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## TOWARDS THE NEURODIVERSITY PARADIGM IN THE EDUCATION OF DYSLEXIC STUDENTS

### W STRONĘ PARADYGMATU NEURORÓŻNORODNOŚCI W EDUKACJI UCZNIÓW Z DYSLEKSJĄ

**Streszczenie:** Celem artykułu jest omówienie dysleksji – jednego z rodzajów specyficznych trudności w uczeniu się – przez pryzmat paradygmatu neuroróżnorodności. W paradygmacie tym ceni się różnice między ludźmi, które wiążą się z prezentowanymi przez nich unikatowymi wzorcami funkcjonowania mózgu. W świetle tego poglądu dysleksja rozpatrywana jest w kategoriach pozytywnie postrzeganej różnicy a nie zaburzenia. Zamierzeniem autorki jest też rozważenie edukacyjnych implikacji takiego podejścia do dysleksji. Za zasadniczą kwestię w tym względzie uznaje potrzebę całościowego postrzegania rozwoju i szkolnego funkcjonowania uczniów z dysleksją. Zdaniem autorki wiąże się to z koniecznością dostrzegania przez nauczycieli nie tylko trudności i problemów tych uczniów, ale także ich atutów, zdolności i talentów. Wymaga to od nauczycieli budowania kontekstu edukacyjnego przyjaznego uczniom z odmiennymi profilami rozwojowymi, kontekstu umożliwiającego wydobyć tkwiącego w nich potencjału.

**Słowa kluczowe:** trudności w uczeniu się, dysleksja, paradygmat neuroróżnorodności, edukacja przyjazna uczniom z dysleksją.

**Abstract:** The aim of this article is to discuss dyslexia – one type of specific learning difficulties – through the lens of the neurodiversity paradigm. The paradigm distinguishes the differences between people, which are related to the unique patterns of brain function presented by them. With this view, dyslexia is analyzed as a positively perceived difference rather than a disorder. It is also the author's intention to consider the educational implications of this approach to dyslexia. The author considers the need for a holistic view of the dyslexic students' development and their functioning at school to be essential in this regard. According to the author, this involves the need for teachers to recognize not only the difficulties and problems of these students,

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but also their strengths, abilities and talents. This requires teachers to develop an educational context that is friendly to students with different developmental profiles, a context that enables encouraging the potential demonstrated by these students.

**Key words:** learning difficulties, dyslexia, neurodiversity paradigm, dyslexic student-friendly education.

## Introduction

The broad “learning difficulties” category, which includes the specific reading difficulties called dyslexia, is usually analysed through the lens of two different discourses: the medical and socio-cultural one. The medical discourse is rooted in the positivist model of science, and is reflected, in particular, in medicine and mainstream psychology. It identifies learning difficulties as a phenomenon located in the student, in deficits of the functions which constitute the basis for acquiring the school skills. On the other hand, the socio-cultural discourse is connected with the idea of the social construction of reality, and manifests itself in interdisciplinary discourse studies (Barnes et al. 2002; Goodley 2011). Opposing the tendency to medicalise disabilities, it does not locate learning difficulties in students themselves, but rather in the unfriendly learning environment.

The establishment of the neurodiversity paradigm, which is gaining importance in the specialist literature, is also considered to be a sign of opposition towards the medical discourse. The paradigm values differences among people which are connected with their unique patterns of brain function (Armstrong 2010; Chapman 2020; Dwyer 2022; Eide, Eide 2019; Rentenbach et al. 2017; Rosqvist et al. 2020; Runswick-Cole 2014; van Schaik 2021). Consequently, this paradigm includes the idea according to which dyslexia, autism or ADHD constitute natural varieties of human functioning, and each of them has its advantages (Armstrong 2010; Rentenbach et al. 2017). It is those advantages and strengths of persons called “atypical” that the neurodiversity paradigm focuses on. The shift towards that paradigm is also connected with the movement to promote the rights of and prevent discrimination against people who are neurologically different from the ‘neurotypical’ (e.g. non-dyslexic or non-autistic) population (Runswick-Cole 2014).

The aim of my article is to discuss dyslexia – which is considered to be one type of specific learning difficulties – through the lens of the neurodiversity paradigm. I also intend to demonstrate educational implications of that paradigm. The main one, in my opinion, is the need to adopt a holistic approach to the development and school functioning of dyslexic students. Consequently, the approach involves the need to recognise not only the difficulties and problems of these students, but also their abilities, strengths and talents. Teachers would have to create an educational context that is friendly to students with different developmental profiles.

In the article, I present, in the first place, the ways in which dyslexia is described in the medical discourse of learning difficulties and in the neurodiversity paradigm. In the medical discourse, it is treated as a disorder, a clear deviation from the accepted norm, as an unambiguously negative phenomenon. However, in view of the neurodiversity concept, dyslexia is examined in terms of categories of a positively perceived difference, as a phenomenon connected, on one hand, with difficulties and problems experienced during the learning process and, on the other hand, with the hidden developmental potential. Further in the article, I discuss the issue of creating a dyslexic student-friendly educational context by teachers. Creating such a context will allow teachers to bring out the potential hidden in brains of dyslexic students (Eide, Eide 2019), thus increasing their chances for successful functioning in the school and out-of-school environment.

### **Dyslexia in the medical discourse of learning difficulties**

The process of the emergence and formation of the field of knowledge concerning learning difficulties, including developmental dyslexia, which had its origins in 19th century Europe (Fletcher et al. 2007), took place in strict connection with clinical research conducted by doctors and psychologists. In the first decade of the 19th century, Franz Gall, an Austrian neurologist, who was looking for the causes of the language disorders identified in his patients, put forward a thesis according to which they had been caused by brain damage. It resulted in the patients' impaired ability to express their thoughts through written language, but did not impair their ability to use spoken language. The scope of the disorders identified in those cases was limited and narrow. The author came to the conclusion that while diagnosing such disorders, one should rule out the potential influence of other factors, such as, for example, mental disability or severe hearing impairment.

The research into the basis for deficits in linguistic and cognitive functions, as well as disorders of the reading process were continued and developed in Europe by Paul Broca, Carl Wernicki, John Hinshelwood, W. Pringle Morgan, and in the United States by Samuel Orton, Alfred Strauss and their associates. The subsequent research no longer focused on the etiology of learning difficulties, but rather on characteristics of people with deficits in this regard, and on the possibility of taking corrective actions corresponding to the types of difficulties identified (Fletcher et al. 2007). Since the second half of the 20th century research into learning difficulties has been conducted also in Poland. It was pioneered by Halina Spionek (1965), who tried to prove that what usually is the root cause of difficulties and failures at school is partial developmental disorders and fragmentary developmental delays, which she referred to as microdefects (cf. also Krasowicz-Kupis 2019).

Apparently, the biomedical and psychological orientation has been present in the research efforts and theoretical considerations aimed at establishing the definition and diagnostic criteria of learning difficulties since the very

beginning. It, consequently, led to the conceptualization of that notion in the language of the medical discourse. It is quite easy to become aware of its presence, if one considers the process as a result of which children who have difficulty in mastering the school skills are qualified to the group labelled “children with learning difficulties”. The process begins with the identification by the teacher of a clear discrepancy between student’s expected and actual school achievements. This observation usually leads to a question about internal, i.e. student-related, determinants of that state of affairs. The student starts to be an object of observation on the school’s premises, whose results are documented in detail, analysed and on the basis of which the preliminary hypothesis concerning the unsatisfactory level of school achievements is put forward. In order to confirm or rule out student’s learning difficulties, specialist diagnostic tests are conducted. Finally, an opinion on the type of learning difficulties (e.g. specific learning difficulties in the form of dyslexia are identified) and further educational and therapeutic treatment which should address his or her special educational needs is issued.

The above-mentioned process of assigning the status of a person with learning difficulties to the student is based on privileged treatment of statistically defined “normality”, and results in placing the problem in the student. In the discourse in question, the category of difference is discussed in one way, as a deviation from the norm, pathological state, deficit which needs to be corrected and compensated for. In view of that discourse, dyslexic persons are perceived mainly through the lens of their limitations, and dyslexia is believed to be an unambiguously negative phenomenon (Armstrong 2010; Dwyer 2022; Eider, Eider 2019; Fletcher et al. 2007; Linton 1998).

### **Discussion in the neurodiversity paradigm perspective**

The approach to understanding and explaining dyslexia is different in the neurodiversity paradigm. It is broadly perceived as a phenomenon which is not only a source of limitations, but also of human being’s talents and abilities. “Dyslexia, or the **dyslexic cognitive style**, is more than an obstacle to learning how to read and write. It is also a completely different way in which the brain is organised and information is processed, which involves both valuable skills and well-known problems (Eide, Eide 2019, p. 18). Consequently, the authors quoted have put forward a thesis about a dual nature of dyslexia, about its two faces. Therefore, they associate dyslexia, on one hand, with experiencing difficulties in acquiring the school skills and, on the other hand, with the simultaneous existence of valuable skills, among which they indicate spatial imagination and mechanical abilities, the ability to see connections or the ability to remember personal experience (Eide, Eide 2019). In view of the neurodiversity concept, the authors’ thesis, according to which an attempt at full understanding of dyslexia needs to take into account

not only difficulties, but also benefits connected with the dyslexic processing of information, should be considered to be accurate.

What should be added at this place is the fact that the dyslexic person's mind works differently than the mind of a non-dyslexic person not because it has been damaged, but because it is constructed in a way thanks to which it demonstrates different skills – abilities which develop “at the expense of certain deficits related to processing of details” (Eide, Eide 2019, p. 61). The authors have identified four talents of dyslexic persons, which are presented in the form of MIND acronym. Made up of the first letters of the names, it refers to the abilities of dyslexic persons regarding **m**aterial reasoning, **i**nterconnected reasoning, **n**arrative or story-based reasoning and **d**ynamic reasoning. According to the authors, these abilities do not constitute “closed and strict categories, but serve only as assistance in thinking about dyslexia skills and understanding them” (Eide, Eide 2019, p. 14). At this point, it has to be pointed out that they are not “reserved” for dyslexic persons. They are connected with brain's certain cognitive and structural features which are typical of those persons.

The MIND abilities require students to use skills which play an important role in reading and writing, such as understanding, assigning meaning, coming to conclusions and noticing connections, e.g. between ideas. If dyslexic students are able to use those abilities in the learning process, one can assume that although the dyslexic brain struggles to master basic skills connected with recognising words, with pronunciation and writing, “it may, however, deal with more advanced forms of reading and writing well” (Rentenbach et al. 2017, p. 62).

### **Dyslexic student-friendly education**

The neurodiversity paradigm concept may be assumed to be a condition for building the dyslexic student-friendly educational context, being an alternative to education perceived from the perspective of the medical discourse related to learning difficulties. Referring to the issue discussed here brings to mind the position of Thomas Armstrong (2010), who is in favour for making an effort to shape the learning environment in such a way that it addresses students' needs resulting from their neurological difference. Building such an environment is called by the author “niche construction”, as it allows teachers to focus on the positive aspects of the neural differences noticed in students. Taking actions of such a nature will become more helpful in supporting the students' well-being than focusing on their deficits (Armstrong 2010; cf. also Dwyer 2022). It is my conviction that Armstrong's views touch upon the heart of the matter, when it comes to creating the educational context which I call dyslexic student-friendly.

Creating such a context involves the need for teachers to take into account two related issues. The first one concerns adoption by them of a holistic approach to work with dyslexic students, being an approach focused not only on minimising

difficulties and problems, but also, or maybe first and foremost, on adjusting the school's learning environment to those students' individual developmental profiles. This approach is connected with paying particular attention to the potential of dyslexic students, and the need to understand and boost their strengths, abilities and talents (Armstrong 2010; Eide, Eide 2019; Martinelli, Schembri 2014; Retenbach et al. 2017; van Schaik 2021). The second issue is connected with teachers' attempts at creating psychological atmosphere in the classroom which helps fulfil the students' developmental potential and enable the learning process, which is significant to students themselves (Rogers 1992). That atmosphere protects the students' psyche against negative consequences of the difficulties related to functioning at school, and helps them build the positive image of themselves.

The first of the above-mentioned issues involves providing students with right external learning conditions, i.e. ones which address their needs. Among them, Brock and Fernet Eide (2019) indicate creating opportunities for taking advantage of the MIND talents by dyslexic students, in line with their individual abilities in this respect. Although not every dyslexic student has all abilities, most of them have at least one of them, and thanks to it can succeed in acquiring the school skills. Barb Rentenbach and her associates (2017) have written about the need to take into account, in everyday educational work, dyslexic students' neurological differences, and encourage them to undertake such forms of learning which may stimulate their developmental potential. According to the authors, what creates favourable conditions for it is providing students with interesting and meaningful texts, trying, together with them, to achieve the main goals of the reading and writing learning process, such as understanding and assigning meaning, as well as communication. The authors consider cultivating dyslexic students' strengths to be a very important matter. It may manifest itself in, among other things, assigning to small groups of students such forms of activity which emphasise their skills in the area of reasoning and undertaking creative activities, rather than text processing skills, as a pre-condition for participation in team work. The group work may be combined with assigning dyslexic students the role of persons in charge of tasks which are connected with interpretation and solving problems, rather than reading out loud or making notes (Rentenbach et al. 2017).

The second issue connected with building dyslexic student friendly education is creating by the teacher, called the facilitator by Carl Rogers (1992), a psychological atmosphere which offers favourable conditions for students' development and supports their learning process. What enables creating such an atmosphere is such features of the teacher's attitude, as sincerity of conduct. acceptance of students and understanding them empathetically. The teacher's sincerity means that he or she is aware of the feelings experienced, and is able to communicate them at the right moment. Talking about accepting the student, Rogers means acceptance "of the second individuality as a separate person, who has value in itself". Acceptance understood in such a way is a sign of facilitator's faith and trust in "the possibilities of the human body" (Rogers 1992, pp. 121, 122). On the other

hand, empathetic understanding of students involves the teacher-facilitator's ability to "watch the world through student's eyes". This is due to the fact that students appreciate they are understood rather than assessed, judged, that they are "simply understood from the perspective of their own points of view and not the teacher's point of view" (Rogers 1991, p. 125).

The psychological atmosphere described by Rogers creates favourable conditions for dyslexic students to develop the sense that they are accepted at school, that they can be successful in the classroom, school, and out-of-school environment. They also gradually become aware of their difficulties, and are able to talk about their anxieties connected with their school situation. It also helps boost in students the willingness to work on overcoming difficulties and to take advantage of their developmental potential. Consequently, the dyslexic student-friendly school provides them with what is particularly important to them, i.e. the positive emotional atmosphere, peace and sense of safety – everything that helps them deal with difficulties and increases the effectiveness of the learning process. Students appreciate the fact that they receive support not only when it comes to overcoming difficulties with acquiring the school skills, but also emotion-, motivation- and personality-related problems.

Creating the dyslexic student-friendly educational context may prevent teachers' from focusing excessively on students' weaknesses, their difficulties and failures, and, as a result, developing low self-esteem in students. This is due to the fact that excessive emphasis on students' problems is a source of negative experience which involves assigning to them the status of a person with learning difficulties. It has been proved by, for example, the research conducted by Nancy Bargi (1996) into coping strategies used by persons with different types of learning difficulties in the educational space. In the interviews carried out by the author, the persons described their experience connected with learning at school, as well as contacts with teachers and peers. A lot of attention in those memories was devoted to descriptions of situations and events in which they painfully experienced peers' and teachers' aversion, sense of rejection, lower value and stigmatisation.

The participants of the research conducted by D. Kim Reid and Linda Button (1995) expressed similar opinions. What was clearly visible in their narrations was references to situations in which they had felt isolated, undervalued, in which they saw themselves as objects of oppression by others. In the research conducted by Eleanor Higgins and her associates, (2002) persons with learning difficulties referred to descriptions of situations in which they were laughed at, harassed, as well as made an object of ridicule and insults. It turned out that the consequences of experiencing stigmatisation and aversion on the part of others was much more unpleasant, severe and painful to them than those which resulted directly from learning difficulties.

Persons diagnosed with learning difficulties express surprise at the ease with which experts assess, classify and put people into groups marked with specific labels. In their opinion, experts are not fully aware of numerous and far-reaching

consequences of being someone who has been assigned a certain label. One of them is influencing the process of building the personal identity and enforcing the need to constantly renegotiate one's self. In this case, constructing one's identity involves the meanings which a given person assigns to the "learning difficulties" category. If that person connects that term with "stupidity" or "imperfectness", then it is those meaning that will be reflected in his or her own image, which means that he or she may consider himself or herself to be stupid or imperfect. If, however, that person connects those categories with the human being's uniqueness or with the source of knowledge about the human condition, then it is possible to build a more positive image of himself or herself (Ferri et al. 2005, p 65). What may play a significant role in this regard is the teacher-facilitator, who is able to trigger and support the learning process initiated by the student himself or herself, as well as his or her tendency to take advantage of his or her developmental resources. In such conditions, "the student is trusted to face the development" (Rogers 1992, p. 143).

### Conclusion

Examining the psychosocial situation of dyslexic students at school, Dené Granger (2010) points out to the way in which the medical discourse of learning disabilities present there triggers segregation processes. This category is used to label certain students as persons who diverge from the norm, to place them in a group marked with a specific label, thus making them more and more socially visible. It means that they become an object of particular attention, assessment, monitoring and efforts aimed at restoring them to the norm assumed. No wonder then that the author is against using the conceptual category in question with reference to persons who struggle with acquiring the school skills, considering it to be a means which serves "normalisation and depriving them of bodies" (Granger 2010, p. 4).

Going beyond the medical discourse of learning difficulties and adopting the assumptions of the neurodiversity paradigm which are an alternative to it will help create a dyslexic student-friendly educational context in which differences between students are appreciated, which are related to the unique patterns of brain function presented by them. It allows respecting a variety of student biographies, complexities of their developmental paths, varied learning styles, in which the dyslexic cognitive style (Eide, Eide 2019) and various ways of understanding and experiencing the world by children are appreciated.

What constitutes one of the two main elements which create a dyslexic student-friendly educational context is using by teachers a holistic approach in work with those students, i.e. an approach in which particular attention is paid to emphasising their developmental potential. The second element consists in creating by teachers the atmosphere which triggers in students "full meanings, based on themselves, personal learning" (Rogers 1992, p. 140). It may contribute to students' acceptance of the weaknesses and strengths of their development and functioning at school, to discovering in themselves abilities to overcome learning difficulties independently and to building the positive image of themselves. The atmosphere in question may



be created by the teacher-facilitator, i.e. the person who is competent in the field of triggering and supporting in students the natural willingness and abilities to learn (Rogers 1992). Consequently, the multi-faceted support provided by teachers to dyslexic students may be considered to be a factor contributing to development of the socio-emotional competence and personality of those students, and a factor which triggers their “creative activity in solving both problems which result from social interactions and those connected with learning” (Dłużniewska et al. 2017, p 74).

Naturally, referring in the educational context to the neurodiversity paradigm concept does not mean that the presence of difficulties and problems faced by students in the school reality is denied or underestimated (Armstrong 2010; Dwyer 2022; Eide, Eide 2019; Rentenbach et al. 2017). It involves adoption of a broader look at students, going beyond the challenges they have to face, and perception of dyslexia as something more than just difficulty in learning how to read, but as a systemic language processing style which has its advantages (Eide, Eide 2019). Using those virtues may help students successfully function in various school and out-of-school environments, now and in the future.

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