

Màster Universitari en Formació del Professorat d'Educació Secundària Obligatòria i Batxillerat, Formació Professional i Ensenyament d'Idiomes.

2018-2019

Changing Narratives of Autistic Spectrum Disorder to Increase Social Awareness and Acceptance in Schools

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Data 11 de juny de 2019

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Abstract

In recent years, due to the implementation of inclusive school policies, there has been an increase in the number of students diagnosed with Autism Spectrum Disorder (ASD) in mainstream schools in Catalonia. However little research has been conducted to know the level of awareness of ASD amongst teachers and students, whose role is essential to achieve a successful inclusion. This research provides an intervention plan to raise awareness on ASD based on the gaps and misconceptions in knowledge identified through a survey to teachers and students in Catalan high school. The plan adopts a change in the medical narrative usually used to explain ASD to focus on the voice of the people on the spectrum that explain with their own words how is life for an autistic person. By providing students first-hand information instead of the medical narrative focused on the disorder, students can develop an unfiltered perception that focuses on the strengths of people in the spectrum rather than their weaknesses.

Keywords: Knowledge of autism, attitudes, high school students, secondary schools, teenagers, adolescence, awareness, ASD, misconceptions, stigma

En els darrers anys, a causa de la implementació de l'escola inclusiva, hi ha hagut un increment en el nombre d'estudiants diagnosticats amb un Trastorn de l'Espectre Autista (TEA) a les escoles ordinàries de Catalunya. Tanmateix, s'ha dut a terme poca recerca per conèixer el nivell de coneixement dels TEA entre professors i estudiants, el rol dels quals és essencial en l'assoliment d'una inclusió reeixida. Aquesta recerca proporciona un pla d'intervenció per sensibilitzar sobre els TEA basat en les mancances i les concepcions errònies identificades a través d'una enquesta dirigida a professors i estudiants de l'escola secundària catalana. El pla adopta un canvi en la narrativa mèdica que s'empra generalment per explicar els TEA per centrar-se en la veu de les persones amb TEA, que expliquen amb les seves pròpies paraules com és la vida d'una persona autista. Oferint als estudiants informació de primera mà en comptes d'una narrativa mèdica centrada en la malaltia, els estudiants poden desenvolupar una percepció no filtrada que centrada en les fortaleses de les persones de l'espectre en lloc de les seves mancances.

Paraules clau: coneixement de l'autisme, actituds, estudiants de secundària, escoles secundàries, adolescents, adolescència, consciència, TEA, concepcions errònies, Estigma

En los últimos años, debido a la implementación de la escuela inclusiva, ha habido un incremento en el número de estudiantes diagnosticados con un Trastorno del Espectro Autista (TEA) en las escuelas ordinarias de Cataluña. Sin embargo, se ha llevado a cabo poca investigación para conocer el nivel de conocimiento de los TEA entre profesores y estudiantes, cuyo papel es esencial para lograr una inclusión exitosa. Esta investigación proporciona un plan de intervención para sensibilizar sobre los TEA basado en las carencias y concepciones erróneas identificadas a través de una encuesta dirigida a profesores y estudiantes de la escuela secundaria catalana. El plan adopta un cambio en la narrativa médica que se emplea generalmente para explicar los TEA para centrarse en la voz de las personas con TEA, que explican con sus propias palabras cómo es la vida de una persona autista. Ofreciendo a los estudiantes información de primera mano en vez de una narrativa médica centrada en la enfermedad, los estudiantes pueden desarrollar una percepción no filtrada que se centra en las fortalezas de las personas del espectro en lugar de sus carencias.

Palabras clave: conocimiento del autismo, actitudes, estudiantes de secundaria, escuelas secundarias, adolescentes, adolescencia, conciencia, TEA, concepciones erróneas, Estigma

1. Introduction

When my oldest son was diagnosed with an Autistic Spectrum Disorder (ASD) at the age of 6, the first thing that the therapist told us was "don't worry: your kid will grow up to be an independent person... he might not be working in any sales related position, though". At that time I didn't know how to take this comment. Now it just makes me smile and reminds me how far we've got from the "we don't know how to deal with your kid" from the school headmaster when he was only four, to the happy place we find ourselves now, six years later. There's been quite a learning curve for all the actors involved: the school, the therapist and my family.

When I enrolled on the master this last year, the phantom of past years showed up again. I was really uncomfortable to hear the opinions and misconceptions of some of my colleagues –future teachers to be– on diversity. The department of education, as most of the western world, is moving in the right direction on inclusive schools, but the teachers that deal with diversity do not necessarily support the manifesto. Instead of embracing the positive aspects of human diversity, the "D" word is becoming the euphemism for special needs education with a clearly negative connotation, something that is considered politically correct but not really believed. But how could it be? The information I have read since my son was diagnosed with what was formerly known as Asperger Syndrome – now a type ASD level 1– was particularly upsetting. I have never had an issue with my kid. For all I know, he has never been sick. There is a clear dissonance between how the books defined the condition and how I saw him: My son was never an issue to me. The lack of understanding and acceptance for people looking for a "normal kid" was.

I got the same feeling when I started reading about ASD in the preparation of this paper. If I didn't know better I would be seriously considering to have my son rechecked: it did not fit with the idea of the people with ASD I know. If I was a mother that recently got her kid diagnosed with ASD I would be completely hopeless and very much concerned about the future perspectives of my son. It is difficult to imagine the impact of such a diagnosis can have on a high functioning autistic person. So there is no wonder that future teachers feel concerned about having one of these "diversity kids" in their classes –which they eventually will, taking into account the prevalence of ASD worldwide.

The core of the problem is not only the lack of awareness but also the way that autism and other neurological conditions are defined. The way we talked about things, the narratives we use, do matter in shaping perceptions and attitudes. The narratives used to define autistic people might have contributed to the existing negative attitudes and perceptions towards them. In this sense, the same narrative used to define autism might have also been responsible for the lack of success in the initiatives addressed to change people's attitudes towards autistic people.

This study aims to design a plan to increase awareness of ASD using the voice of autistic people themselves so that non-autistic students can create their own impressions on autism. The aim is to ultimately foster empathy among peers, whose role is essential to succeed in ordinary schools. In doing so I believe that we can further improve the socio-affective competence of all students –

especially empathy and tolerance– and build a climate of acceptance in the classroom that will allow ASD students to thrive.

But what do teachers and students in secondary education settings know about ASD? is there a link between the knowledge and the attitudes towards students with ASD in the classroom? As I mentioned before, peer acceptance is essential for successful inclusion, but the attitudes of the teachers will also have a direct effect on the perceptions of their peers and the kind of support received by the student, so both should be considered in our analysis prior to the development of the intervention plan. My research question is then: Can we change the attitudes towards people with ASD using different narratives?

The objectives of this paper, in a nutshell, are:

- To know school experiences from ASD people
- To know the knowledge and attitudes on ASD from teachers in Catalan high schools
- To know the knowledge and attitudes on ASD from students in Catalan high schools
- To design an intervention plan to increase positive attitudes towards ASD students

2. Theoretical Framework

2.1. Inclusive Education and Asperger Syndrome

In recent decades, there has been a clear shift in the way education is conceived and approached worldwide. An example of this new paradigm is the policies from international entities that fully commit to an inclusive educational system, such as article 24 of the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006). By signing the convention, states agree to create environments that maximize academic and social development, consistent with the goal of full inclusion (De Boer, A., 2016). Up until today, 177 states have ratified the convention, and 99 of them have also ratified its protocol, including Spain¹. Other international organizations have produced similar guidelines embracing inclusive education, such as OCDE in 2007, UNESCO in 2009, and the European Agency for Special Needs and Inclusive Education in 2015. Part of these international guidelines has been reviewed and developed in the UNESCO report *Rethinking education. Towards a global common good? (2015)*. In Catalonia, *Generalitat de Catalunya* adopted European and international recommendations and issued the law 12/2009 on Education, which establishes the need to adapt the educational activity to manage diversity and achieve greater equal opportunities for all students (Departament d'Ensenyament, 2015).

A direct consequence of the implementation of inclusive education legislation in mainstream school settings is that students diagnosed with Autistic Spectrum Disorders (ASD), such as Asperger syndrome (AS), are being reported with increasing frequency in classrooms throughout the Western world (Konza, 2005). But inclusive education is not the only contributor to such an increase: the effects of early diagnosis and treatment programs as a result of better awareness of autism among health care professionals may have also contributed to higher detection of cases. In other words, people with AS might have already been attending mainstream schools before but were simply not diagnosed, misdiagnosed or their behaviors just being labeled as disruptive and consequently not receiving proper support, as it has also been the case with students with other neurological conditions such as dyslexia.

Inclusive education is a huge step forward in democratic societies. Embracing diversity is an essential value we need to pass on to our children if we want them to be exemplary citizens of the diverse societies we live in. However, placing students with special needs in the same classrooms as average students is just a first step. Inclusive education is about ensuring that all students, regardless of their challenges or differences, are able to fully participate, learn, develop and succeed in schools, and that means academically as well as socio-affectively. However, successful inclusion has often been measured by the academic achievement of pupils with special education needs (Farrell et al., 2007). AS students are verbal autistic people with either average or above average intelligence. Thus, they can normally manage quite well academically in mainstream schools if adequate support is provided. Their challenge is precisely linked to the social aspect of attending mainstream schools. Due to their

¹ Current status of the Convention on the Rights of Persons with Disabilities signatures and ratifications, can be checked at <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

impaired social instinct and despite their desire to have friends and interact with others, AS students normally have difficulty starting and keeping social interactions, which can negatively impact their relationships with peers and isolate them in the classroom. Research shows that many students on the spectrum remain socially excluded, and that are more vulnerable to bullying (Dillenburger, 2017). An important contributor factor to this social exclusion that has been consistently reported in research is the lack of awareness from peers (Landor, 2017). Other authors suggest that the stigma responsible for their exclusion is worse than the one suffered by students with other disabilities since they lack any physical abnormalities. If not familiar with AS, their peers can easily blame them or their parents for their odd or disruptive behavior (Staniland, J.; Byrne, M., 2013).

Secondary schools settings are per se quite challenging for AS students. The increased complexity of social interactions during adolescence adds complexity to their already challenging social interactions. Common interests and more or less structured playing, which is on the basis of children's friendship relationships, changes to more complex relationships centered in a sense of group belonging that involves extremely complex social skills. How can we provide them with the appropriate support so they can thrive socially as well as academically? Typical developing peers have a large role to play in normalizing or accepting the differences displayed by autistic students. Moreover, non-autistic peers can act as 'gatekeepers' to social activities, as they can choose whether or not to include students labeled as different in their activities (Bottema-Beutel, Kristen & Li, Zhushan, 2015). Since there is evidence that many non-autistic children, even through high school, have misperceptions and incomplete knowledge about ASD, focusing on typical peers as intervention targets instead of students with ASD could improve social inclusion. Students with AS may learn social scripts that will accommodate their behavior to the social norm, but they will always show some kind of awkwardness in their behavior as there are infinite situations for which they cannot have a learned script and they struggle to read social cues. Instead, we can actually teach non-autistic students that their "weird" or considered socially inappropriate behavior is not intentional. For young adults at university, there is evidence that college students have a more positive attitude towards someone performing mild social digressions when the person is labeled with an ASD than when they are labeled a typical student (Brosnan, M. & Mills, E., 2016). If they accept AS peers as they are they may actually see beyond the difference and find some common interest that can eventually lead to an honest friendship. "Although much can be done to help students on the spectrum learn to navigate social and communicative interactions, research is needed on how to effectively extend the sphere of intervention to peers" (Underhill, Jill et. Al, 2019).

2.2 Asperger Syndrome, High Functioning Autism or ASD? The Burden of the Labels

Asperger Syndrome was originally described in 1944 by Viennese physician Hans Asperger in his book *Autistic psychopathy in childhood*. In his work, Asperger included the denomination "autistic psychopathy" in order to refer not only to the social difficulties and the restricted interests

displayed by autistic individuals, but also referred to their IQ within the average or above average and their excellent linguistic abilities, with the exception of certain limitations in the understanding of the ironic and metaphorical language (Sanz, 2018). Asperger highlighted the heterogeneous nature of autistic psychopathy and its variable symptomatic manifestations based on the personality of the child and the experiences of learning to which they might have been exposed in their family and school (Borreguero, 2005).

It was not until 1981 that Lorna Wing coined the name Asperger Syndrome instead of autistic psychopathy to describe the same condition with some variability on the diagnosis criteria originally described by Asperger. Future works from other researchers would provide further variability on the diagnosis criteria, like Gillberg and Gillberg in 1989, or Szatmari also in 1989 (Borreguero, 2005). The variability of the classification systems resulted in a high level of inconsistency regarding the identification and classification of Asperger syndrome, as a child could receive a different diagnosis depending on the criteria applied by the medical expert.

Even with the nosological debate among medical experts since Wing coined the name, AS as an independent condition from autism was defended based on the presence of a particular combination of behaviors that revolve around three aspects: deficits in social interactions, tendency to engage in restricted interests and activities, and difficulties with social communication. In the field of clinical practice, the term Asperger Syndrome has been used heterogeneously, either to refer to individuals with autism and a high intellectual coefficient or to describe individuals with a severe social disorder and altered emotional development whose behaviors did not meet all criteria for the diagnosis of autism (Borreguero, 2015).

AS was not officially recognized globally until the early 1990s when it was included in the 1994 revision of the Diagnostic Statistical Manual of Mental Disorders-IV (Connor, 2013). Normally referred as the DMS, the manual is regularly published and updated by the American Psychiatric Association (APA) and it is considered the single most significant guide to the diagnosis of mental disorders by health care providers in the United States and much of the world (Parsloe, S; Babrow, A., 2016).

In May 2013, the APA released the latest version of the manual with substantial changes in the classification. One of the most important and controversial was the removal of AS as a separate diagnosis. The DSM-V included Asperger syndrome within the larger category called Autism Spectrum Disorder (ASD). The second manual of reference is the International Classification for Diseases (ICD), published by the World Health Organization. On the 10th version of the manual, published in 2016, we can still see Asperger Syndrome as one of the five Pervasive Developmental Disorders (PDD), Autism being another category. The term was also removed from the ICD-11, published in June 2018, where PDDs have been replaced by Autism Spectrum Disorder, and Asperger can be identified now as category 6A02.0: "Autism spectrum disorder without disorder of intellectual

development and with mild or no impairment of functional language”². For the purpose of simplification and consistency, we will keep the term AS throughout this paper.

The new classification has not pleased all experts in the field. To some researchers, AS is still different from autism for different reasons, just to name a few: Unlike children with classic autism, children with AS do not have delayed language development and, as mentioned before, they have average or above average intelligence, which is why they are placed at the higher end of the spectrum. But most importantly, children with AS do not withdraw from social interaction. They want to interact but struggle to adapt to social conventions. In response to the question “Do you think there is a difference between autism and Asperger’s disorder?” 94% of 491 social workers, speech pathologists, nurses, and psychologists indicated that there is (Kite et al., 2013).

Even if they can be classified as conditions on the same spectrum, their needs differ radically. Allow me to use the following analogy: we can say that blindness and mild myopia are both conditions that fall under the classification “visual impairment”, but the needs of a person experiencing any of the two will change dramatically. While the use of proper glasses may be necessary to the person with mild myopia to see the world as the “non-visually impaired”, we can all agree that teaching him/her braille would be completely unnecessary. My point is that classifying autism and AS under the same ASD umbrella provides a diagnosis which is way too vague to actually be helpful to anyone, especially to the individuals labeled that way.

While worldwide experts were debating on the proper classification and definition of autism, the neurodiversity movement arose. The term neurodiversity refers to the political identity among autistic self-advocates that positively relates to a proud identity and opposes to treatment toward a cure. Autistic self-advocacy became organized in the 1990s as a part of the disability rights movement. The movement emerged in response to the lack of representation of autistic voices in the international debate on autism. Since then, people with AS have challenged the dominant discourses that position them as disordered, deficient, and dysfunctional. They also promote subjective well-being and adaptive rather than typical functioning.

The importance of the discourse in contributing to stigmatization of disabilities is well captured by Connor (2013) while commenting on the DSM-IV description of AS:

Framing Asperger’s this way, through a list of medicalized, ‘scientific’, and psychological criteria, creates a dominant discourse in which human differences are deeply rooted in pathology. Note the commonplace language of dysfunction: ‘marked impairments’, ‘failure’, ‘lack of’ (used repeatedly), ‘abnormal’, ‘inflexible’, ‘nonfunctional’, ‘persistent preoccupation’, and ‘disturbance’. If a person actually has Asperger’s, such a definition (like

² <https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/437815624>

most in the DSM-IV) is highly reductionistic, thoroughly negative, and ‘diagnosed’ with a view for potential ‘treatment’.(p.115)

Aligned with Connor’s ideas, in the study called Deficit, Difference, or Both? Autism and Neurodiversity the authors claim: “In the absence of biological markers, psychiatry mostly ascertains deficits on the basis of behavioral deviations from average (Anckarsater, 2010). This classification system tends to omit advantageous behaviors, the reasons for behaviors, and society’s role in determining appropriate behaviors”. (Kapp, S et al., 2013, p.59),

This is common in most of the articles reviewed in the preparation of this paper. Researchers in the medical field will also tend to refer to individuals “with Autism” and will oppose them to “typically developing” individuals and will use words like “disorder”, “deficit”, “inabilities”, “lack” and similar wording when referring to autism (words that I’m voluntarily trying to avoid in this paper), which contrasts with the terms used by autistic self-advocates that call themselves “aspies” and define themselves as “neuroatypical” as opposed to the neurotypical people or NTs (non-autistic). They will also use the term “autistic people” instead of “people with autism”, because autism is part of who they are: identity defined by difference, as opposed to identity based on a pathology that is not part of who they really are and needs fixing. In a review of three monographs on autism called Storying Autism, it reads: “Each of these texts centers disability – autism in particular– and in doing so, they highlight the insidious ways in which our cultural, institutional, and personal autism narratives support extant social hierarchies that sideline autistic lives in scholarship and beyond.” (Thomas, 2018, p.1)

Of course, between these opposed views on autism, there are many shades of gray. While not all autistic people are advocates of the neurodiversity movement and some would love that there was a cure, the movement has definitely highlighted that narratives matter in defining identity.

2.3 ASD in Mainstream Schools, a Review of Up-to-date Research

Research regarding the inclusion of students on ASD in mainstream education shows that non-autistic students tend to have incomplete knowledge or even misconceptions about ASD, which can lead to the social exclusion of their already vulnerable peers. Staniland and Byrne (2013) examined the effect of an initiative to prevent stigmatization towards high functioning autism in a mainstream school using descriptive, explanatory and directive information on the knowledge, attitudes and behavioral intentions of non-autistic adolescents towards their autistic peers. In their discussion section the authors state: “Overall, the results indicated that an intervention of this type and length can have an impact on the knowledge and attitudes, but not on the behavioral intentions of adolescent boys towards their HFA peers”(p.9)

Similar studies carried out on attitudes and intervention plans to change them that I was able to review for this paper also show that the focus is always on their disabilities rather than on their strengths and their particular way to see and interpret the world. Moreover, most of these

representations of the students on the spectrum are normally made in the third person, which prevents them from having their own voice on issues that specifically affect them. We can clearly see an example of this in a qualitative study by McLaughlin and Rafferty (2014) on the views of adolescent students with a diagnosis of AS. While reviewing the previous literature about it, the authors concluded that out of the eight studies reviewed claiming to represent the voices of adolescents with AS, only two focused solely on the adolescent perspective. “The remaining six seek to represent both the adolescent voice and also that of their parent, and/or the school staff, including the class teacher, the Special Education teacher, and the Special Educational Needs Co-ordinator” (p.65).

Tangen (2008) also concludes that “Research that focuses only on special needs also runs the risk of reproducing certain stereotypes. Instead, research should be conducted in ways that promote agency, mastery experiences and inclusion” (p. 165). In their study on teachers' strategies for including children with ASD in mainstream classrooms (Lindsay, S. et al, 2014), researchers concluded that poor social acceptance and unsuccessful inclusion are often the result of non-autistic children not being taught to value diversity, which also demonstrates the importance of creating empathy, acceptance, and peer belonging within inclusive classrooms.

A recent study conducted a systematic review of western and international literature to examine measures used to assess autism spectrum disorder knowledge (Harrison et al. 2017). Out of the 67 studies conducted in 21 countries, none was carried out in Spain. Most of these studies also targeted health professionals (40%), and only 6% focused on other children, including siblings and same-aged peers. There is actually only one study from 2018 focused on preservice teachers' knowledge, misconceptions, and gaps about autism in their first and final year at university, which suggested that university preparation in ASD might not adequately train future teachers of inclusive schools (Sanz, 2018).

There have not been many studies examining the influence of knowledge and attitudes on autism stigma reduction in primary and secondary education, Cornelius Jill (2017) mentions three: Swaim and Morgan (2001), Ranson and Byrne, (2014), and Staniland and Byrne (2013). In the majority of these studies, the intervention increased the knowledge of ASD but either showed little effect on the reduction of stigma or no reduction at all. These results may be linked to the way in which the information on ASD is presented. *Who* is providing the narrative and the condition is explained may have an effect on the final outcome. There is quite a difference in presenting AS as a disorder, which already has a negative connotation, than presenting someone with Asperger Syndrome as a “neuro-atypical” person. That is to say: AS students do not have learning disorders, they just learn in a different way that is consistent with how they process the information. Regarding the *who*, there is also a difference in telling someone about a third person that when we get to know them directly. First-hand contact -be that physical or through direct reports from the subject being studied- does make a difference as stereotypes and prejudices regarding a specific group usually debunk.

3. Methodological Approach

In order to create the intervention plan –or unit as I will call it moving forward– trends in knowledge and attitudes towards ASD from teachers and students alike need to be explored. Detecting gaps and misconceptions around ASD will allow assessing where the focus should be made. The unit also needs to take into account the voice of the autistic people. It makes no sense to focus on a particular aspect if autistic people do not consider it relevant to their well-being during their time spent in high school.

The objective of this paper has been to design the unit and provide the instruments to assess knowledge and attitudes towards ASD before and after implementing it in order to measure its efficacy. However, due to time constraints, the unit has not been tested. The awareness survey test and the social distance scale test in students to create the unit are the same that would be applied if the unit was to be implemented in a particular school setting with minor modifications that will be discussed in the conclusions section.

3.1 Participants

To measure knowledge and attitudes, two online surveys in Catalan were circulated mid of May using social media channels: one addressed to secondary school teachers and another to current students at ordinary high schools (from 1st of ESO to 2nd of batxillerat). Participants in the teacher survey were asked to indicate their gender, age, experience and training in ASD. Personal experience with ASD was assessed with the following question. “do you know anyone diagnosed with ASD outside the school? In the affirmative check all the boxes you deem necessary: yourself, a relative, a friend, a colleague, an acquaintance”. This section also asked if respondents have heard the term or received information on ASD and the source of such information. The student survey did not ask for age, but the grade they were attending instead. Experience and training questions were removed.

The teacher’s survey had 66 unique visits and was completed by 48 teachers (72.7% completion rate). The majority of respondents were women (69%) and the largest age group was between 40 and 44 (35%). As for the students' survey, out of the 141 unique visits, 102 completed the survey (72.3%). A slight majority of respondents were female (55%) and most of the answers came from 1st of Batxillerat (35%). The main characteristics of the respondents for both the student and the teacher surveys are shown in table 1.

Besides the online surveys, to gather qualitative information on autistic people experiences in mainstream high schools, three interviews were conducted: an interview with Carles, aged 41 and just recently diagnosed with Asperger two years ago; another interview with Alan, aged 25 and diagnosed Asperger during first of batxillerat, and finally a third interview with psychologist and ASD expert Mireia Gràcia from the Associació Asperger de Catalunya. One of the activities carried out by the

association are workshops based on the PEERS program (Program for the Evaluation and Enrichment of Relational Skills) addressed to teenage adolescents who are transitioning from primary to secondary school. The original idea was to get first-hand information on the experience of autistic students currently in high school through a focus group. But due to the constraints related to their minor status, I finally opted for interviewing the person who helps them adapt in their transition to high-school. The insights from these interviews are discussed later on in the results section.

Table 1. Awareness and attitudes survey. Characteristics of participants.

<i>Characteristics of teachers</i>		<i>Characteristics of students</i>	
Gender		Gender	
female	69%	female	57%
male	31%	male	41%
Third gender/non-binary	0%	third gender/non-binary	2%
Age range		Grade	
25 - 29	6%	1st of ESO	21%
30 - 34	2%	2nd ESO	5%
35 - 39	19%	3rd ESO	15%
40 - 44	35%	4th ESO	13%
45 - 49	10%	1st Batxillerat	34%
50 - 54	10%	2nd batxillerat	13%
54 - 59	15%		
> 60	2%		
Experience in education			
>5 years	29%		
5–10 years	17%		
11 - 15 years	25%		
< 15 years	29%		
Knowledge on ASD		Knowledge on ASD	
Has received information outside school	81%	Have heard of ASD	55%
Know someone with ASD outside school	56%	Knows someone with ASD	21%
ASD Students in the class	67%		
ASD training	13%		

3.2 Measures

3.2.1 Autism Awareness test

In 2016, a systematic review of western and international literature examined measures used to assess autism spectrum disorder knowledge (Harrison, op cit.). The review identified no less than 44 unique autism spectrum disorder knowledge measures. “This large number of measures indicates that instead of identifying a specific measure as a gold standard of ASD knowledge assessment, research groups often newly create a measure each time the construct is evaluated” (Harrison et al, op

cit. p. 266). I would add that this large number also reflects the changes in definitions of what constitutes autism. As already explained, up until 2015, Asperger syndrome and autism were considered different disorders, but the most widely acknowledged measure used to assess autism knowledge – the Autism Knowledge Survey (AKS)- dates back to 1987. Measures applied before 2015 cannot be used for comparison purposes because they are just comparing different things. The measure has certainly been revised multiple times to reflect advances in the field. However, Harrison only mentions two measures adapted from Stone’s AKS to align with the DMS-5: Gillespie-Lynch et al. (2015) and Obeid et al. (2015). The latter, however, is already an adaptation of the Gillespie-Lynch measure (Obeid, op cit.), so in the current study, the final measure used to assess autism knowledge is the *Autism Awareness Survey* from Gillispie-Lynch.

In their survey, given the frequent changes in what constitutes an accurate answer to many questions about autism, Gillispie-Lynch selected ten items from previous versions of the scale that they believed to be accurate and added three items that were not in previous versions of the scale to capture frequent misconceptions about autism. In this paper I added two more questions that I deemed necessary after the recent changes in the definition of ASD: On statement just to capture the essential characteristics of what is now known as ASD – *social interaction and communication challenges, and repetitive behaviors*– and a second statement to assess if the changes in the definition have created confusion regarding the previous labeling: *Asperger syndrome is a type of ASD*. Also, the term *autism* from the original test was changed to ASD to reflect the current terminology used in Catalonia. The 15 items were scored on a 5-point scale according to their degree of accuracy (from -2 to 2) and summed to obtain an ASD knowledge score that could range from -30 to 30. Higher scores indicate greater knowledge of ASD.

3.2.2 Measure of Autism Stigma

The students’ survey also contained a test to assess stigma towards autism, that is, to see how willing students were to interact with an autistic peer. The same adapted version of the Bogardus Social Distance Scale used in the Gillespie-Lynch study was used. This type of scale measures varying degrees of closeness in people towards other members of diverse social, ethnic or racial groups and consists of a series of questions about participants’ willingness to engage with a given type of person at various levels of intimacy. Responses to the six items used to assess social distance in the current study were scored from 1 (most stigma) to 4 (least stigma) and summed to obtain a stigma score that ranged from 6 to 24. The term autism used in the scale was also changed to ASD to reflect current use in a Catalan environment.

3.2.3 Inclusive Education Opinions

The survey addressed to teachers did not contain an assessment of stigma but rather a test to capture their opinions on inclusive education, which can give valuable information regarding their attitudes on having an autistic child in class and the way they may address their interaction and teaching style. The test consists of 15 Likert-type scale items adapted from Segall (2008). Seven response choices range from *Strongly Agree* to *Strongly Disagree*, including a *No opinion or neutral* response. On ten items, respondents evaluate to what extent various factors are important for successful inclusion, then six statements measure participants attitudes towards inclusion of students with ASD. The original survey contained eight statements to measure participants' attitudes towards inclusion in general and four items to allow comparison of attitudes towards disabilities other than ASD: ADHD or Special Education Needs. The statements on ADHD and special education needs were considered irrelevant in the present study and removed to keep the number of questions reasonable for an online test and to increase the chances of test completion.

3.2.4 Interviews

The voice of autistic people was taken into account through interviews. The interviews with people diagnosed with Asperger Syndrome were carried out in the relaxing atmosphere of a café and lasted for about two hours each. The youngest one asked to be accompanied by his girlfriend, which I certainly did not oppose as I wanted him to feel comfortable.

The structure of the interviews was relatively loose scripted. Questions were open-ended and intended to trigger memories of their experience throughout high school and their thoughts about it: *When and how were you diagnosed? How was your experience during high school? What are the things that made it easier/more difficult for you?* There was a last question addressed to assess their current perspective on the topic: *If you were assigned a job as a consultant to create a project to improve the well-being of autistic children in ordinary schools, what would you do?* Since in both cases they did not know their diagnoses until later in adulthood I also ask them to imagine how did they think their experience could have been if they had known their diagnoses before.

In the case of the psychologist, the interview lasted about an hour and was carried out at her office in one of the buildings of the association, located at Parc Sanitari Rovira i Virgili, in Barcelona. The interview revolved around autistic teenage accounts of their experiences in high school. *What are their main concerns? Are there any trends in their experiences?* Similarly to the other interviews, I also asked her in her expert capacity how to better adapt ordinary schools to improve the experience of autistic children.

4. Results and Discussion

4.1. Students' Survey Results

The results on the students survey highlighted the need for an intervention plan to raise awareness of ASD. Overall awareness scores are shown in chart 1. Up to 20 % of the students scored negative on the awareness test and the combined percentage of “less than 0” and “between 0 and 9” score ranges adds up to a total of 85%, which means that there is definitely a huge room for improvement in awareness of ASD among high school students. Only 3% of students show an overall accurate knowledge of the condition.

Chart 1. ASD awareness score ranges among students

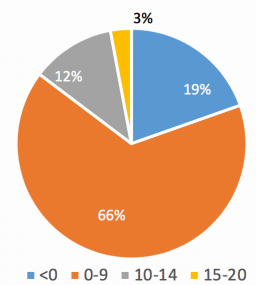


Table 1 shows overall performance results on each of the items of the test. It is quite surprising that 64% of students know the main characteristic of ASD, but perform so low in most of the items of the test. Only items 2 and 3 exceed 60% on the level of accuracy of the answer. For most of the items, the level of combined percentages of misconception and gap either equals or exceeds 50% in 10 out of 15 questions. Moreover, items 1, 6, 11 and 12 exceed 70% in misconception and gap percentages combined. The fact that most of the students do not know that autism is a lifelong condition might not be very relevant in their interaction with their ASD peers, but the fact that 67% of students do not know or think that their ASD peers are deliberately uncooperative might have a clear influence on the dynamics of their interactions in the classroom. All of these relevant items that may have an effect on class dynamics, such as *people with ASD do not have empathy*, will definitely be addressed in the unit.

Table 1. Student overall performance on ASD awareness test

Item	Accurate	Misconception	Gap	misconception & gap combined
1 More frequent in males	22%	20%	58%	78%
2 Social interaction & communication challenges, repetitive behaviors	64%	9%	27%	36%
3 Can go to college/marry	68%	7%	25%	32%
4 Can be diagnosed by 15 months	34%	19%	47%	66%
5 Show affection	54%	14%	32%	47%
6 Lifelong condition	26%	19%	55%	74%
7 Have empathy	53%	13%	34%	47%
8 Asperger a type of ASD	27%	11%	62%	73%
Wrong statements (reversed scored)				
9 Don't show attachments	41%	33%	27%	60%
10 Deliberately uncooperative	33%	33%	34%	67%
11 One intervention for all	27%	32%	41%	73%
12 Proper treatment outgrow ASD	19%	43%	38%	81%
13 Most low IQ	60%	13%	27%	40%
14 Violent tendencies	50%	14%	36%	50%
15 Not interested in friends	49%	26%	26%	52%

As per results in the social distant scale test, table 2 shows overall results per item. Moving from item 1, requiring a minimum level of closeness, to item 6, the strongest level of intimacy, it is remarkable to see how score 4 (definitely willing) starts out with 44% and stays stable until item number 4 (making friends) which peaks 70%, to decrease again to 50% in item 5 and end up with a 29% in item 6, (marrying someone with ASD). In this kind of scale, the normal trend is to start with high levels of maximum willingness and decrease as the intimacy or closeness level increases. Translation of *How willing would you be* from the original test to *fins a quin punt estaries disposat a* instead of an alternative like *t'importaria* might have resulted in different score results. In any case, results show that there is indeed a certain amount of stigma associated with ASD even if figures of "unwilling" are relatively low in all statements. Low stigma levels could also reflect a lack of awareness. Stigmas require an internalized construct of a specific type of group. If there is no construct because there is no knowledge, there may not be a stigma associated. A total of 46% of respondents have never heard about ASD, which is a high percentage.

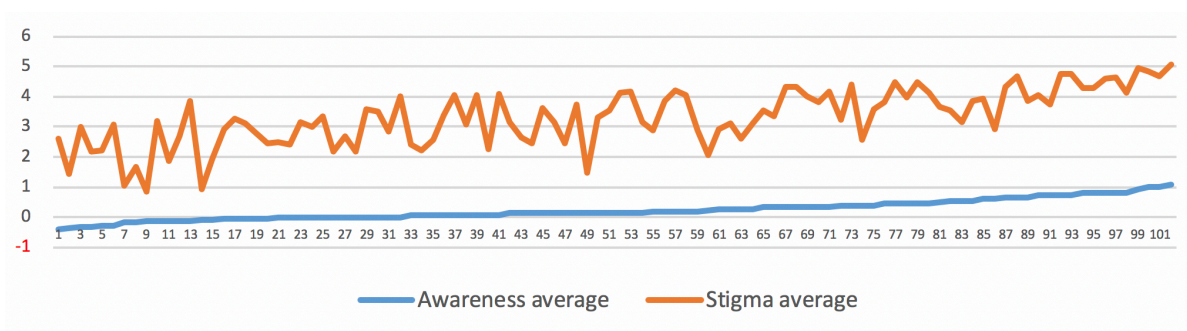
Table 2. Student overall result on Social Distance Scale test

<i>How willing would you be to...</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>total</i>
1 move next door to someone with ASD	10%	22%	24%	44%	91
2 spend an evening socializing with someone with ASD	9%	17%	30%	44%	100
3 start a collaborative project with someone with ASD	12%	13%	30%	45%	100
4 make friends with a person with ASD?	4%	11%	16%	70%	102
5 have a person with ASD marry into the family	9%	18%	24%	50%	101
6 marry or date a person with ASD	20%	27%	25%	29%	101

unwilling (1), somewhat unwilling (2), somewhat willing (3), definitely willing (4).

One question I wanted to address in this paper if there is a correlation between higher levels of awareness and low levels of stigma. Chart 2 below shows awareness average scores of all students together with their results on the social distance scale. If these two variables were correlated we would see two lines steadily growing in parallel, which is not the case.

Chart 2. Correlation between results on Awareness average scores and social distance scale average ranging from 1 (unwilling) to 4 (definitely willing)



The same lack of correlation is shown when comparing statements 4 (making friends with someone with ASD) and 6 (marring someone) to the awareness score (see charts 3 and 4 below). Once again there seems not to be a direct correlation between awareness scores and social distance scale results.

Chart 3. Correlation between “how willing to marry or date someone with ASD” and awareness score

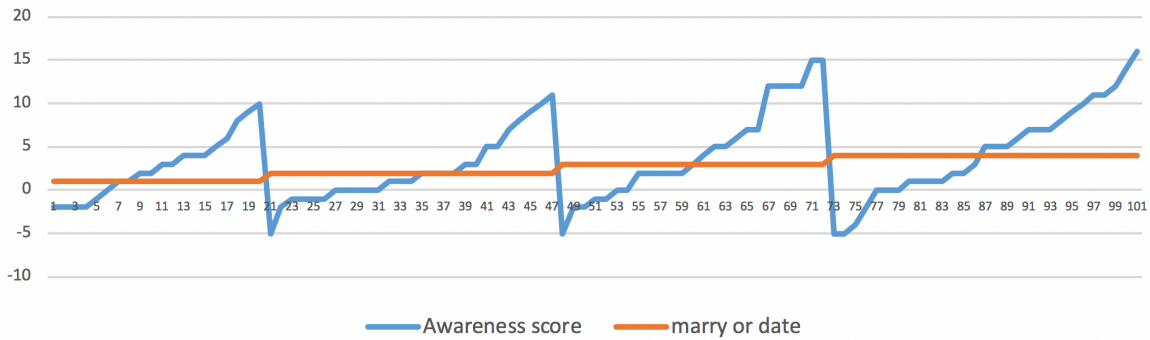
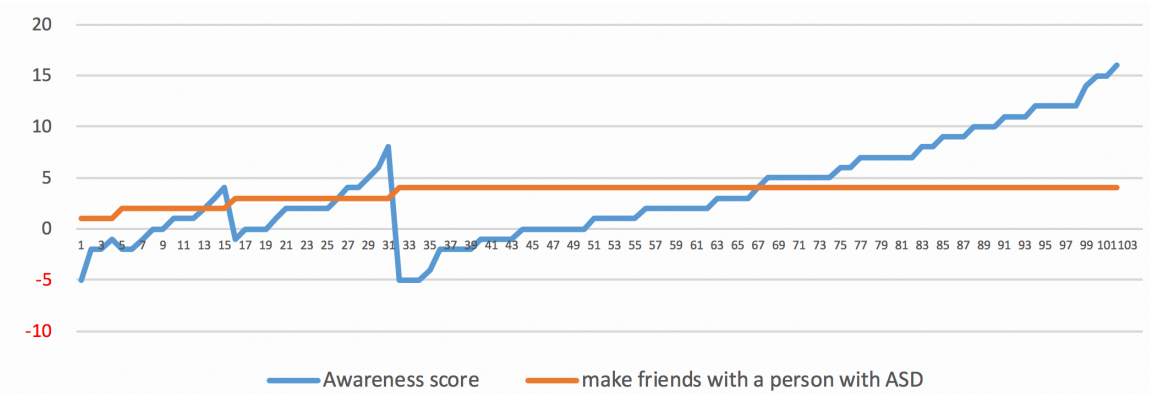


Chart 4. Correlation between “how willing to befriend someone with ASD” and awareness score



The lack of evident correlation between awareness and stigma seems to be confirmed again when comparing score ranges and then social distance scale results: the charts show that even those respondents having low or very low awareness results in the test show that at least 20% of them would be definitely willing to marry someone with ASD and 60% of them would befriend someone with ASD. However, it is worth noticing that the highest awareness scores do not present any associated

Chart 5. Score range in awareness test and social distance scale vs “Marry someone with ASD”

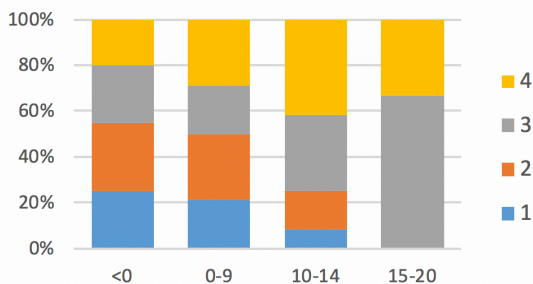
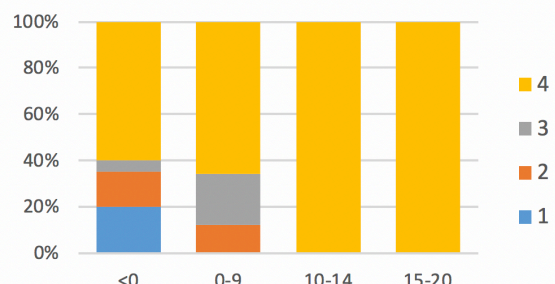
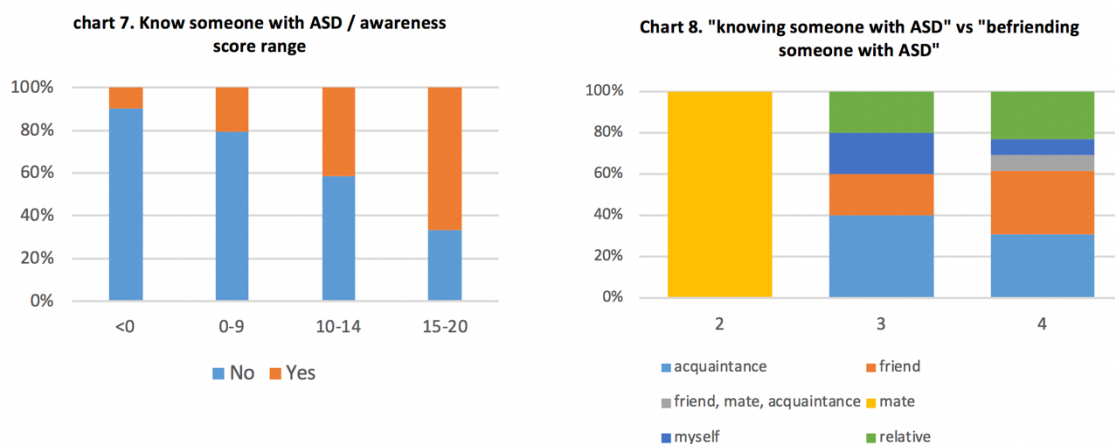


Chart 6. Score range in awareness test and social distance scale vs “befriend someone with ASD”



stigma results in *befriending someone with ASD* and that results tend to decrease in the case of *marrying someone with ASD* versus lower awareness scores (See charts 5 and 6).

Since there is no strong correlation between awareness and stigma, further analysis was conducted to see if other variables could explain lower levels of stigma. Chart 7 below shows that there is indeed a correlation between knowing someone with ASD and results in the awareness test. Chart 8 shows that the closest the relationship with someone with ASD the more willing to engage with them. However, once again, people not knowing someone with ASD are also willing to befriend them in high numbers, so this relation should be considered carefully. Moreover, chart 8 is based on a sample of only 19 people knowing someone with ASD out of 102 students, so the limitations of running into any conclusions are obvious.

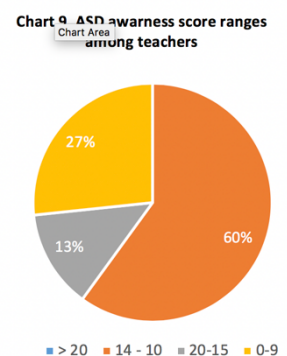


Social distance scales results presented here may also underestimate the actual stigma due to the effects of social desirability, which would explain the negative stigma levels of people that lack either knowledge or experience with people with ASD. Indeed, assessing stigma immediately before and after implementing the unit could tell if endorsed positive attitudes towards autism may be the result of better knowledge of the disorder through the voice of autistic people.

4.2 Teachers' Survey Results

Overall results for the awareness test among teachers show much better results than the ones from students. Only 27% of respondents scored less than 10, compared to 78% of students. The highest percentage (over 20) is similar to the students' results, but the biggest piece of the cake is for the 14-10 range score.

The statements that matter the most in a class setting have excellent levels of accuracy in general (see table 3 below). 9 out of 15 statements achieved over 70%, meaning more than 7 teachers out of 10 have an accurate idea in regards to these particular statements, but there's definitely room from improvement in the empathy side of the condition and on the fact that almost 4 out of 10 teachers either don't know or think that ASD kids are



not interested in friends. Both empathy and friendship need to be addressed as they have an effect on the socio-affective integration of students on the spectrum. In the case of the teachers, 90% of them knew that Asperger Syndrome is a type of ASD, which is an excellent result compared to 27% of the students.

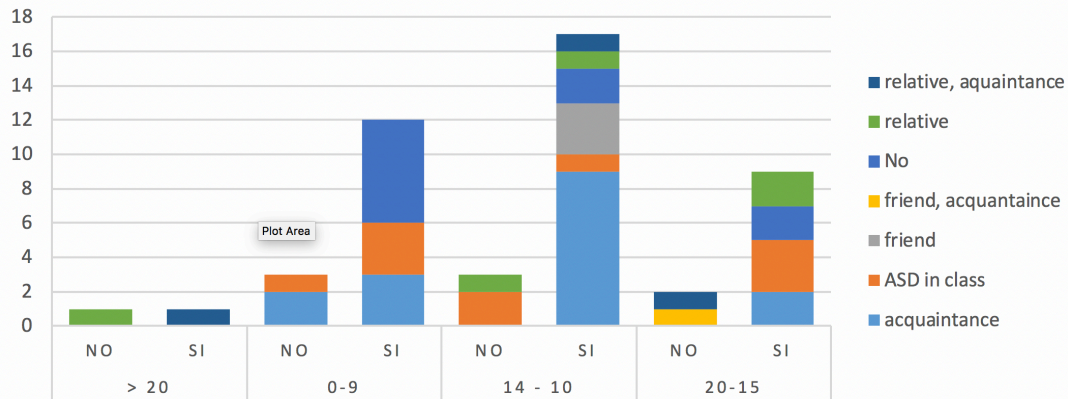
Table 3. Teacher overall performance on ASD awareness test

<i>ASD Knowledge Items</i>	<i>Accurate</i>	<i>Misconception</i>	<i>Gap</i>	<i>misconception & gap combined</i>
More frequent in males	44%	15%	42%	56%
Social interaction & communication challenges, repetitive behaviors	96%	2%	2%	4%
Can go to college/marry	83%	6%	10%	17%
Can be diagnosed by 15 months	19%	21%	60%	81%
Show affection	73%	2%	25%	27%
Lifelong condition	56%	8%	35%	44%
Have empathy	38%	31%	31%	63%
Asperger a type of ASD	90%	0%	10%	10%
<i>Wrong statements (reversed scored)</i>				
Don't show attachments	73%	13%	15%	27%
Deliberately uncooperative	79%	8%	13%	21%
One intervention for all	71%	6%	23%	29%
Proper treatment outgrow ASD	65%	4%	31%	35%
Most low IQ	90%	4%	6%	10%
Violent tendencies	92%	0%	8%	8%
Not interested in friends	63%	15%	23%	38%

As in the students' survey, variables were crossed to see if there was any kind of correlation between performance in the awareness test and knowing someone with ASD or having received information about the condition outside school. Value *no* in the chart indicates no relationship whatsoever – within the school or at a personal level-, the value *ASD in class* indicates no personal relationship with anyone outside the school. For the other values where there is indeed a personal relationship outside the school only 6 had never had an ASD student in the class, but 3 of them had either a relative or a friend, so to keep things simple the chart only shows the personal relationship regardless of any experience with ASD students they might have had in the class.

In any case, chart 11 shows that there is no clear correlation in any of the variables considered. While the highest levels of awareness are found only in people with a closer relationship with someone in ASD, having an acquaintance or someone with ASD in class does not reflect on their score. The biggest number of people scoring under 9 (6 respondents) are people with no relationship with someone with ASD but that claim they have received information about it. Four respondents with these same characteristics have scored above 10. Similarly, 3 people that scored less than 9 had a student with ASD in class and had received information about ASD, but the same amount of people with these same characteristics got more than 15 in the test.

Chart 11. Awareness Score range vs. relationship with ASD and information received



Regarding the survey on opinions on inclusive education, table 4 below show overall results for all the statements. It needs to be highlighted that 81% of respondents consider encouraging students with ASD to interact with their peers a factor for successful inclusion, which contrasts with the 40% of respondents that either doesn't know or wrongly think that autistic people are not interested in making friends. Other factors in which the majority of respondents agree are the attitude of the staff and the one-on-one intervention. All of them involve someone other than the student with ASD, which is pointing in the right direction for inclusion as it highlights the important role that everyone plays, not only the child with special needs. Interestingly, 27% of respondents agree on the use of medication and drug therapy for successful inclusion. There is actually no medication for ASD. The medication that some autistic people receive has to do either with their social anxiety (which can be significantly reduced with other non-medical strategies) or the fact that autism is often diagnosed alongside other conditions such as ADHD -for which there is indeed medical treatment. In all fairness, 44% of the respondents don't have an opinion or are either neutral about it.

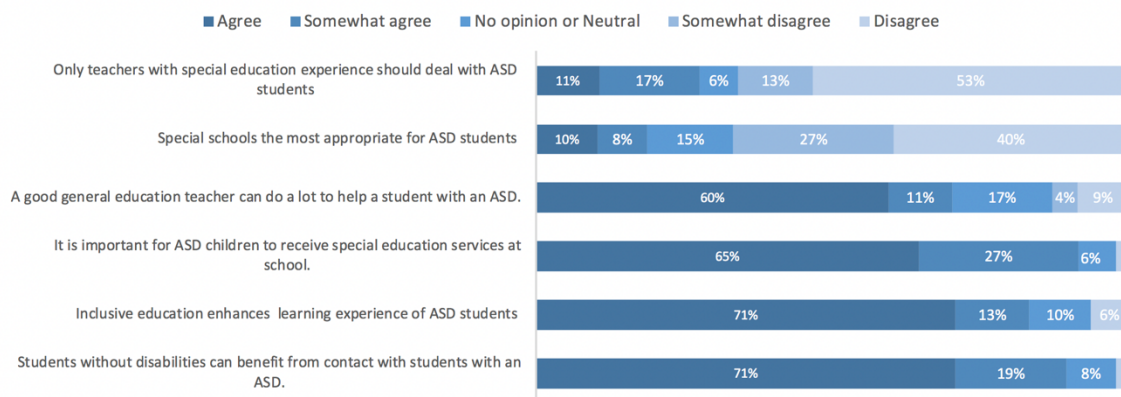
Table 4. Factors of success in ASD inclusion

Factors for Successful Inclusion of a Student with ASD	Agree	somewhat agree	No opinion or Neutral	Somewhat disagree	disagree
Teaching assistant help	52%	25%	8%	2%	13%
academic ability of the student	19%	29%	17%	13%	23%
The severity of the disorder	58%	25%	13%	2%	2%
The student's personality	42%	29%	10%	10%	8%
The attitude of the staff	83%	10%	4%		2%
One on one intervention	77%	13%	8%		2%
Encouraging students with ASD to interact with peers	81%	6%	10%	2%	
The use of reinforcement schedules	44%	21%	17%	4%	15%
Medication and drug therapy	27%	10%	44%	6%	13%

Chart 12 shows overall results on the inclusive education statements of the opinion about inclusive education of the test. For the purpose of simplification, values *Agree and Disagree* include also *Strongly agree* and *Strongly disagree*. Even though the majority of statements show a great amount

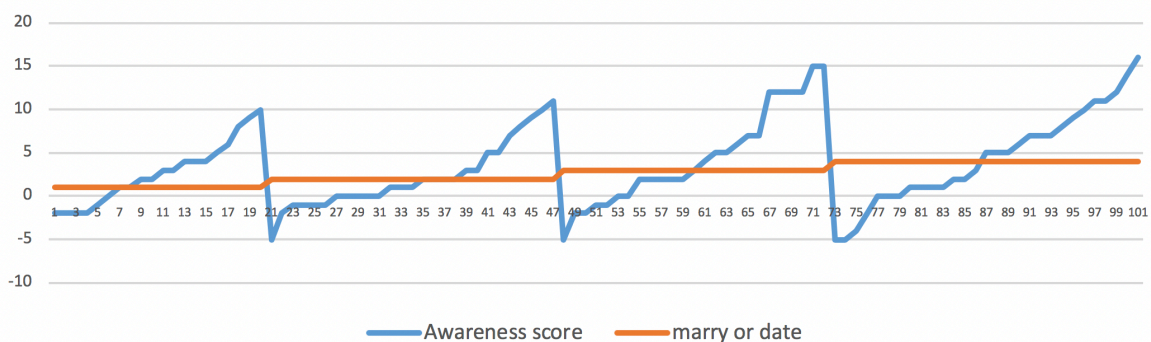
of agreement with inclusive education there is a quite a contradiction worth noticing: Statement *Inclusive education enhances learning experience of ASD students* and, similarly, *regular peers benefit from contact with ASD students*, present a 71% of agreement, which contrasts a bit with the statement *special schools specifically designed for their needs are the most appropriate placement for students with an ASD*, with only a 40% of disagreement. This dissonance might be due to the fact that ASD comprises from the mildest cases to the most severe, which relates to the criticism pointed out in the first part of this paper, when comparing ASD to visual impairment, that the definition might consider conditions that require very different levels of support under the same umbrella. In this sense, it needs to be highlighted that most severe cases of ASD cases never reach mainstream high schools.

Chart 12. Inclusive Education Opinions - overall results

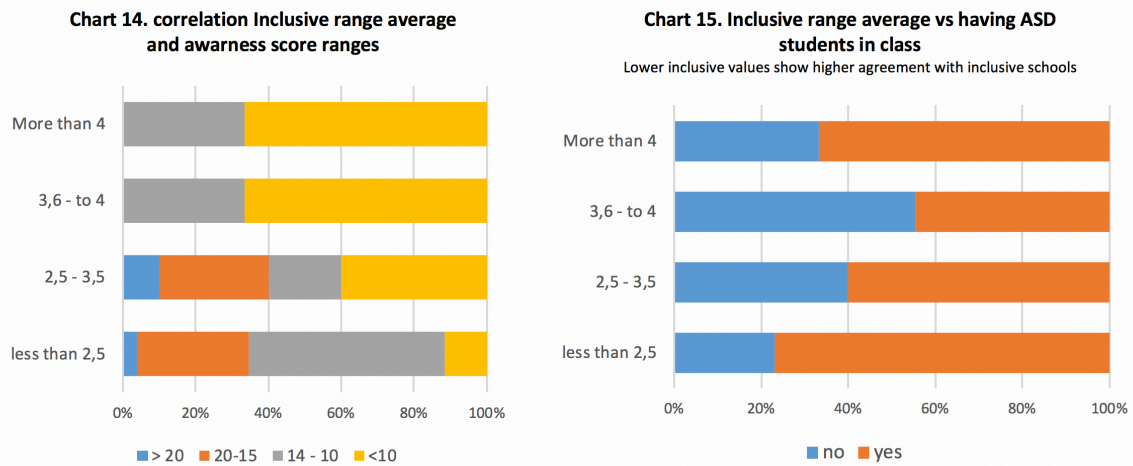


To look for a correlation between inclusive attitudes and awareness, individual scores on both tests were compared. Inclusive scores go from a minimum of 6 (1 point per statement) to a maximum 42 (7 point per question). However, unlike the awareness score, lower values of inclusive scores indicate higher agreement with inclusive statements so, in case of correlation, chart 13 below would show one line steadily growing while the other would decrease proportionally, crossing at some point. No apparent correlation between the two variables could be found.

Chart 3. Correlation "how willing to marry or date someone with ASD" and awareness score



However, when grouping the same individuals in awareness score ranges and comparing them with their inclusive averages scores, as in chart 14, results show that even if lower inclusive ranges (that is, better opinions with regards to inclusive schools) present people from all awareness ranges, only people scoring less than 10, and to less extent those in the 10-14 awareness range, have the highest scores in the inclusive test. In other words, lower levels of awareness are related to lower agreements with inclusive statements.



And finally, chart 15 shows the correlation between having a better opinion of inclusive schools and having someone with ASD in class. Once again, even if teachers having an ASD student in class show higher opinions on inclusive statements, having ASD students in class does not mean having a better opinion on inclusive schools. A qualitative study could shed some light on the causes of this lack of correlation. Although a first thought would be that not all first-hand experiences might have been positive and experiences do have an impact on the development of opinions.

4.3 Interview results

Both interviews with Alan and Carles were emotionally powerful. They were candid when talking about their experiences even if memories could be hurtful sometimes. I ask them both if they wanted to stop the interview at some point but continued with their stories until I got all my questions answered. It also felt as if they had long wanted to get some of their feelings out of their chest, and for that, I am very thankful. Therefore, I would try to go through their experiences as respectfully and tactfully as I can.

4.3.1 Carles

Carles first comment when we met is that he was happy to have the meeting because he felt that adults with Asperger are underused. There are plenty of studies focusing on children from the parents and expert perspectives, but the adult Asperger community is huge and it would be positive

that society could leverage their expertise and past experiences. Carles Vallbé is an activist and advocate on autism awareness since he was diagnosed with Asperger Syndrome only a couple of years ago. He keeps a blog called SócAsperger³, which is how I managed to contact him.

Even if he was diagnosed way through adulthood, this does not mean that his family or the school did not have suspicions that something was off about him. However, thirty years ago Asperger Syndrome was still something very much unknown by psychologists, let alone teachers. Carles remembers visiting a psychologist because his parents were worried about his changes in mood. However, the condition went unnoticed. It is quite surprising taking into account that Carles has also been diagnosed with dyslexia, dyscalculia and weak muscular tone. With this constellation of conditions, it is amazing that he managed to survive academically without support any kind of support. His diagnose would have certainly been detected much earlier today taking into account current knowledge and school protocols.

Carles survived academically during high school even if he failed between two to five subjects each year, normally languages and physical education. Surprisingly, when he went to university Carles started passing many subjects with honors and now he has three university degrees in engineering. He attributes his achievement to the fact that in college he could finally focus on his interest.

Carles did not suffer any bullying, but he did experience a great deal of solitude. He felt he was different and had no friends. He thinks that his low academic performance might have contributed to this lack of friends during primary and high school. It did not help that each year he was relocated to another group class. When talking about making friends he mentions that there are asocial Aspergers the same way that there are asocial neurotypicals (non-autistic people), but this was not his case. He wanted badly to fit in but did not manage to do it successfully. Faced with the constant inability to socialize, he ended up isolating himself from people. He never liked football, which is also key in the socializing of male students, so most of the time he would walk alone in the courtyard.

When talking about the teachers' attitudes, Carles tells me he recently found the reports from school and that he realized that all the alarm signs were there. When he finished 8th of EGB (currently 2nd of ESO), his teachers told their parents that he should not continue to High school but follow a professional training instead. Thankfully his parents ignored the recommendation. The comments in the reports are "he talks to the teachers but do not relate to peers" (typically autistic), "he is smart, but he does not work hard enough, he is a bit lazy" and "he lacks motivation". However, he admits that some personalized measures were actually applied. He always had very bad calligraphy (also typically autistic), and he was the only student that did not change from pencil to ballpoint pen when going to high school and then to university. When talking about sciences in high school he admits that he was not so good at the beginning since he had issues understanding the problems in writing. But he

³ <https://blog.socasperger.cat/>

eventually developed a strategy that has helped him ever since: turning words into schemes or drawings, visualizing the problem to then being able to *desgranar el problema*: splitting into affordable bits of information that he could process.

Regarding the disclosure of the diagnosis, he is absolutely in favor of doing so. When asked if the disclosure of the diagnosis could contribute to labeling and further stigmatizing the kid he is straightforward:

Jo crec que no. Jo crec que és necessari per una raó molt simple: els nens, ni que no tinguis l'etiqueta, t'etiquetaran igualment. Seràs el *raro*, el *borde*, l'*asocial*, el *gilipolles*... A mi m'havien dit de tot. Llavors, t'etiqueten igualment. Si tens l'etiqueta –que no cal dir-la als companys de classe, eh?- Però si tens l'etiqueta, si tens un diagnòstic, tens un poder per millorar les dificultats que tens. Si no tens l'etiqueta no podràs millorar aquestes habilitat socials que et falten. (...). No entenc els que diuen que no cal posar etiquetes. Serveixen per ajudar per a buscar teràpies, per a un munt de coses. Si el procés d'autoconeixement que vaig començar fas dos anys l'hagués pogut començar fa quaranta... hòstia! Crec que val la pena (16')

About the changes in the diagnosis, he is also very aware that changes are not helping anyone. There are identity issues associated with the changes in names, because ASD is still very much associated with classic non-verbal severe autism: “Ara hi ha gent que no vol ni acceptar el TEA, perquè trastorn sona malament, sinó CEA, Condició de l'Espectre Autista (...) això [aquests canvis] és dolentíssim per a la comunitat i per explicar-ho a la societat”

When asked about things that might contribute to help people on the spectrum in high school he gets very emotional talking about meltdowns (sensorial overload). According to Carles, having the understanding of neurotypical peers recognizing a meltdown and knowing how to manage it – by staying with the kid having the meltdown, not talking, just being there to calm them down- would be a great improvement. Another factor mentioned is the awareness of their social skills impairments. In his opinion, autistic people need to learn social skills, of course, because they are helpful when living in a neurotypical society, but this society needs to change a bit as well to accept the difference: “Quina necessitat hi ha de forçar el nen a mirar els ulls? a jugar el futbol? Per internet corrent els típics “surt més”, preferiria que em diguessis.. si en comptes d'això em dius “anem a fer un cafè?” (42')

Carles also claims that the resources needed for neurodivergent people are also useful for asocial neurotypical people. If we educate children to accept the difference, they will become better grown-ups. But sometimes grown-ups are not helpful, because they oppose different people in the classes of their children as they associate them with trouble. In this sense Carles states that “falta molta pedagogia encara”.

On his current life as a full grown-up aspie, Carles has managed to thrive academically, and also affectively (as she has a girlfriend know and friends). Things are looking good for him. However, he admits that he stills need support. Even now he is unable to pass a job interview due to his social skills, which is the reason why he is self-employed. But counting on the diagnosis has definitely changed his life in a very positive way.

4.3.2 Alan

I started the interview asking about when he was diagnosed:

“I remember that I knew I had Asperger at first of batxillerat, and to me, it was a realization of "thank God! Now I know what it's wrong with me" because my whole life I was the weird one and all that, I didn't know why, so it was a relieve” (1)⁴.

Alan learned to speak quite late and was always on his world so he visited a psychiatrist very early in his life, even though his story is that of a series of misdiagnoses that made his life very complicated from the very beginning. Alan was on different types of medication intended to calm him down that did not help him. Instead, some of the drugs he would take would worsen his condition. One of the drugs he took for a while caused him symptoms that are typical to someone with Tourette syndrome. All of this contributed to increased bullying in school, and the bullying for him started early in primary school. He was again misdiagnosed with psychopathy due to a meltdown he suffered in school and was prescribed once again more drugs.

Other than the extreme bullying he suffered, he also had issues academically with languages and maths. Similarly to Carles' experience, he admits “knowing his numbers” now due to strategies developed to overcome the issues, using drawing, for example. I would like to use Alan's own words to define what his problem was: “The problem with education is that is standardized, a lot of studying but not much time. Most of the people feel like morons and different, but different from what?”

He recalls having some wonderful teachers, who had their personal touch and were able to create a pleasant atmosphere. But in general terms, secondary school was “hell”. People were laughing at him literally since day one due to an accident, which involved an incident with an umbrella when entering the school the first day while it was raining. To make things worse some of the bullies from the primary school attended the same high school, so the bullying did never stop: just moved from one school to the other.

Alan also holds a very negative opinion of the psychopedagogue of the school, as he feels she took the side of the bullies because of the “difficult situation” they had at home. At the time, Alan's parents were on the processing of getting divorced so it was also a complicated situation for him. At one point the psychopedagogue asked Alan to stop getting angry at five peers that were bullying him

⁴ The interview was conducted in English as Alan is bilingual, which is why quotes in this section are in English

physically and called him retarded. He remembers she even slapped him once, a behavior that would not be allowed today and certainly wasn't ten years ago, so he had a terrible feeling of unfairness and, what is even worse, helplessness from the people that were supposed to help him out. Bullying could also come from the kids of another school that shared their courtyard. He recalls her mother hiding once to take a picture of one of these attacks and reporting it to school. As time went on the bullying diminished. He remembers being attacked for the last time on 4th of ESO.

Batxillerat years were great considered the previous years, the groups were also smaller which might have contributed to his well-being. Eventually, Alan managed to have friends in university, but when he was twelve he started attending the Agrupament Escolta Ramon Llull, which was also helpful as he could develop some kind of camaraderie and sense of belonging before going to university. Even though he was bullied at the beginning for some kids six years younger than him, he eventually became a *Cap* and remember those years being a wonderful time for him. Everybody had their own issues, and each of the members had a more personal approach.

When asked about what he would do to make high schools better for autistic people Alan gave me a speech that it is worth capturing word by word below (some fragments):

Asperger is not the only thing going on in school. Many people are there having issues which they struggle to overcome: there are people with depression, anorexia, bulimia... The problem with high schools is that we focus too much on cognitive skills. If only we could work more on emotional intelligence (...) but they don't want to train humans, just workers. If they feel flawed they are going to be so miserable. We have to teach them that everybody is capable in their own way. Just because you failed a mandatory test does not mean that you are an imbecile, they are just simply not taking profit of your particular intelligence. (...). It is hard on the self-esteem, and I don't think these people that bullied others had huge self-esteem themselves.

He marvelously went off track to define the kind of school that would be appreciated by anyone; smaller classes (he also joked on having all bullies packed in one class). But bullying is definitely what has caused Alan's high school experience being such a nightmare. He insists on this culture of blaming the victim and how he was constantly told not to provoke the others or trying to be normal: "I felt like a freak, like this inhuman creature. A troublemaker looking for attention".

Alan is still attending therapy to "iron" his "bad habits" such as not respecting people's turns on a conversation. He is also a member of the Fundació Friends, devoted to people with Asperger and their families. Alan has found there his true "troupe of friends". They rarely talk about being "aspie" but spend most of their time talking about topics they are interested in like science and history. They also discuss how anti-intellectualism and anti-science are becoming a thing. He mentions a new association called *Asperger's new life*. He was shocked to see that this association, an organization that

is supposed to know about ASD, listed vaccines as one of the causes of autism: "Is like a wolf becoming the leader of the sheep' syndicate. It's insane."

Just as Carles, Alan has found the way to live an almost normal social life. He has friends, he has a "neurotypical" girlfriend and he is finalizing his university degree in history. Their perseverance in life against all odds, because none of them has had an easy life during their childhood and adolescence, is admirable.

4.3.3 Mireia

The interview with the expert was much less emotional and straight to the point. It is worth noticing that most of the characteristics shown by the teenagers she deals with at the program have many things in common with Alan and Carles: Most of them are male, have experienced some kind of bullying at school and show great interest in sciences, information technology or history. Most of them will eventually go for an engineering degree at university, which is the reason why the first project devoted to the follow up of the ASD community in college from the association called Meetup was implemented at Universitat Politècnica de Barcelona.

One of the main issues pointed out by Mireia is the complex social skills required for social interaction with peers. Many of them have trouble understanding their peers, especially developing reciprocity, which might give their peers the wrong idea that they are not interested in having friends. They also struggle finding someone that shares their similar interests. Adolescence involves identity development, attraction to the opposite sex (or the same sex) and the development of personality. All of them can be very confusing for kids with ASD.

They do not enjoy collaborative working precisely because it requires complex social skills, something that can be managed by working in smaller groups of three people where the kid might feel more comfortable and then progressively increase the number of people as the kid improves his social skills or bonds with some of his peers.

Adolescence is also the period when most of the girls with autism are finally detected. This is due to the fact that girls are better than boys at developing coping strategies to overcome their social impairment. Girls tend to observe and copy, so their diagnosis can go unnoticed until problems emerge later in life, such as in high schools (males are normally diagnosed at six, according to Mireia). Their special interest, in this case, tends to be on natural sciences, or the creative arts: music, drawing, or art history.

Mireia has the impression that meltdown episodes decrease during adolescence, but just because they tend to isolate themselves to block their emotions. The most common trend is their tendency to isolate themselves in a physical space. Most of them have a tough time adapting at the beginning but eventually, with the right support, find their place and befriend someone. The stimming, or self-stimulation behavior (the repetition of physical movements, sounds, words, or moving objects),

is not so present in high school but only because it evolves to another form of self-calming behavior through the rigidity of rituals or their rejection to changes, although some can still experience auditory or tactile hypersensitivity.

When asked about her expert opinion on school improvements to better adapt schools to autistic teenagers she considers the following.

- Regarding the physical space, avoid or prevent spaces with echo (they are terribly annoying for someone on the spectrum).
- Create spaces where they can explore and relax, read. Places where they can take a break when they feel overstimulated.
- Academically, they need more structure on processes, contents, and anticipation. (average kids can actually benefit from this as well)
- Regarding the improvement of peer interaction, just show them how they can interact with someone with on the spectrum. More awareness on the spectrum.

One point that was highlighted by Mireia is the fact that students and teachers alike are not aware of how exhausting a day is for an autistic teenager in high school. Not only the need to concentrate on the academic part with teaching styles that may not adapt to their needs but also because there is all this social part involved, which neurotypical kids master naturally, that it requires a huge deal of energy from their part: reading all the non-verbal cues, remembering how to deal with a specific situation and put it into practice.

5. Intervention Plan: the Unit

5.1. Contextualization

The idea of the unit was developed after reading on the experience of Padrón (2007) on having a student with Asperger in the class. In his book, author tells the case study of Javier, a student with Asperger, and how Padrón managed to create and an optimal environment for him. Parallel to the one-on-one plan with the student, Padrón carried out a line of work with the group intended to improve the curricular and socio-affective competence of all the students, which proved to be very effective in providing an adequate atmosphere for all students to interact with Javier. The idea beneath the story of Padrón is that unless the class has a specific mindset that contributes to the acceptance of all, special needs students included, any intervention that targets the special education student only is likely to fail. To increase awareness and acceptance a strategy is needed.

The unit described here was inspired by a reading itinerary to raise awareness on disability among primary education students developed by Sánchez (2015) called *Read, Understand and Empathize*. The proposed five stage reading is intended to reinforce acceptance, collaboration, self-esteem, integration, and friendship.

The itinerary is based on the current social model of disability, a reaction to the previous medical and rehabilitation models of disability where the focus was on the individual and functional analysis of the body as a machine to be fixed in order to conform with normative values. The social model of disability identifies systemic barriers, negative attitudes, and exclusion by society that position society as the main factor in disabling people.

The present unit is targeted to any of the grades from 1st of ESO to 2nd of Batxillerat. Although the unit has been developed in English, the main focus of the plan is to increase awareness and acceptance on neurodiversity, which means that competences associated with the area of culture and values, more specifically to interpersonal competences, is the priority of this unit. English is subdued to the main purpose of the unit. In this sense, since English is the language used in all written and oral texts, reading and listening competences are, of course, worked in class but not assessed. The only assessment of the unit is the project at the end of it. Students are required to work in groups to present the biography of a neurodivergent individual who has made a positive contribution to the world in whatever format or medium they freely decide to use: a game, a poster, a video, a comic strip, a PowerPoint Presentation, etc. In whatever grade the unit is implemented, students will need to have enough level of English to be able to master the features that a biography entails: the use of compound and complex sentences containing connectives and the past tense. The project can always be simplified to adapt to the level of English. However, there is also the possibility to carry out this unit in another subject where students use either their L1 or L2 (Spanish or Catalan). The book and the film used in

the unit are available in Spanish, a transcript for the Ted Talk is also available in multiple languages and videos on YouTube have subtitles in Spanish.

Although the unit contains 6 sessions it could actually be taken modularly to fit the time constraints of the grade and make it shorter. For example, the film could be removed or given as a homework – as long as the movie can be made available somehow-. Also, should the teacher decide not to do a final assessment, the unit could be finished in 3 sessions. The unit can be implemented during the week of neurodiversity (autism day is April 2) or throughout April (as April is Autism month in the United States, or just implemented whenever considered by the faculty as it could also be included as an appropriate activity in the *Pla d'acció tutorial*.

Following the insights gathered through the surveys and the interviews, the unit focuses on Social interactions aspects: making friends, reciprocity in communication interactions, sensorial experiences from autistic people and also a final session devoted to stereotypes and misconceptions on autism. The learning objectives of sessions 2 and 3, which include activities to develop empathy towards autistic people are:

Session 2: social and communication skills:

1. The challenges some people with autism face in building and maintaining friendships and relationships
2. How anxiety and stress can trigger certain behaviors and impact how they communicate with others.
3. How people with autism and those around them can adapt their behavior to overcome these challenges.

Session 3: Sensorial experiences and stereotypes

1. Identify the sensory challenges faced by a person with autism,
2. Understand the strategies used by individuals to cope with these challenges.
3. Learn how adaptations to the environment can help people with autism.
4. Be able to recognize my own and others' stereotypical and prejudicial attitudes.
5. Be aware of the negative consequences of prejudice and stereotypes.

5.2 The Syllabus Grid

Area: English/ culture and values	Unit: <i>Neurodiversity</i>	Timing: <i>6 sessions</i>	Class: ESO / Batxillerat	School Year:	Teacher:
Dimensions and specific competences			Specific Learning Objectives		
<p><i>1. Oral communicative dimension</i></p> <p>C1. Get information and interpret oral texts</p> <p>C2. Plan and produce oral texts</p> <p>C3. Use oral interaction strategies to <i>communicate</i></p> <p><i>2. Reading comprehension dimension</i></p> <p>C4. Use comprehension strategies to understand</p> <p>C6. Select and use different tools to understand</p> <p><i>Culture and values Area:</i></p> <p><i>Interpersonal Dimension:</i></p> <p>A. Competence 5. Showing attitudes of active respect towards other people, cultures, options, and beliefs.</p>			<p>In this unit, we will explore the concept of Neurodiversity, which refers to variations in the human brain regarding sociability, learning, attention, mood, and other mental functions. Students will explore how people who are “differently wired negotiate, view and interact with the world. The focus will be made on Autism. As students learn about autism through the lens of individuals with autism, they will see the world through their eyes and understand it through their brains in order to increase awareness and acceptance in class.</p>		
Key Contents			Diversity		
<p>CC1. Oral comprehension</p> <p>CC2. Oral comprehension strategies</p> <p>CC4. Oral interaction strategies</p> <p>CC5. Out loud reading</p> <p>CC7. Written comprehension</p> <p>CC8. Written comprehension strategies</p> <p>CC9. Search and management of information</p> <p>CC15. Creative production</p> <p>CC10. Selection criteria and evaluation of information</p> <p>CC12. Adequacy, coherence, and cohesion</p> <p>CC13. Revision, correction, reparation and presentation strategies</p> <p>CC21. Human dignity and respect. Consideration of equality.</p> <p>CC22. Cultural, political, religious and other plurality.</p> <p>CC23. Diversity of identities. The differences and their contexts.</p>			<p>Activities will be carried out as a group mainly so any challenges with comprehension or following up will be addressed right away by the teacher.</p> <p>The end of unit assignments will be handled in heterogenous collaborative work groups designed to better manage diversity as well.</p> <p>The use of visual videos will allow for a better understanding of people with hearing issues. Videos will include subtitles to facilitate comprehension. If deemed necessary transcripts of the text can also be circulated to students</p>		

Session #	Activity	Resources / Material	Skills	Grouping	Time	Key Content	Specific comp.	Evaluation Criteria
1	Warm up: Lesson plan celebrating differences. The teacher asks students questions about normalcy. What does being normal mean? And diversity? Then the teacher writes "neurodiversity" on chart paper and asks students to share what they think it means.		L, S	WG	10'	CC1, CC2, CC4	C1, C4	-
	Introducing Neurodiversity: students watch video amazing things happen ⁵ . An introduction to autism that aims to raise awareness among young non-autistic audiences to stimulate understanding and acceptance.		L, S	WG	5'	CC1, CC2, CC4	C1, C3	-
	The teacher asks if they now any other type of neurodiversity. And then shows posters on celebrities with different types of neurological conditions and we discuss them together to develop a mind map of neurodiversity.		L, S		10'	CC1, CC2, CC4	C1, C3	-
	The teacher briefly introduces the reading of book <i>Look me in the Eye my life with Asperger's from John Elder Robinson</i> where bestseller author defines Asperger syndrome from his own experiences. The teacher explains that Asperger is a former diagnosis for a type of ASD.	worksheet	R, S	WG	5'	CC7, CC8, CC4, CC5	C4	-
	Out-loud reading of the prologue of the book. Students individually mark the words that they don't know and ask the group -or the teacher if nobody knows the answer. We briefly discuss their impressions afterwards.	worksheet	R, S	WG	25'	CC7, CC8, CC4, CC5	C4	-
2	Lesson plan for the day: Autism and social skills. Activity 1: Making friends - Out-loud reading of chapter 2 <i>Permanent Playmate</i> from book <i>Look me in the eye</i> dealing with communication and social interaction. Students individually mark the words that they don't know and ask the group - or the teacher if nobody knows the answer. The teacher asks questions to make sure everybody has understood the text.	worksheet	R, S	WG	25'	CC7, CC8, CC4, CC5 CC21, CC22, CC23.	C4	-
	Activity 2. Interacting in a conversation. Students watch 2-minute clip ⁶ from the documentary <i>Neurotypical: The Last Three Words</i> , in which one of the characters talks about his difficulties in catching verbal cues in a conversation and the strategies he developed. Then we discuss it with the class	Worksheet, computer	R, W	SG	10'	CC9, CC10, CC11, CC12	C4, C7, C8	-
	In the autistic shoes: Social situations activities Activity 3: On foreign land ⁷		L, S	WG	10'	CC1, CC2, CC4, CC21, CC22, CC23.	C1, C3	-

⁵ <https://youtu.be/7JdCY-cdgkl>

⁶ <http://www.pbs.org/pov/neurotypical/video-neurotypical-classroom-clip-the-last-three-words/>

⁷ See annex for session 2

	Exercise to show the problems that people with autism can face when learning the unexplained social rules for new and different situations.							
	Activity 4: how good are you at learning non-verbal cues? Students watch <i>Gestures Around the World: English-Speakers React</i> ⁸ . The teacher will stop the video before gestures are explained to see if any of the students manage to understand gestures from other cultures.		L, S	WG	10'	CC1, CC2, CC4	C1, C3	-
3	Warm Up: Autism and sensory experience. Students watch a scene from TV show <i>Atypical</i> , where Sam, an autistic teenager, gets out of the class after a meltdown (season 2 episode 3) ⁹ . Then, students discuss briefly what they saw. Then students watch the first 2 minutes of <i>Ask an Autistic #15 - What are Autistic Meltdowns?</i> ¹⁰ A video from Amythest, and Autistic writer, public speaker, artist, advocate, and activist.	projector	L	WG	10'	CC1, CC2, CC4.	C1, C4	-
	In the autistic shoes: sensory experience activities ¹¹ <ul style="list-style-type: none"> • Activity 1- Sound: This exercise will show how some people with autism can find noise difficult, especially when they're trying to focus on a task. • Activity 2 - Spatial Awareness: This exercise will show how some people with autism can have problems understanding personal space. • Activity 3- Sight: This exercise will show the impact of bright lights, as well as the distraction created by moving objects. After each activity classes answer questions regarding their experiences. ¹²		R, W	PW, I	25'	CC23, CC1, CC7, CC21, CC22, CC23.	C9	-
	Autism, stigma, and stereotypes. Students watch two videos: <i>Things Not To Say To An Autistic Person</i> ¹³ and <i>How autism freed me to be myself</i> , ¹⁴ a Ted Talk from Rosie King.	Projector, home computer	L	WG	20'	CC1, CC2, CC4, CC21, CC22, CC23.	C1, C4	-

⁸ Gestures Around the World: English-Speakers React <https://youtu.be/CLwsey11GSg>

⁹Atypical S2E3 Sam get out from class scene <https://youtu.be/--fVvV6JeEA>

¹⁰ Ask an Autistic #15 - What are Autistic Meltdowns? <https://youtu.be/FhUDvarzqXE>

¹¹ National Autistic Society (2014). *Full spectrum awareness. A toolkit for understanding autism for secondary school students* London

¹² See annex for a detailed description of the activities and the questions

¹³ Things Not To Say To An Autistic Person <https://youtu.be/d69tTXOvRq4>

¹⁴How autism freed me to be myself https://www.ted.com/talks/rosie_king_how_autism_freed_me_to_be_myself?utm_campaign=tedsread&utm_medium=referral&utm_source=tedcomshare

	Then class discusses together which stereotypes did they mention, and if they actually have thought of them prior to watching the film and also the opinion on the second video.							
4	<p>The teacher also explains the assessment task for session 6: in groups students will have to present a neurodivergent individual who made a positive contribution to the world. The final product can be a poster, a video, a presentation, a game, etc. whatever medium they want to use as long as it covers the requirements on structure and content¹⁵.</p> <p>Then, the teacher introduces the movie <i>Temple Grandin</i>. The movie is a biopic of Temple Grandin, an autistic woman who has become one of the top scientists in the humane livestock handling industry. The movie is intended to review contents already worked in class about ASD with a historic perception of the evolution of the condition and what it meant being a woman with autism in the 50s</p>		L	WG	5'	CC1, CC2, CC4	C1, C4	-
	Students watch <i>Temple Grandin film</i>	projector	L,	WG	50'	CC1, CC21, CC22, CC23.	C4	-
5	Students watch <i>Temple Grandin film</i>	projector	L,	WG	55'	CC1, CC21, CC22, CC23.	C4	-
6	Students present their group project in front of the class (based on 5 groups presenting their project in 10 minutes each)	computer	L	I	55'	CC7, CC8, CC9, CC15, CC10, CC12, CC13.	C1, C4	Specific rubric ¹⁶

Grouping: WG (Whole Group), I (Individually), PW (Pair Work), SG (Small groups)

¹⁵ See annex for structure and rubric

¹⁶ See annex

6. Conclusions

Due to time constraints, the intervention plan could not be tested in a real class setting, which would have allowed assessing the main hypothesis of this paper: Can we change the attitudes towards people with ASD using different narratives? The answer to this question will need to be assessed in the future. However, the tests and interviews conducted to prepare the intervention plan provided a picture – or a glimpse- of the current status of the topic in Catalan high school settings. Results can be taken as a benchmark in future studies that I hope will eventually follow due to the enormous gap shown in this regard when I started the research. There is, of course, the limitation on the number of respondents for the test: a much bigger sample of teachers and students would have provided more reliable data in quantitative terms.

Regarding the tests used, the translation of the original surveys might have influenced some way the results obtained. Testing the questions and reviewing it accordingly prior send it out is strongly suggested. The choice of the surveys used had to do with the recommendation from Harrison (2016) that science requires the use of “well-established measures” in order to allow for comparison, the other important rule being that such measures need high internal consistency. However, even if I share the well-established measure golden rule I do agree with the group of researchers of the test used here that “An autism knowledge scale with better psychometric properties is needed and could be developed by attending to patterns of responses to a range of qualitative and quantitative questions about autism” (Gillispie-Lynch et al. 2015, p 2563).

Concerning the results of the teachers' survey, the levels of knowledge were better than expected, especially when compared with the results from students. The level of accuracy was quite high in most of the statements, nevertheless, there is still some work that needs to be carried out to change misconceptions on empathy and friendship they have regarding people with autism. Awareness is especially important in primary education settings, where early detection and therapy can have a huge impact on the development of kids and how well they will develop further in life. However, teachers in secondary schools are also important as they deal with teenagers in a time in their lives where they are especially vulnerable and they have a huge role to play in the successful education and inclusion of ASD teenagers. Therefore, even if teachers get reasonable good grades in most of the statements, schools cannot afford to have faculty teams resting on the laurels, nor having teachers taking care of their own training on how to handle students with special needs. An alarming number of teachers (87%) did not receive any training on ASD, but they are expected to deal with kids having ASD.

There are, of course, external resources provided by the Departament d'Ensenyament, but they are scarce and are not practical to use on a daily basis. If I can use an analogy to better explain this: If you don't have a car and you need to drive somewhere, even If you know someone specialized in

professional race driving, you cannot ask to drive you out every single time, especially if you most certainly have to share the resource with the rest of non-drivers.

Teaching teachers deal with neurodivergent environments on a daily basis (and that means having students with dyslexia, dyscalculia, ASD, ADHD, just to name a few) need training to empower them to a better job. The inclusive school manifesto won't work unless resources are provided. In this sense, even if the majority of respondents have favorable opinions on inclusive schools, 51% of them still think that having a teacher assistant (un vetllador) is an important factor for successful inclusion. Teacher assistants are very much used with special education needs students in primary school settings, but when ASD students reach high school they have normally gained enough autonomy as not to be needed anymore. The teacher-assistant statement shows some insecurities that could be solved with proper training.

Regarding students' survey results, the main conclusion from the analysis of the data is that there is indeed a need for awareness campaigns on ASD as there are huge gaps in knowledge that need to be addressed if inclusion needs to be implemented successfully. No correlation between awareness and stigma were found in this research, but as already mentioned, it is hard to have negative attitudes on something you don't know it exists. The lack of correlation between high knowledge and attitudes is consistent with previous research conducted in the US. However, the contexts are quite different. In the United States, but also in the UK, there is a higher awareness of autism at all levels of society, but also in schools. Having kids on the spectrum in class and peers knowing it is something that has been occurring for quite a while. Therefore, it does make sense to test awareness and stigmatization of people with ASD when the condition is so visible.

In Catalan high school contexts, but in our society in general, there is no visibility of autism. Many students might already have had contact with someone with ASD but not being aware of that as diagnoses are kept secret: it is up to the student to disclose his or her diagnoses to their peers. So far, it rarely happens as kids might normally be afraid of the consequences of such levels. However, as the neurodiversity movement consolidates in Catalonia making kids self-aware of their identities, we might see a change in the near future. The interviews with Alan and specially Carles show an embryonic movement in this direction. They both made it quite clear how finally having a label they could embrace, a name to what they were, was in many senses liberating. It allows them to make sense of themselves and relate to a community of people that shared their same issues and interests. This self-empowerment as a first step in improving the lives of people with ASD needs to be followed by a higher level of acceptance from the communities and societies they belong. Society needs to embrace difference as the new "normalcy" the same way we just recently realized in western societies that change is the only invariable constant.

When preparing the intervention plan, I was amazed to find so many resources in English and so many experiences. The fact that social media is full of people in the spectrum sharing their views, not only on neurodiversity, but also on topics that had nothing to do with autism, made it very easy for

me to prepare the unit, but also made me realize that there is a long way to walk to reach the level of visibility, awareness and acceptance accomplished by our Anglo-Saxon counterparts. The good thing about being so much behind is that we can benefit from the experiences and knowledge they have to gather throughout the years.

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Annexes

Annex 1: Teachers survey

Link: <https://susannaherrera.typeform.com/to/EVnfyT>

Section 1. Demographic information and experience

1. Gènere

Home Dona Tercer gènere/no binari

2. Edat

< 25 25 – 29 30 – 34 35 – 39 40 – 44
 45 – 49 50 – 54 54 – 59 >60

3. Anys d'experiència en ensenyament

Menys de 5 anys 5–10 anys 11 - 15 anys
 Més de 15 anys

4. Has tingut a l'aula alumnes amb un Trastorn de l'Espectre Autista (TEA)? Sí/No

5. Has rebut una formació específica per ensenyar a alumnes amb un TEA? Sí/No

6. Fora de l'entorn escolar, has sentit el terme o has rebut informació sobre els TEA? Sí/No

7. En cas afirmatiu, en quin context has sentit el terme o has rebut informació sobre els TEA?

Per un familiar Per un amic / amiga
 Al metge A la televisió
 Per internet En una revista /premsa
 A les xarxes socials A la ràdio

8. Fora del context de l'escola, coneixes algú diagnosticat amb un TEA? Sí/No

9. En cas afirmatiu, marca totes les opcions que consideris oportunes

jo mateix / jo mateixa un familiar
 un amic / amiga un company /companya
 un conegut /coneguda

Section 2. Autism Awareness Scale

Response choices included Molt en desacord (-2), En desacord (-1), No estic d'acord ni en desacord (0), D'acord (1), Completament d'acord (2).

Note: Questions 2 and 15 were added to the scale from Gillespie-Lynch. Bolded items are reverse scored.

1. El TEA es diagnostica amb més freqüència en homes que en dones.

2. Les persones amb TEA tenen dificultats de comunicació i interacció social, i tendeixen a realitzar conductes repetitives

3. Els nens amb TEA no mostren vincles, ni tan sols cap als seus pares o cuidadors.

4. Les persones amb TEA són deliberadament poc col·laboradores.

5. Molts nens diagnosticats amb TEA poden arribar a anar a la universitat i casar-se de grans

6. Hi ha un tipus d'intervenció que funciona per a totes les persones amb TEA

7. El TEA es pot diagnosticar a partir dels 15 mesos d'edat.

8. Amb el tractament adequat, la majoria dels nens diagnosticats amb TEA acabaran per superar el trastorn

9. Les persones amb TEA mostren afecte

10. La major part de persones amb TEA té un nivell d'intel·ligència baix.

11. Els nens amb TEA esdevindran adults amb TEA

12. Les persones amb TEA solen ser violentes

13. Les persones amb TEA generalment no tenen interès en tenir amics

14. Les persones amb TEA tenen empatia

15. La Síndrome d'Asperger és un tipus de TEA

Section 3: Opinions about Inclusive Education

Response choices included *Totalment en desacord*, *En desacord*, *Una mica en desacord*, *sense opinió o neutral* *una mica d'acord*, *d'acord*, *Completament d'acord*.

1. Un factor important en la inclusió amb èxit d'un estudiant amb un TEA és:
 1. L'ajuda d'un vetllador
 2. La capacitat acadèmica de l'estudiant
 3. La gravetat del trastorn
 4. La personalitat de l'estudiant
 5. L'actitud del personal de l'escola
 6. Una intervenció individualitzada
 7. Fomentar la interacció dels estudiants amb un TEA amb la resta de companys
 8. Les classes de reforç
 9. Fomentar la interacció dels estudiants amb un TEA amb la resta de companys
 10. La medicació i la teràpia farmacològica
2. En un entorn escolar, només els professors amb llarga experiència en educació especial haurien de tractar amb estudiants amb un TEA.
3. L'educació inclusiva millora l'experiència d'aprenentatge dels estudiants amb TEA
4. Un bon professor d'educació secundària pot fer molt per ajudar un estudiant amb un TEA.
5. Els estudiants sense necessitats especials poden beneficiar-se del contacte amb estudiants amb un TEA.
6. Les escoles especials dissenyades específicament per a les seves necessitats són el lloc més adequat per als estudiants amb un TEA.
7. És important que els nens amb un TEA rebin serveis d'educació especial a l'escola

Annex 2: Students survey

Link: <https://susannamherreratypeform.com/to/xONUot>

Section 1. Demographic information and experience

1. Gènere
 Home Dona Tercer gènere/no binari
2. Curs
 1r ESO 2n ESO 3r ESO
 4RT ESO 1r Batxillerat 2n Batxillerat
3. Has sentit a parlar del Trastorn de l'Espectre Autista (TEA)? Sí/No
4. En quin context has sentit el terme o has rebut informació sobre el TEA? Respon només si has respost "Sí" a la pregunta anterior, si no, salta a la següent pregunta
 A casa Per un amic / amiga
 Al metge A l'escola
 A la televisió Per internet
 En una revista / diari A les xarxes socials
 A la ràdio
5. Coneixes algú diagnosticat amb un TEA? Sí / No
6. En cas afirmatiu, marca totes les opcions que consideris oportunes
 jo mateix / jo mateixa un familiar
 un amic / amiga un company / companya
 un conegut / coneguda

Section 2. Autism Awareness Scale

Response choices included *Molt en desacord* (-2), *En desacord* (-1), *No estic d'acord ni en desacord* (0), *D'acord* (1), *Completament d'acord* (2).

Note: We added questions 2 and 15 to the scale from Gillespie-Lynch. Bolded items are reverse scored. El TEA es diagnostica amb més freqüència en homes que en dones.

1. El TEA es diagnostica amb més freqüència en homes que en dones.
2. Les persones amb TEA tenen dificultats de comunicació i interacció social, i tendeixen a realitzar conductes repetitives
3. **Els nens amb TEA no mostren vincles, ni tan sols cap als seus pares o cuidadors.**
4. **Les persones amb TEA són deliberadament poc col·laboradores.**
5. Molts nens diagnosticats amb TEA poden arribar a anar a la universitat i casar-se de grans
6. **Hi ha un tipus d'intervenció que funciona per a totes les persones amb TEA**
7. El TEA es pot diagnosticar a partir dels 15 mesos d'edat.

8. **Amb el tractament adequat, la majoria dels nens diagnosticats amb TEA acabaran per superar el trastorn**
9. Les persones amb TEA mostren afecte
10. **La major part de persones amb TEA té un nivell d'intel·ligència baix.**
11. Els nens amb TEA esdevindran adults amb TEA
12. **Les persones amb TEA solen ser violentes**
13. **Les persones amb TEA generalment no tenen interès en tenir amics**
14. Les persones amb TEA tenen empatia
15. La Síndrome d'Asperger és un tipus de TEA

Section 3: Social Distance scale


Responses ranged from 1 to 4, being 1 unwilling (gens disposat) and 4 definitely willing (totalment disposat)

1. Fins a quin punt estaries disposat/da a mudar-te al pis del costat d'una persona amb TEA?
2. Fins a quin punt estaries disposat/da a passar una nit socialitzant amb una persona amb TEA?
3. Fins a quin punt estaries disposat/da a iniciar un projecte col·laboratiu amb una persona amb TEA?
4. Fins a quin punt estaries disposat/da a ser amic/amiga d'una persona amb TEA?
5. Fins a quin punt estaries disposat/da a tenir un familiar casat amb una persona amb TEA?
6. Fins a quin punt estaries disposat/da a casar-te o tenir un a parella sentimental amb TEA?

Annex Session 1: Celebrating Differences - Posters Celebrities and Neurodiversity¹⁷

Posters were downloaded from the website <https://www.neurodiversity-celebration-week.com> an initiative by Siena Castellon, a sixteen year old nationally-recognized neurodiversity advocate, who is also autistic, dyslexic, dyspraxic and has ADHD.


**Did you know
Keira Knightley
is dyslexic?**



**“I have always been
really creative.”**
- Keira Knightley (Actress)

Neurodiversity Celebration Week

**Did you know
Channing Tatum
has ADHD?**



**“I’ve always had way too much
energy so I’m always looking for new
things to do to channel that energy.”**
- Channing Tatum (Actor)

Neurodiversity Celebration Week


**Did you know that
Greta Thunberg
is autistic and has ADHD?**



**“Being different is a gift. If I would’ve
been like everyone else, I wouldn’t
have started this school strike.”**
- Greta Thunberg (Climate Activist)

Neurodiversity Celebration Week


**Did you know that
Orlando Bloom
was dyslexic?**



**“Creativity is the key for any child
with dyslexia - or for anyone, for
that matter. Then you can think
outside of the box.”**
- Orlando Bloom (Actor)

Neurodiversity Celebration Week


**Did you know
Will.i.am
has ADHD?**



**“Music brings control to my thoughts.
I am here to let you know that you can
be anything you want to be.”**
- Will.i.am (Singer / Producer)

Neurodiversity Celebration Week

**Did you know
Justin Timberlake
has ADHD?**



**“You cannot make a difference
unless you’re different.”**
- Justin Timberlake (Singer / Producer / Actor)

Neurodiversity Celebration Week

¹⁷Source, resource section at : <https://www.neurodiversity-celebration-week.com>

Did you know
Emma Watson
has ADHD?



"I don't want other people to decide what I am. I want to decide that for myself."
- Emma Watson (Actress / Activist)

Neurodiversity Celebration Week

Did you know
Justin Bieber
has ADHD?



"Believe you can achieve."
- Singer / Songwriter

Neurodiversity Celebration Week

Did you know
Ryan Gosling
has ADHD?



"I've learned it's important not to limit yourself. You can do whatever you really love to do, no matter what it is."
- Ryan Gosling (Actor)

Neurodiversity Celebration Week

Did you know that
Cara Delevingne
is dyspraxic?



"Don't worry. Be Happy. Embrace your weirdness."
- Cara Delevingne (Actress / Model)

Neurodiversity Celebration Week

Did you know that
Daniel Radcliffe
is dyspraxic?



"It has never held me back. Some of the smartest people I know are people who have learning disabilities."
- Daniel Radcliffe (Actor)

Neurodiversity Celebration Week

Did you know that
the creator of **Pokémon**
is autistic?



Satoshi Tajiri has attributed his creativity, passion, relentless focus and drive to being autistic.

Neurodiversity Celebration Week

Annex Session 1: *Look me in the Eye my life with Asperger's* – John E. Robison - Prologue

Presentation before starting the reading (extracted from Taylor and Connor)

“*Look Me in the Eye*, published in 2007, is a memoir of John Elder Robison’s unique life. The tale chronicles a man with Asperger’s syndrome and the challenges he has faced throughout his life. From loneliness as a child to finding his niche in the world as an adult, *Look Me in the Eye* exemplifies what it means to see the world from a different lens and persevere. The book provides a first-hand account of what it is like to live isolated from emotion and socialization.

Robison was born in Athens, GA in 1957. The eldest son with two psychiatrically ill parents, Robison found himself with a disjointed childhood. His poet mother, Margaret, lived with severe depression. John, his father, a professor at the University of Massachusetts, lived with alcoholism that eventually caused his death. At the age of sixteen Robison left home after experiencing years of maltreatment.” (Taylor, 2016, p.1)¹⁸

In what is probably an unparalleled mainstream success to date, John Elder Robison’s *Look Me in the Eye: My Life with Asperger’s Syndrome* (2007) became a New York Times best seller. Initially a ‘real’ character in his brother’s best-selling book *Running With Scissors*, Burroughs (2002) encouraged John to pen his own narrative due to the level of interest readers have expressed about Asperger Syndrome. In his own book, Robison describes that, unsolicited, he is informed by a regular customer of his luxury car repair business (who happens to be a doctor) that he probably has Asperger Syndrome.”

“Robison (2007, 236) is told, ‘It’s not a disease . . . it doesn’t need curing. It’s just how you are’. Robison later shares, ‘. . . I spent many years adapting to a condition I didn’t know I had. Learning about AS was truly a life-transforming experience’ (238). Until that point, he had not been able to understand his life-long ‘anti-social’, ‘inadequate’, ‘self-absorbed’, ‘peculiar’ behavior and all of the anxieties that paradoxical self-awareness of his general unawareness of social situations brought.” (Connor, 2013, p. 121)¹⁹

Teacher also explains how Asperger Syndrome is now included in the Autistic Spectrum Disorder, but how there is a community of autistic people that still likes to call themselves “Aspies”, as a self-identity label.

Prologue

“Look me in the eye, young man!”

I cannot tell you how many times I heard that shrill, whining refrain. It started about the time I got to first grade. I heard it from parents, relatives, teachers, principals, and all manner of other people. I heard it so often I began to expect to hear it.

Sometimes it would be punctuated by a jab from a ruler or one of those rubber-tipped pointers teachers used in those days. The teachers would say, “Look at me when I’m speaking to you!” I would squirm and continue looking at the floor, which would just make them madder. I would glance up at their hostile faces and feel squirmier and more uncomfortable and unable to form words, and I would quickly look away.

My father would say, “Look at me! What are you hiding?”

“Nothing.”

¹⁸ Taylor, Krystle M. (2016). *Look Me in the Eye: My Life With Asperger's*. *Rehabilitation Research, Policy* 30(1): 107-108. (2p)

¹⁹ Connor, D.J. (2013). *Kiss my Asperger's: Turning the tables of knowledge*. *International Journal of Inclusive Education*. 17(2):111-129)

If my father had been drinking, he might interpret “nothing” as a smart-aleck answer and come after me. By the time I was in grade school, my father was buying his Gallo wine by the gallon jug, and he had made a pretty big dent in a jug every evening before I went to bed. He kept drinking long into the night, too.

He would say, “Look at me,” and I would stare at the abstract composition of empty wine bottles stacked behind the chair and under the table. I looked at anything but him. When I was little, I ran and hid from him, and sometimes he chased me while waving his belt. Sometimes my mother would save me, sometimes not. When I got bigger and stronger and amassed a formidable collection of knives (about age twelve), he realized I was becoming dangerous and quit before coming to a bad end over “Look me in the eye.”

Everyone thought they understood my behavior. They thought it was simple: I was just no good.

“Nobody trusts a man who won’t look them in the eye.” “You look like a criminal.”

“You’re up to something. I know it!”

Most of the time, I wasn’t. I didn’t know why they were getting agitated. I didn’t even understand what looking someone in the eye meant. And yet I felt ashamed, because people expected me to do it, and I knew it, and yet I didn’t. So what was wrong with me?

“Sociopath” and “psycho” were two of the most common field diagnoses for my look and expression. I heard it all the time: “I’ve read about people like you. They have no expression because they have no feeling. Some of the worst murderers in history were sociopaths.”

I came to believe what people said about me, because so many said the same thing, and the realization that I was defective hurt. I became shyer, more withdrawn. I began to read about deviant personalities and wonder if I would one day “go bad.” Would I grow up to be a killer? I had read that they were shifty and didn’t look people in the eyes.

I pondered it endlessly. I didn’t attack people. I didn’t start fires. I didn’t torture animals. I had no desire to kill anyone. Yet. Maybe that would come later, though. I spent a lot of time wondering whether I would end up in prison. I read about them and determined that the federal ones were nicer. If I were ever incarcerated, I hoped for a medium-security federal prison, not a vicious state prison like Attica.

I was well into my teenage years before I figured out that I wasn’t a killer, or worse. By then, I knew I wasn’t being shifty or evasive when I failed to meet someone’s gaze, and I had started to wonder why so many adults equated that behavior with shiftiness and evasiveness. Also, by then I had met shifty and scummy people who did look me in the eye, making me think the people who complained about me were hypocrites.

To this day, when I speak, I find visual input to be distracting. When I was younger, if I saw something interesting I might begin to watch it and stop speaking entirely. As a grown-up, I don’t usually come to a complete stop, but I may still pause if something catches my eye. That’s why I usually look somewhere neutral -at the ground or off into the distance- when I’m talking to someone. Because speaking while watching things has always been difficult for me, learning to drive a car and talk at the same time was a tough one, but I mastered it.

And now I know it is perfectly natural for me not to look at someone when I talk. Those of us with Asperger’s are just not comfortable doing it. In fact, I don’t really understand why it’s considered normal to stare at someone’s eyeballs.

It was a great relief to finally understand why I don’t look people in the eye. If I had known this when I was younger, I might have been spared a lot of hurt.

SIXTY YEARS AGO, the Austrian psychiatrist Hans Asperger wrote about children who were smart, with above average vocabulary, but who exhibited a number of behaviors common to people with autism, such as pronounced deficiencies in social and communication skills. The condition was named Asperger’s syndrome in 1981. In 1984, it was added to the Diagnostic and Statistical Manual of Mental Disorders used by mental health professionals.

Asperger's has always been with us, but it's a condition that has flown under the radar until quite recently. When I was a child, mental health workers incorrectly diagnosed most Asperger's as depression, schizophrenia, or a host of other disorders.

Asperger's syndrome isn't all bad. It can bestow rare gifts. Some Aspergians have truly extraordinary natural insight into complex problems. An Aspergian child may grow up to be a brilliant engineer or scientist. Some have perfect pitch and otherworldly musical abilities. Many have such exceptional verbal skills that some people refer to the condition as Little Professor Syndrome. But don't be misled - most Aspergian kids do not grow up to be college professors. Growing up can be rough.

Asperger's exists along a continuum -some people exhibit the symptoms to such a degree that their ability to function alone in society is seriously impaired. Others, like me, are affected mildly enough that they can make their own way, after a fashion. Some Aspergians have actually been remarkably successful by finding work that showcases their unique abilities.

And Asperger's is turning out to be surprisingly common: A February 2007 report from the federal Centers for Disease Control and Prevention says that 1 person in 150 has Asperger's or some other autistic spectrum disorder. That's almost two million people in the United States alone.

Asperger's is something you are born with -not something that happens later in life. It was evident in me at a very early age, but, unfortunately, no one knew what to look for. All my parents knew was that I was different from the other kids. Even as a toddler, an observer would have thought that I was not quite right. I walked with a mechanical, robotic gait. I moved clumsily. My facial expressions were rigid, and I seldom smiled. Often I failed to respond to other people at all. I acted as if they weren't even there. Most of the time, I stayed alone, in my own little world, apart from my peers. I could be completely oblivious to my surroundings, totally absorbed in a pile of Tinkertoys. When I did interact with other kids, the interactions were usually awkward. I seldom met anyone's gaze.

Also, I never sat still; I bobbed and weaved and bounced. But with all that movement, I could never catch a ball or do anything athletic. My grandfather was a track star in college, a runner- up for the United States Olympic Team. Not me!

If I were a child today, it is possible that an observer would pick up on these things and refer me for evaluation, thereby saving me from the worst of the experiences I describe in this book. I was, as my brother said, raised without a diagnosis.

It was a lonely and painful way to grow up.

Asperger's is not a disease. It's a way of being. There is no cure, nor is there a need for one. There is, however, a need for knowledge and adaptation on the part of Aspergian kids and their families and friends. I hope readers- especially those who are struggling to grow up or live with Asperger's- will see that the twists and turns and unconventional choices I made led to a pretty good life, and will learn from my story.

It took a long while for me to get to this place, to learn who I am. My days of hiding in the corner or crawling under a rock are over. I am proud to be an Aspergian.

Annex Session 2: *Look me in the Eye my life with Asperger's* – John E. Robinson –

Chapter 2: A permanent Playmate

“John Elder, we’re going to move back to Pennsylvania,” my father announced one day when he came home from school. I was more interested in the pile of silver dollars I had just discovered in his drawer. They were old and heavy, and some were from the 1880s. But he insisted on telling me about moving. He took the silver dollar out of my hand and said it again.

“John Elder, we’re moving soon!”

Taking the silver dollar away did get my attention. But as I think back on events like this, I realize my parents were not always very affectionate toward me. Did they even want a child? I’ll never know.

With my attention now on my father, I asked, “Are we moving to the same place we lived before?”

“No, this time it’s Pittsburgh,” my father said. He thought he’d found a permanent job. I’d be starting first grade in the Pittsburgh schools, with a new pack of kids. I was sad to say good-bye to my friend Jeff, but I wasn’t very happy in Seattle, so I didn’t mind moving away.

I had learned something from my humiliations at the hands of Ronnie Ronson and Chuckie and all the other kids I’d tried and failed to make friends with. I was starting to figure out that I was different. But I had a positive outlook. I would make the best of my lot in life as a defective child.

In Pittsburgh, I finally started learning how to make friends. I knew now that kids and dogs were different. I didn’t try to pet kids anymore, or poke them with sticks. And at nine years of age, I had a life-changing revelation.

I figured out how to talk to other children.

I suddenly realized that when a kid said, “Look at my Tonka truck,” he expected an answer that made sense in the context of what he had said. Here were some things I might have said prior to this revelation in response to “Look at my Tonka truck”:

- a) “I have a helicopter.”
- b) “I want some cookies.”
- c) “My mom is mad at me today.”
- d) “I rode a horse at the fair.”

I was so used to living inside my own world that I answered with whatever I had been thinking. If I was remembering riding a horse at the fair, it didn’t matter if a kid came up to me and said, “Look at my truck!” or “My mom is in the hospital!” I was still going to answer, “I rode a horse at the fair.” The other kid’s words did not change the course of my thoughts. It was almost like I didn’t hear him. But on some level, I did hear, because I responded. Even though the response didn’t make any sense to the person speaking to me.

My new understanding changed that. All of a sudden, I realized that the response the kid was looking for, the correct answer, was:

- e) “That’s a neat truck! Can I hold it?”

Even more important, I realized that responses A, B, C, and D would annoy the other kid. With my new found social brilliance, I understood why Ronnie’s cowboys hadn’t wanted to talk to me. Maybe that was why Chuckie had ignored me, too. (Or maybe Chuckie was just another defective kid, like me. After all, she did like trucks, and she did look at the dirt when I talked.) After I suddenly got it, my answers made sense- most of the time. I wasn’t ready to be

the life of the party, but I was able to participate. Conversations no longer came to a screeching halt. Things were getting better.

In some ways, the grown-ups around me had actually kept me from figuring this out sooner. Adults –almost all family members or friends of my parents- would approach me and say something to start a conversation. If my response made no sense, they never told me. They just played along. So I never learned how to carry on a conversation from talking to grown-ups, because they just adapted to whatever I said. Kids, on the other hand, got mad or frustrated.

How do normal kids figure this out? They learn it from seeing how other kids react to their words, something my brain is not wired to do. I have since learned that kids with Asperger's don't pick up on common social cues. They don't recognize a lot of body language or facial expressions. I know I didn't. I only recognized pretty extreme reactions, and by the time things were extreme, it was usually too late.

With my incredible new skills, I made friends right away. I met the Meyers girls across the street, Christine and Lisa. I made friends with Lenny Persichetti, five doors down. We formed a kid pack, playing hide-and-seek and building forts in the woods. We hung out in the garage behind our house, where some older kids had formed a band. My new friends and I roamed the neighborhood, exploring things without our parents for the first time. Lenny and I found abandoned castles and ruins and ancient machinery hidden in the woods of Frick Park. There were all sorts of things to explore.

That summer, we became Big Kids. We were free. No one was watching us. I loved it, because all of a sudden, I was no longer alone. Then I got another big surprise.

Annex Session 2: Autism and social skills. In the autistic shoes: Social situations activitie

Activity 3: On foreign land

Exercise to show the problems that people with autism can face when learning the unexplained social rules for new and different situations.

Learning objectives

To understand:

1. the challenges some people with autism face in building and maintaining friendships and relationships
2. how anxiety and stress can trigger certain behaviors and impact how they communicate with others
3. how people with autism and those around them can adapt their behavior to overcome these challenges.

Task: A volunteer walks out of the room for a moment while the teacher explains the game. The class is an invented country named Aedion (backward for no idea). In this country, it is customary that when you greet someone you touch your nose as a sign of respect. People will stare at you and not say anything until you touch your nose. In Aedion is also very rude to touch someone's hands when greeting them, so people will be upset or confused if you do.

The only thing the volunteer will be told before entering the room is that he/she is an exchange student in a foreign country and that he/she is going to meet their peers in class for the first time and the hat has to introduce himself/herself. When in the room, the volunteer mustn't ask any questions. Other students stare at them for a minute without saying a Word.

Then we discuss how the volunteer felt not knowing what to do or understanding other peoples' reactions

Annex Session 3: In the autistic shoes: sensory experience activities²⁰

Learning objectives: Students will carry out different activities designed to:

1. identify the sensory challenges faced by a person with autism,
2. understand the strategies used by individuals to cope with these challenges.
3. learn how adaptations to the environment can help people with autism.

Activity 1: Sound

This exercise will show how some people with autism can find noise difficult, especially when they're trying to focus on a task.

Task: The volunteer recites their weakest times table.

Meanwhile other students create distractions and noise by: scraping chairs, making verbal noises, clicking their fingers, playing musical instruments

This exercise should last up to one minute.

Question

1. How did you try to concentrate?
2. How did you react to the noise?
3. How would noises at school cause you difficulties when trying to concentrate on different tasks?

People with autism may be hypersensitive to noise and find it difficult to filter out noises that other people can simply block out or ignore. As a result, they may be unable to focus and have to leave the classroom. They may go into a state of sensory overload in which the stimuli around them become too much to cope with. Sensory overload can trigger a 'meltdown'. Meltdowns may include extreme outbursts of emotion, such as sadness in the form of crying, or anger in the form of snapping or shouting.

However, some people with autism who are hyposensitive (under-sensitive) to sound may want to make more noise as a reaction to something that they feel is a pleasurable sensation.

4. What do you think would have helped someone with autism deal with a noisy environment better?
Someone could have given him headphones or ear defenders to block out the noise.

Activity 2: Spatial Awareness

This exercise will show how some people with autism can have problems understanding personal space.

Task: The volunteer must quickly learn to focus on finding the exit to avoid bumping into more people and becoming increasingly disorientated and anxious. The participant is blindfolded. Another class member spins them around. Then, they walk to a designated spot whilst spelling out their first name and surname forwards then backwards.

Questions

1. Where in school could you find a similar situation like the one in this exercise?

A sports hall, library or dining room can be very crowded. Moving through tight school corridors between lessons can also cause problems due to the amount of people in close proximity to one another.

²⁰ Activities are from the resource National Autistic Society (2014). *Full spectrum awareness. A toolkit for understanding autism for secondary school students* London, available at <https://www.autism.org.uk/get-involved/campaign/england/young-campaigners-group/our-resources/full-spectrum.aspx>

2. Can you think of places around town where this could also be a challenge and why?

Going to the supermarket or a busy station where there are a large amount of people going in different directions in close proximity to one another. It is important to note that some people with autism will seek out locations with a lot of noise because they are hyposensitive to noise.

Activity 3: Sight

This exercise will show the impact of bright lights, as well as the distraction created by moving objects.

Task: The room is as dark as possible. The participant is asked to name capital cities. Meanwhile, lights flash on and off. Other students wave and flick their finger in front of the participant's face.

- 1- How did you try to concentrate?
- 2- Did you find any of the light painful and if so, why?

- 3- Can you think of situation where lights flicker or turn on and off constantly?
Discos, theatres, cinemas, stadiums or other settings where light is used for entertainment purposes.
Classrooms or offices may use lights with different intensities that can also cause problems, as this means that a person with autism has make constant adjustments to adapt to the changing environment.

- 4- People with autism can find bright lights such as fluorescent lights irritating and even harmful. What adaptations could be made to those lights to make them more bearable?
Filters or shades could be installed to dim the glare of the lights or move the beam upwards instead of downwards. Alternatively, light emitting diode (LED) bulbs could be installed instead of energy saving lightbulbs.

Annex Session 4: Transcript from Ted Talk How autism freed me to br myself, from Rosie King.

I haven't told many people this, but in my head, I've got thousands of secret worlds all going on all at the same time. I am also autistic.

00:11

People tend to diagnose autism with really specific check-box descriptions, but in reality, it's a whole variation as to what we're like. For instance, my little brother, he's very severely autistic. He's nonverbal. He can't talk at all. But I love to talk. People often associate autism with liking maths and science and nothing else, but I know so many autistic people who love being creative. But that is a stereotype, and the stereotypes of things are often, if not always, wrong. For instance, a lot of people think autism and think "Rain Man" immediately. That's the common belief, that every single autistic person is Dustin Hoffman, and that's not true.

01:00

But that's not just with autistic people, either. I've seen it with LGBTQ people, with women, with POC people. People are so afraid of variety that they try to fit everything into a tiny little box with really specific labels. This is something that actually happened to me in real life: I googled "autistic people are ..." and it comes up with suggestions as to what you're going to type. I googled "autistic people are ..." and the top result was "demons." That is the first thing that people think when they think autism. They know. (Laughter)

01:44

One of the things I can do because I'm autistic — it's an ability rather than a disability — is I've got a very, very vivid imagination. Let me explain it to you a bit. It's like I'm walking in two worlds most of the time. There's the real world, the world that we all share, and there's the world in my mind, and the world in my mind is often so much more real than the real world. Like, it's very easy for me to let my mind loose because I don't try and fit myself into a tiny little box. That's one of the best things about being autistic. You don't have the urge to do that. You find what you want to do, you find a way to do it, and you get on with it. If I was trying to fit myself into a box, I wouldn't be here, I wouldn't have achieved half the things that I have now. There are problems, though. There are problems with being autistic, and there are problems with having too much imagination. School can be a problem in general, but having also to explain to a teacher on a daily basis that their lesson is inexplicably dull and you are secretly taking refuge in a world inside your head in which you are not in that lesson, that adds to your list of problems. (Laughter) Also, when my imagination takes hold, my body takes on a life of its own. When something very exciting happens in my inner world, I've just got to run. I've got to rock backwards and forwards, or sometimes scream. This gives me so much energy, and I've got to have an outlet for all that energy. But I've done that ever since I was a child, ever since I was a tiny little girl. And my parents thought it was cute, so they didn't bring it up, but when I got into school, they didn't really agree that it was cute. It can be that people don't want to be friends with the girl that starts screaming in an algebra lesson. And this doesn't normally happen in this day and age, but it can be that people don't want to be friends with the autistic girl. It can be that people don't want to associate with anyone who won't or can't fit themselves into a box that's labeled normal. But that's fine with me, because it sorts the wheat from the chaff, and I can find which people are genuine and true and I can pick these people as my friends.

04:01

But if you think about it, what is normal? What does it mean? Imagine if that was the best compliment you ever received. "Wow, you are really normal." (Laughter) But compliments are, "you are extraordinary" or "you step outside the box." It's "you're amazing." So if people want to be these things, why are so many people striving to be

normal? Why are people pouring their brilliant individual light into a mold? People are so afraid of variety that they try and force everyone, even people who don't want to or can't, to become normal. There are camps for LGBTQ people or autistic people to try and make them this "normal," and that's terrifying that people would do that in this day and age.

04:50

All in all, I wouldn't trade my autism and my imagination for the world. Because I am autistic, I've presented documentaries to the BBC, I'm in the midst of writing a book, I'm doing this — this is fantastic — and one of the best things that I've achieved, that I consider to have achieved, is I've found ways of communicating with my little brother and sister, who as I've said are nonverbal. They can't speak. And people would often write off someone who's nonverbal, but that's silly, because my little brother and sister are the best siblings that you could ever hope for. They're just the best, and I love them so much and I care about them more than anything else. I'm going to leave you with one question: If we can't get inside the person's minds, no matter if they're autistic or not, instead of punishing anything that strays from normal, why not celebrate uniqueness and cheer every time someone unleashes their imagination?

05:48

Thank you.

05:50

(Applause)

Annex: final project rubric and requirement

Required contents of the final project asset (video, presentation, poster, comic strip, game, etc.)

- Name of the Person
- Birth Date
- Place of Birth
- Death Date
- Place of Death
- Childhood and Adolescence
- Adult Life
- Notable Achievements
- Famous For
- Images or photograph

Creative Project Assessment Rubric

Category	Score of 5	Score of 4	Score of 3	Score of 2
Required Elements Score:	Goes over and above all the required elements stated in the directions & instructions	Includes all of the required elements as stated in the directions/instructions	Missing one or more of the required elements as stated in the directions/instructions	Several required elements are missing from the project
Creativity Score:	Exceptionally clever and unique	Thoughtfully and uniquely presented; clever at times	A few original touches enhance the project	Shows little creativity, originality and/or effort
Neatness and Attractiveness Score:	Exceptionally attractive and particularly neat in design and layout	Attractive and neat in design and layout	Acceptably attractive but may be messy at times and/or show lack of organization	Distractingly messy or very poorly designed. Does not show pride in work.
Use of English Score:	No grammatical or mechanical mistakes in the project	A few grammatical/mechanical mistakes which are not distracting	Several grammatical/mechanical mistakes which are distracting	Many grammatical or mechanical mistakes throughout the project. Clearly not proofread.
Understanding of Content Score:	Shows a sophisticated understanding of the contents worked in the unit	Shows an understanding of the major contents worked in the unit	Displays a somewhat limited understanding of the unit. May have a few misinterpretations.	Does not show an understanding of the contents worked in the unit
Overall Effectiveness and Completion Score:	Project is engagingly organized and presents material that is captivating for the viewer.	Project is somewhat organized, complete and holds the attention of the viewer	Project is disorganized and incomplete at times and is somewhat able to hold the attention of the viewer	Project is incomplete and not easy to follow

Comments:

Total Score: /30