in a second or third language or the multilingualism of the student population. Furthermore, the scores of the comparison groups (i.e., the reference norms applied in those tests) are only comparable to the results of the Luxembourg student population to a limited extent. In order to optimise the diagnostic process in the future, and to place adequate resources at the disposal of the specialists concerned, the second phase of the ongoing collaboration between the UL and the CDA will therefore focus on the development of specific tests tailored to the Luxembourg student population and the Luxembourg educational system, using appropriate standards which also consider, amongst other things, linguistic characteristics of the students.

The handbook, which is available both online and in printed form, reflects the diagnostic process currently in place. The described process will undoubtedly develop further over time (e.g., in terms of the tests available and organisational changes). Consequently, the diagnostic guidelines are not 'set in stone'. This handbook should rather be considered as a document of its time, with contents that will probably need to be updated regularly. The online version of the handbook offers the possibility of providing updated contents, and is thus intended to permanently represent a helpful resource, enabling readers to keep up to date with the latest developments. Additionally, the online contents are freely accessible to all who are interested in the subject.

In conclusion, we would like to thank all who have provided help and support in the realisation of the handbook, especially the authors from both institutions (the UL and the CDA), to whom we are indebted for their valuable and interesting contributions, and also the reviewers for their constructive feedback. In addition, we offer our thanks to all the practitioners at the local, regional and national levels who have taken part in this project and who have shared their experiences of working with students with special educational needs, thereby contributing to the enhancement of this handbook. Our thanks

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