

EDUCACIÓN TRANSDIGITAL

ALEXANDRO ESCUDERO-NAHÓN
EMMA PATRICIA MERCADO-LÓPEZ
(COORDS.)

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23.

**THE DEVELOPMENT OF INCLUSIVE
OPEN EDUCATIONAL RESOURCES:
A PRELIMINARY STUDY OF EFL
TEACHERS' PERSPECTIVES**

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23.

The development of Inclusive Open Educational Resources: A preliminary study of EFL teachers' perspectives

INTRODUCTION

Human rights, such as the right to education, ensure everyone can access quality and inclusive education. Unfortunately, even though several policies and programs have been created to support inclusive education, they are not fully involved in public higher education, leaving certain areas of interest to study and analyze.

The term *neurodivergence* is an evolving and inclusive concept originally introduced to offer a different perspective on the variety of conditions that exist in the world (Amador et al., 2021). It explains and describes the different ways in which brains function, helping to combat stigma toward individuals diagnosed with autism, Attention-Deficit/Hyperactivity Disorder (ADHD), and specific learning disorders. For the purpose of this study, the most common neurodivergent conditions considered are ADHD, autism spectrum disorder, and specific learning disorders such as dyslexia, dysgraphia, and dyscalculia.

Moreover, inclusive education emerges as a response against exclusion within the educational territory. Inclusive education focuses on the integration of students into the school's regular environment taking into account their differences and assuring them equal opportunities (Buenaño Barreno, 2024). Internal and external factors are an important part of an inclusive education; this means that elements such as government policies and administrative structures are as important as teachers' and students' actions inside the institution.

Working with neurodivergent students may be a challenge as regular expectations come towards university students such as time management and less support, these expectations do not fit in the neurodivergent student who struggles with establishing routines or having social interaction with different services (Wischnewsky et al., 2023). With this in mind, teachers, Faculty members, and students must be encouraged to raise awareness within the institution.

Teachers' attitudes play an important part in inclusive education; their personal beliefs and judgments can be expressed in Bandura's self-efficacy theory. Self-efficacy centers on

self-evaluating an individual's ability to perform something successfully (Waddington, 2023). EFL teachers' self-efficacy regarding teaching neurodivergent students is an important matter of analysis, as research indicates that teachers' efficacy beliefs substantially influence academic motivation, learning, and achievement (Schunk, 1995; Pajares, 1996; Schunk & Pajares, 2002, as cited in Waddington, 2023).

As part of the project, the elaboration of open educational resources comes from the data analyzed in this preliminary study. UNESCO first introduced Open Educational Resources and its principal characteristic is the availability of educational resources without the requirement to pay royalties or licenses fees which are designed specifically for use in teaching and learning (Butcher, 2015). Digitized material is helpful because it allows authors to be acknowledged for their work while permitting to use, reuse, and adapt their OER (UNESCO, 2015).

Previous studies have investigated neurodiversity in higher education. Borsotti et al. (2024) analyzed the barriers experienced by neurodivergent students at university through a qualitative study. The results show an "invisible" problem, such as cognitive fatigue and a need for multi-modal forms due to the intensity of the work; results also indicate a need for teachers to have a "place to turn in" to receive support when working with students with different learning needs.

This preliminary research aims to analyze EFL teachers' experiences and perceptions when teaching neurodivergent students in higher education. By identifying these elements, the findings will be used to develop OER that are inclusive and adaptable to the specific requirements of both teachers and students in English language teaching.

METHOD

RESEARCH APPROACH

To analyze teachers' experiences and opinions, this research follows a qualitative approach that can be defined as a one-of-a-kind study, meaning that there could not be two similar studies due to each circumstance's uniqueness (Hernández et al., 2014). Qualitative research is performed when there is a problem or issue that needs to be explored to identify variables instead of using predetermined information from literature or previous studies; it empowers individuals to share their experiences and give a sense of their contexts (Creswell, 2009).

RESEARCH DESIGN

In order to get immersed in the context this research adopted the ethnographic method allowing the researcher to describe cultural phenomena making it helpful for finding and analyzing unexpected issues (Sharma & Sarkar, 2019). This design aims to analyze the cultural group in a natural setting by collecting interview data (Creswell, 2009). The data obtained from interviews is then used to uncover and describe beliefs, values and attitudes that structure behavior of a group (Merriam, 1998).

PARTICIPANTS

In collaboration with the university's department of inclusivity program, valuable information was provided to reach teachers who have instructed neurodivergent students. Finally, four teachers from a public Mexican university were invited to participate in this research, and the final sample consisted of two male teachers (50%) and two female teachers (50%). The names of the participants have been changed to protect anonymity. The participant identified by the pseudonym "Valentina" is a 40-year-old female teacher. Valentina has taught English for over 11 years and teaches basic and intermediate levels to university students. The participant identified by the pseudonym "Ricardo" is a 37-year-old male teacher. Ricardo has been teaching English to university students for 11 years. He now teaches intermediate and advanced levels at the university. The participant identified as "Tamara" is a 51-year-old female teacher. Tamara has been an English teacher for over 21 years and teaches pre-intermediate and basic levels to university students. Lastly, the participant identified by the pseudonym "Juan" is a 72-year-old male teacher. Juan has taught English for 47 years and now teaches pre-intermediate and intermediate levels at the university.

SAMPLING

Given the unique characteristics of this study, a convenience sampling method was employed to select a small group of participants. In collaboration with the university's Office of Inclusivity Programs, valuable information was obtained to identify teachers who work with neurodivergent students. Ultimately, four teachers from a public Mexican university were invited to participate in this research. The final sample consisted of two male teachers (50%) and two female teachers (50%), with participants' ages ranging from 37 to 72 years. All interviews were conducted with the participants' permission and were subsequently recorded and transcribed for analysis

DATA ANALYSIS

The information collected and transcribed from the interviews was analyzed using thematic analysis to identify recurring patterns of meaning within the participants' narratives. This method, as outlined by Braun & Clarke (2012), provides a systematic yet flexible approach to qualitative data analysis by enabling the researcher to code data, generate themes, and interpret how these themes reflect shared experiences or perspectives.

RESULTS

While not central to the study's main objectives, two secondary findings were observed in the thematic analysis: the interviews revealed the relationship between students' self-diagnoses and the effect it has on teachers' attitudes inside the classroom, and students' trust in teachers to express their condition, how they would like to be treated, and their special needs. The primary focus of this study, however, centered on three key themes:

NEURODIVERGENT BEHAVIOR

Participants have observed particular behavior from neurodivergent students and described it as a part of their experience. Tamara shares:

Students with Asperger's do not always want to work. I assign them specific tasks individually and try to make them interact.

Valentina mentions some characteristics and behaviors of neurodivergent students in the class during activities:

Feeling in an unknown field, for him, it was unpleasant, activities such as looking for a partner and talking about this information, asking a set of questions, or interviewing three or four classmates, all those activities caused him much insecurity, and he did not want to do it that way, he just did it differently and individually.

Another comment on neurodivergent behavior focused on attention and stress while giving instructions. Ricardo mentions:

Neurodivergent students tend to forget what was already explained.

Tamara also shares:

They suffer from anxiety, skip class, or feel overwhelmed when facing circumstances like a test, they end up somatizing their stress into physical symptoms.

TECHNOLOGICAL TOOLS

With their experience, EFL teachers talked about their digital tools and suggested others.

Ricardo shares:

I would love to have my Kahoots or even open educational resources. They are an invaluable source not used here in school, and if we had our own open educational resources collection, we would be linking our teaching topics.

Valentina combines digital resources and physical tools:

I use the book, we use the TV because I am always projecting exercises, we play games online, with the readings, and they use their cell phones to do other activities.

INCLUSIVE MATERIALS

As a part of the interview, teachers expressed their ideas about inclusive materials adapted to students with different needs. Valentina suggested:

Do not include activities that may put them in a win or lose situation.

Ricardo shares:

In the open educational resources design, we could have in mind the audio quality, color contrast, brief text, and images.

Valentina suggests:

having color contrasts because even though it is not significant for anybody else, it impacts neurodivergent people. Also, if the material has too much text, it will be less attractive. It needs images, audio, and a brief quantity of text.

TEACHERS' SELF-EFFICACY

Even though teachers give detailed information about their experiences with neurodivergent students, they also express their concern when discussing the lack of preparedness, as they receive a degree without reflecting the diversity they may experience. Valentina expresses:

When I have found myself in those situations, I feel not trained, not capable enough to deal with it, because when you finish the bachelor's degree, you only imagine yourself teaching English, you do not get to think about all the contexts and different personalities, people, and conditions that you may find.

Tamara reported a lack of knowledge in this topic, claiming:

Well, I know, I mean, I have read a little bit about the different types of neurodivergent situations. I also work at a private school, where many of these cases exist with kids in that kind of situation, but yes, obviously, I need to inform even more.

Participants mentioned the importance of learning materials and training as a necessary part of their career. Tamara mentions:

If there is, for example, a designated person, not from here, but from outside the institution, to help us with an informative meeting for teachers, I think that would help a lot." Juan also expresses: "Primarily, we need information; there must be information such as bibliographical references that are easy to understand for teachers.

DISCUSSION

This preliminary study provides valuable insights into the relationship between teachers' preparation and their perspectives and beliefs when working with neurodivergent students at a public Mexican university. The results suggest an understanding of different characteristics that may be present within the context.

Findings from this research reveal an issue related to external factors, such as underdiagnosis and undertreatment, which lead students to self-diagnose in order to explain certain behaviors. Participants from this study perceive self-diagnosis as a negative consequence that may be confusing due to a lack of formal documentation to support these conditions. The absence of diagnosis and treatment may be associated with students' ways to overcome their symptoms, as in Mexico, some people have barriers to accessing mental health care.

Participants who have observed neurodivergent students' behavior in class can share instances where students feel confident enough to communicate their diagnosis. The participants' immediate response and active support towards these situations suggest a significant implication where teachers can comprehend and actively support students' diverse needs in the educational field.

Most of the cases described in the interviews were related to autism characteristics such as problems with socialization, anxiety or intolerance of uncertainty leading teachers to immediately modify their scheduled plan to make students feel comfortable inside the class, these modifications can be applied with the use of technology as a tool to achieve certain goals, teachers also suggest to include activities that don't involve "winning or losing" due to the stress or anxiety that may arise in students with autism.

While teachers observe, listen, and actively adapt their methods to fulfill students' needs, they expressed concern about the lack of training they have received within the institution. This concern is projected as a demand for information from experts about how to work with neurodivergent students. What can be seen as an internal problem is related to an external topic, where institutional leaders and coordination programs need to get actively involved in this field. This finding shows a nonverbal relationship between the institution and teachers. There is not enough information about how the institution can help and where the limits are. Without this information self-assessment comes into focus, as teachers become aware of the necessity of learning independently.

The lack of confidence due to the absence of training programs aligns with Bandura's (1977) theory, which states the impact of vicarious experience on someone's self-efficacy. In this context, the minimum amount of time and attention spent on vicarious experience (observing others) and lack of performance accomplishments (practice and positive experiences) has a negative effect on teachers' own perceptions and are important areas to develop a good self-efficacy, according to Bandura. As some teachers suggest, with the help of an informational meeting, they can learn, empathize, and develop new skills for their teaching practice, contributing to an inclusive environment.

Educational technology tools can be highly useful when working with neurodivergent students in several ways—from assistive technologies and noise-canceling headphones to the use of color for guidance and organization. Technology can also support individuals who struggle with social interaction (Caluori, 2023).

The relationship between open educational resources as a possible solution to some difficulties and technology has its own benefits, as some teachers have already shared their experience and knowledge on how to work with neurodivergent students with the help of technology. Teachers' suggestions contrast with the main idea that the participants are not fully prepared for neurodivergent students, as their first response was a need to receive information to cover inclusive education. When talking about technology, participants demonstrate a sense of notion that allows them to share and recommend.

CONCLUSION

Working with neurodivergent students at a Mexican public university presents multiple responsibilities and challenges for teachers in the classroom. This preliminary research explored the opinions and perspectives of EFL teachers who have encountered this situation. The present context within public institutions suggests that additional interventions are necessary to ensure inclusive spaces in public schools.

The lack of teachers' confidence stemming from insufficient training may be reflected in low self-efficacy, which can be observed in fewer opportunities for teachers to observe others and have positive experiences at work. Although some teachers independently research neurodiversity, it is still important to fulfill some needs requiring more than individual study by developing training and awareness programs for teachers of Mexican public universities and selecting pertinent literature for teachers to study independently. Further research may be useful in exploring teachers' self-learning strategies and time management techniques to improve their skills.

The findings Based on the findings, a solution for teachers and students is suggested by using digital open educational resources created with generative AI as a practical tool for EFL teachers who work with neurodivergent students. Open educational resources offer practical solutions for EFL teachers thanks to the openness to use and modify them according to the students' needs, which can be a time saver when wanting to create new material. This new proposal for future studies takes into consideration how students can learn more about English as a foreign language. Creating educational resources adapted to different educational needs for neurodivergent students in higher education can benefit teachers and students in order to improve inclusion in Mexican public institutions and give teachers access to a wide variety of material that can involve every student without leaving them behind. This proposal can also contribute to the graduation rates of neurodivergent students by considering their learning necessities in a higher

education environment. It is important to mention that these findings cannot be generalized to a broader population due to the small sample size applied in this qualitative research. Nevertheless, they can provide a foundational basis for future research related to this field.

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