



Neurodiversity paradigm and inclusive education are analyzed based on case studies

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Abstract. Due to the negative influence of traditional disability view, educators often have a deviation in understanding neurodiversity and implementing inclusive education. This bias can lead to disabled students being oppressed, marginalized or excluded in the classroom, which in turn is detrimental to the mental health and learning of students with or without disabilities. Through the analysis of self-reported case of autistic person, this paper expounds the differences between neurodiversity paradigm and medical paradigm, and between special education and inclusive education. At the same time, this paper also sorts out and analyzes the transformation of neurodiversity and inclusive education, aiming at make people shift from medical paradigm and special education to neurodiversity paradigm and inclusive education, and ultimately promote social equity and justice.

Keywords: Inclusive education; Neurodiversity; Medical paradigm; Discrepancy

1 Introduction

Due to the extensive implementation of special education, disabled students do not get the same educational opportunities as their peers[1]. Special education treats a student's disability as a "problem" or "defect." If disabled students are sent to "regular" schools, they are likely to be isolated and thus marginalized in school and society[2]. In the field of special education, the pathological understanding of disability has limited the development of pedagogical methods and policy making related to this field[3]. Therefore, relevant scholars have proposed an alternative to special education - inclusive education. Although there is no consensus on the current definition of inclusive education, the most mainstream view is in support of students with and without disabilities participating and learning together in the classroom.

At present, some countries or regions have formulated laws and policies in the field of inclusive education, especially to protect the rights of students with disabilities to receive education in mainstream classrooms. For example, the New Zealand Education Act recognizes that people with disabilities should have equal access to mainstream

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schools compared to their non-disabled peers[4]. In the United States, for example, the No Child Left Behind (NCLB) law of 2001 and the Individuals with Disabilities Education Act of 2004 provides that: Compared with non-disabled students, students with disabilities enjoy equal rights to education in mainstream schools and have equal opportunities to participate in same courses[5]. To sum up, although different countries have differences in policy details, they all have inclusive values.

However, some research suggests that in countries or regions with inclusive education policies, some students may still be excluded from the classroom[1]. The citation authors argue that traditional views within special education and medical paradigm may be deeply rooted and culturally dominated. Due to the negative impact on individual development, researchers and educators associated with the field have rethought the medical paradigm and proposed an alternative - the neurodiversity paradigm[2]. The neurodiversity paradigm encompasses a set of views and beliefs about the diversity of the human mind and supports different neurological types that are natural and normal[6]. In conclusion, this paper aims at shed light on two opposing paradigms, shifting the perspective from the medical paradigm and special education to the neurodiversity paradigm and inclusive education in order to construct an inclusive classroom environment for all students.

2 Case

The case used for analysis in this article is a self-narrative entitled "Autistic insights on identity and self-acceptance" articulated by Lauren Melissa Ellzey[7]. Lauren details her journey through life with autism with the goal of illustrating the change from a pathological paradigm to a neurodiversity paradigm, highlighting the need for such a shift, and challenging views of "autism" as a "disease," "problem," and "impairment." Also, in this work, Lauren states the relationship between autistic people and their self-acceptance.

3 The differences between neurodiversity paradigm and medical paradigm are analyzed based on case studies

Through the analysis of Lauren's self-narrative, the belief in the pathological paradigm is challenged, and the value of "disability" as a natural form of human diversity is clearly recognized. Lauren points out that the concept of autism is defined by the American Psychological Association (APA), a definition that fits the pathology paradigm but differs from a positive attitude toward the diversity of the human mind, which views autistic individuals as "inferior" to their "neurotypical" peers[2].

However, Lauren points out a definition proposed by Autistic Self Advocacy Network that autism as "a developmental disorder that affects how people see the world, that we are autistic and that autism is a normal part of life". This is consistent with the neurodiversity paradigm, which views people with disabilities through an interest-based lens and views neurodevelopmental diversity as natural and unique. Diversity

of neural function is not only instinctive and valuable, but should also be understood and accepted[8], rather than being excluded and discriminated against. Among other things, Lauren's self-narrative also represents the second principle of the neurodiversity paradigm proposed by Walker[9], which holds that "the notion that the human brain or mind is divided into 'normal' and 'abnormal' is constructed by socially dominant cultures". For example, Lauren points out that autistic traits are often described in a pathological way rather than a strengths-based way, which can be viewed as a social construction. That said, people with autism are described as "having trouble communicating and socializing", rather than enjoying one-on-one communication and being around nature or animals. This notion is socially dominant and then can be deconstructed and rejected.

From the above, we can further analyze the following point of view: everyone has their own strengths, including "neurodivergent" people. For example, according to Lauren, autistic people tend to be potentially creative, which makes them think and act in different and innovative ways, suggesting that autistic people may have an advantage in some areas[6]. For example, Lauren has the potential to do research, writing, and design, although additional support in other areas is needed. Moreover, her focus on developing those talents and building self-confidence and increasing self-acceptance is consistent with the neurodiversity paradigm, as opposed to the medical paradigm. In addition, both autistic and non-autistic people have potential or talent in some areas and need help in others, suggesting that autistic people are equal to non-autistic people. This view also suggests that there is no one approach that fits all people's neurotypes, and that neurodiverse people should be respected for their unique ways of thinking.

On the contrary, the medical paradigm should be opposed. As noted above, people with different neurological types often have their own advantages, which challenges the view within the medical paradigm that neurological differences are "problems," "defects," or "impairments." For example, Lauren tends to use interest-based language to describe people with autism, such as "focus on areas of interest" and "enjoy spending time with nature or animals." These expressions clearly challenge the medical paradigm of focusing only on the vulnerability of people with autism. In summary, Lauren's experience with autism distanced her from both "normal" and "abnormal" neurological types, thus opposing medical paradigms.

4 The transformation of neurodiversity and inclusive education

The first shift concerns the definition of neurodiversity, which was initially thought to signal "neurodivergence" and then transformed into a description of the bio-metric of a group of people. At the same time, the teaching practice of inclusive education is also influenced by changes in the understanding of neurodiversity, which means that there is no one-size-fits-all approach for all students due to different levels of neurodevelopment. Therefore, educators should explore and develop diverse teaching strategies tailored to different neurocognitive functions to ensure the healthy physical and mental development of all students. This view is also supported by many studies, such as those showing that implementing inclusive education and including all students in the

classroom environment improves academic achievement and social-emotional outcomes[10].

The second shift involves the neurodiversity paradigm, with some researchers claiming to define autism or other forms of "neurodivergence" as a cultural identity rather than a disability[11]. However, autism, or another form of "neurodivergence", is defined by a social model of disability in which disability is seen as a mismatch between individuals with physical or neurological differences and the environment. Therefore, schools and teachers should adjust the classroom contexts to include disabled students, rather than changing students with disabilities to fit the classroom environment, in order to maximize the positive outcomes of inclusive education.

The third change is in the understanding of special education, from supporting special education to supporting inclusive education. Support for special education is primarily due to the segregated environment of disabled students, in which students with similar disabilities might feel a sense of acceptance and belonging. Another explanation for this is that while inclusive education advocates the inclusion of all students with and without disabilities in an inclusive classroom environment, disabled students and students without disabilities might not understand and accept each other, which may lead to a possible exclusion and discrimination in the classroom. However, more negative effects were found in segregated learning environments than in inclusive classrooms[10]. Conversely, students who learn in inclusive environments are likely to have better academic performance and social-emotional outcomes compared to students in isolated environments. Therefore, due to the positive impact of inclusive education on all students, we can conclude that inclusive education rather than special education should be a better option for all students.

5 Thinking and prospect

As described above, there was a long history for education that is unequally accessible to all students. The apparent example of this inequality was the popularity of special education, which places disabled students into a separated environment. This kind of education deeply rooted in pathology paradigm, viewing "disability" as "problem" or "impairment" and needs to be changed or cured, which may lead to declined mental and physical development for disabled students. However, inclusive education, which asserts placing disabled students with non-disabled students into mainstream classrooms, falls within the neurodiversity paradigm, regarding diverse neurotypes as normal and valuable[12]. The implementation of inclusive education tends to positively influence students' academic performance and social-emotional skills, thereby emphasizing the necessity of implementing inclusive education. Accordingly, it is crucial to notice that the change from special education to inclusive education and the shift from the pathology paradigm to the neurodiversity paradigm is important.

Lauren's resource evidently communicates and supports the key principles of the neurodiversity paradigm while argues against the pathology paradigm. Lauren's positive attitudes and experiences of her autism journey imply that neurodiversity is a natural and precious form of human diversity. Also, Lauren's expression of the char-

acteristics of autistic people is based on benefits-centered lens, such as “tackling with one task a time” or “having focused area of interests.” Moreover, through using different expressions to depict autistic people’s features, the perspective that human minds can be divided into “normal” and “other than normal” is socially constructed. In addition, Lauren’s acceptance of her autism identity embodies that “neurodivergence” should be respected and tolerated rather than be changed or removed.

Apart from the approval of the neurodiversity paradigm and the challenges of the medical paradigm, the majority of people have changed their ideas about the neurodiversity paradigm and inclusive education. The first change is from the narrow understanding of neurodiversity (just referring to neurodivergent people) to the broad perception (including all people, regardless their neurological function), which suggests that teachers should adopt to various teaching methods to educate different students instead of using one-size-fits-all approaches. Furthermore, clarifying how the neurodiversity paradigm defines a form of neurodivergence is the second shift. This paradigm views autism or other forms of neurodivergence as “disability” and is caused by the poor fit between the disabled people and the environment. Moreover, the support for special education has shifted to the approval of inclusive education, which has positive impact on all students, such as increased academic achievement, class engagement, and interpersonal skills[13].

6 Conclusion

The implementation of inclusive education tends to have a positive impact on students' academic performance and social-emotional skills, thus emphasizing the need to implement inclusive education. Therefore, we must recognize that the shift from special education to inclusive education and from the medical paradigm to the neurodiversity paradigm is critical. At the same time, our view of the neurodiversity paradigm and inclusive education should also be interpreted from a narrow to a broad understanding, requiring educators to adopt different teaching methods to educate different students. The case and analysis results of this paper will help people understand neurodiversity and inclusive education and provide references for its popularization in the future.

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