

A Square Peg in a Round Hole - Autistic Students in Third Level Education in Ireland

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Abstract

Research suggests that approximately 20% of the population meets the definition of being neurodiverse, however our research has shown that up to 49% of the third level education study body is neurodiverse. Of this, current research suggests 1-2% of the population are autistic, our research shows that 16% of the third level student population identify as being autistic. Whilst these are positive statistics the success rates of autistic students in third level education are lower when compared to their neurotypical peers.

Success rates at graduation are not solely linked to a student's level of knowledge or understanding but also their ability to demonstrate this knowledge or understanding through assessments. For assessments accommodations are put in place for neurodiverse students to help them to demonstrate their knowledge within the assessments, but these accommodations are not always fit for purpose. For example, if someone is autistic, does giving them 15 minutes in an exam help them overcome their challenges? It could be like giving something in a wheelchair longer to climb a flight of stairs. First, we need to understand the hurdles and then suitable supports can be put into place.

Supports cannot be blunt such as extra time in exams but instead need to be integrated at the module level ranging from employing technology aides to techniques such as Universal Design Learning and Inclusive Assessments to assist in achieving positive outcomes.

1. Introduction

Approximately 20% of the general population can be defined as neurodiverse, with 10% being dyslexic, 4-5% with Attention Deficit Hyperactivity Disorder (ADHD) and 1-2% being autistic [1]. Typically, neurodiverse adults in third level education will register with the support services of a college to avail of accommodations such as early access to notes, extra time to complete exams etc to support them throughout their educational journey. However, many of these accommodations are done to “fit” a neurodiverse student into the education system designed for neurotypical students. This has been shown to be ineffective as the graduation rates of

neurodiverse students compared to neurotypical peers are lower [2].

Since the early 1990s there has been an increase in the diagnosis of Autism and other forms of neurodiversity, and it is expected that the number of neurodiverse students in third level education will also rise [3], [4]. A Centre for Disease Control (CDC) report published in 2014 revealed that 69% of autistic people do not have any additional intellectual disabilities. However, despite this a further report revealed that autistic people without additional intellectual disabilities have lesser prospects when compared to autistic people who do have additional learning needs [5]. Further evidence shows that autistic students in second level education often desire to progress to third level education [5] as research has shown that autistic people who have a third level education have better life outcomes [6].

Despite autistic students with third level education having better life outcomes, their graduate rates compared to their neurotypical peers is lower. A study carried out in Australia in 2015 identifies the number as 35% compared to 67% [7]. A study completed at the University of Connecticut in 2015 sees several (39%) when compared with their peers (59%) [8].

The success of autistic students enrolled in third level education can be determined by the support which they received from their Higher Education Institute (HEI) [9]. This represents a challenge for autistic students in third level education as they may be reluctant to disclose their diagnosis to others [10]. These disclosures are made to receive accommodations for exams and for during classroom learning activities [11]. Autistic students choosing not to disclose their diagnosis can potentially lead them to suffer as they don't receive the necessary accommodations which they need to succeed [12].

A study carried out in Ireland in 2019 revealed that large numbers of autistic people are either underemployed or unemployed [13]. In Australia a report identified that just 42% of autistic people are employed compared to 83% of those without a disability [14]. A report released by the Office of National Statistics (ONS) in 2021 revealed that just 22% of autistic adults in the United Kingdom are in employment [15]. In the US approximately 85% of autistic adults are unemployed [16].

Transitioning from higher education to the workforce can be a particularly challenging period for autistic students [17]. These students often struggle with changes in routine, social interaction, and expectations associated with job searching and maintaining employment. Research shows that schools can play a significant role in helping students navigate this transition by providing career counselling and work-based learning opportunities [18].

This research details a survey which was undertaken across 7 higher education institutes in Ireland, seeking to establish how many students identify as being neurodiverse, the struggles they have encountered in third level education and what supports could be put in place to help them during their third level journey.

2. Survey

Between April and May 2023, we conducted a survey of students in third level education in Ireland to gain a better understanding of neurodiversity within the third level student population. This survey was distributed to students on seven different campuses of HEIs i.e., TU Dublin, Technological University of the Shannon, Atlantic Technological University and Dundalk Institute of Technology. A total of 150 responses were received.

2.1 Demographics

Firstly, the survey sought to identify what portion of the student population is autistic. There are currently no published reports indicating how many autistic students there are in third level education in Ireland. There are approximately 250,000 students in third level education in Ireland, and assuming the college population reflects the general population there are up to 5000 students currently in third level education that are autistic.

Another method of establishing how many students in third level education are autistic is to review the number of those registered with the disabilities service within each HEI. A challenge with this data is that many autistic students either do not wish to disclose their formal diagnosis or may not have received one.

Neither of these methods for identifying the number of autistic students is accurate for various reasons i.e., does the college population reflect the general population, what about autistic students not registered with the disabilities service. As a result, we asked participants if they identify or have been diagnosed as being neurodiverse and if so what form of neurodiversity they experience. Self-identification amongst the neurodiverse community is deemed valid.

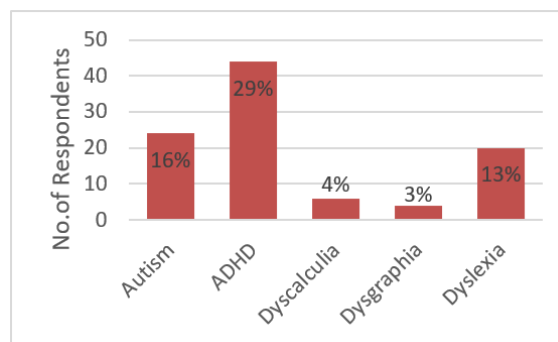


Figure 1. Forms of Neurodiversity Identified

This survey revealed that 49% of respondents identify or have been diagnosed as being neurodivergent. Respondents were permitted to select multiple forms of neurodiversity, e.g.: a respondent may be autistic and dyslexic.

3.2 Covid-19 Impact

During this research we were conscious that the group of students participating in this research were the one impacted by the covid lockdowns either during their second or third level education. We wanted to establish the impact of these lockdown on autistic and other neurodiverse students. In the survey, if a participant identified that they were neurodiverse they were asked if they experienced one or more of a range of mental health challenges e.g. anxiety, depression, lack of focus, attention problems internalising problems etc. Participants were asked to identify only challenges they experienced during or after the Covid-19 lockdown restrictions. Figure 2 shows the responses to this question.

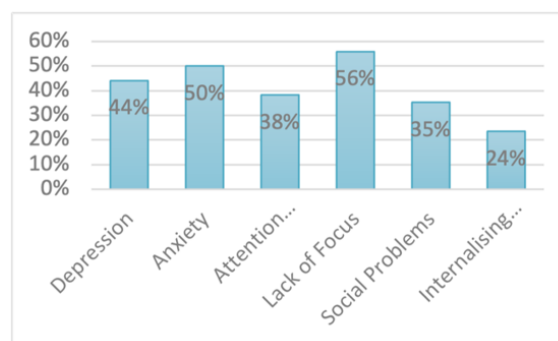


Figure 2. Challenges experienced by Neurodiverse students during or after the Covid-19 lockdown restrictions

It can be seen in Figure 2 that there was a large increase in conditions which would directly impact a neurodiverse student's ability to successfully participate in third level education i.e. attention problems, lack of focus. It is important to understand

the challenges and needs of the student cohort to be better able to support them through their educational journey.

When asked about their experiences in online remote learning, participants identified that they liked that weren't required to socially interact and that they could participate in education from the comfort of their own home. However, several participants stated they did not enjoy remote learning as they engaged better in a face-to-face environment, and that it was very difficult to self-motivate.

3. Solutions

As has been outlined in previous sections autistic and neurodiverse students face several challenges through their educational journey, many of which have been exacerbated by the Covid-19 restrictions. Once we have a better understanding of our student cohort, we can determine the most suitable actions and supports.

For example, prior to conducting this research there was a belief that only 1 in 5 students in the classroom met the definition of being neurodiverse and 1 in 25 met the definition of being autistic meaning any interventions would be to support the minority of the classroom, however as our research has shown 49% of third level students are neurodiverse, now meaning any interventions adopted wholesale in the classroom will benefit a significant proportion of the students in the class.

3.1. Universal Design for Learning

Universal Design for Learning (UDL) is a framework for designing instruction and assessment that proactively addresses the diverse needs of all learners, including those with disabilities [19]. UDL provides a set of guidelines for designing assessments that are flexible, accommodating and provide multiple means of Representation, Action, and Expression (RAE). This approach recognizes that students learn differently and that assessments should be designed to accommodate this diversity. By providing multiple means of representation, action, and expression, UDL assessments allow for different ways to demonstrate learning, giving all students an equal opportunity to succeed [20].

For example, providing visual aids, audio recordings, or alternative response formats for questions can support students with different learning styles, including those with autism. Additionally, UDL assessments can be designed to be more inclusive of the context and environment in which the assessment is taking place, which can positively impact the performance of autistic students [21].

3.1.1. Assessment. Assessment in third level education has multiple purposes and has a central role

in the learning process. Assessment is important for the following reasons:

1. Evaluation of learning
2. Feedback for Improvement
3. Motivation and Engagement
4. Quality Assurance
5. Benchmarking and Comparison
6. Certification and Recognition

Forms of assessments can change across courses and institutes to suit various disciplines including combining multiple forms of assessments such as written reports, class tests, presentations etc. The primary objective of assessments is creating a fair evaluation process that supports student learning while also helping them to demonstrate their knowledge of the discipline [22]–[26].

3.2.1. Inclusive Assessment. The primary strength of inclusive assessment is that it does not need to focus on an individual learner's needs, rather the learner is provided with multiple modes of assessment which they chose from to support their education journey. Inclusive assessment is cognisant of a group's needs.

Inclusive assessment for autism involves using a range of strategies and accommodations to create a supportive and accessible evaluation environment [27]. These strategies may include providing visual supports, alternative communication methods, flexible testing formats, extended time, and sensory accommodations. By incorporating these adjustments, educators can better identify the true potential and skills of autistic students, ensuring that their unique abilities are not overlooked or underestimated.

One of the main benefits of inclusive assessment is that it allows for the development of more tailored and effective interventions and supports. By considering the unique strengths and challenges of autistic students, it is possible to design interventions that are more likely to be successful and meet the individual's needs.

Inclusive assessment is an important approach to evaluating that considers their unique abilities and needs. By using a variety of methods and tools, considering the context in which the assessment takes place, and involving a range of professionals, it is possible to gain a more comprehensive and accurate understanding of the individual's abilities and needs, leading to more effective interventions and support.

When conducting our survey, we asked participants to identify which mode of assessment they preferred. As part of UDL and Inclusive Assessment the supports should be universal and therefore all students should be facilitated in through multiple means of expression e.g. all students can choose to submit a written report or a short video for their assessment, not only those with a formal diagnosis who have registered with an institute's

disabilities office for accommodations.

Respondents were provided with a list of the typically used forms of assessments in higher education and asked to strongly disagree, neither agree nor disagree, agree, or strongly agree, with several statements, e.g.: I like written tests, I like multiple choice tests etc.

As part of the responses received, no single form of assessment which can be discounted. The responses further support the need for inclusive assessment practices as there are no single form of assessment which all students have a preference.

4. Implementation

In 2023 as part of the *National Technological University Transformation for Recovery and Resilience* (NTUTORR) we were successful in obtaining funding under the *Students as Partners in Innovation and Change Fellowship* programme to explore the effect of inclusive education in first year computing students in a third level institute in Ireland.

This project is exploring if existing modes of assessments are inclusive and if not, recommendations will be made to teaching teams to support them in transitioning to more inclusive assessments.

4.1. Project Impact

The impact of this project is expected to be significant. As discussed, neurodiverse students have a lower graduation rate when compared to their neurotypical peers. Through teaching and assessment these students are expected to conform to a system designed primarily for neurotypical students and which fails to account for the strengths of neurodiverse students.

While various accommodations are available to neurodiverse students, these accommodations often fail to embrace the strengths of neurodiversity and are seen as tools to fit a square peg into a round hole. Inclusive assessment considers the needs of all types of learners, allows for a menu of assessment types which assist students in demonstrating their knowledge within a module. This will allow the round peg to find a round hole.

Success for this project will be measured by the student satisfaction of the new forms of assessment. When students are comfortable with the form of assessment, they tend to succeed as they can better communicate and demonstrate their knowledge. We will perform a comparison of the findings of a satisfaction survey prior to change and after to quantify the impact.

To this point we have discussed the impact of the project on the student experience and of course this is crucial, however for the changes to be sustainable beyond the 23/24 academic year they must be done

with support from the lecturers. The newly adopted forms of assessments will not only need to consider the diverse needs of the students but also the additional effort and workload on the lecturer.

5. Conclusion

For centuries education was designed to suit the needs of the majority, but as we have evolved, we have learned that education should be designed to suit all. In a very diverse world, a one size fits all approach rarely works successfully, and in many instances, we are still doing this in education.

To compound this problem, our understanding of the majority is blurred. It is believed that those meeting the definition of being neurodiverse are a small portion of the population, when most studies suggest 1 in 5 people are neurodiverse and when we consider the third level education population this rises to almost 1 in 2 students are neurodiverse.

With an understanding of student demographics can we best teach to their strengths and weaknesses. In recent times we have the further complication of the Covid-19 lockdown restrictions which had a disproportion impact on neurodiverse students. Eventually the negative effects of lockdown restrictions will work their way out of the education system; however, we cannot have a “lost” generation of those who suffered under these restrictions, and we must be cognisant of their needs in the education system.

It is believed the education is the silver bullet for inequality. UDL principles with inclusive assessment can help to resolve inequalities within education. We now have the tools to teach to all our students, not just the majority.

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