

Future support teachers' opinions about their role on inclusion of students with ASD. An exploratory study to determine training impact

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Abstract

School inclusion of students with Autism Spectrum Disorder (ASD) is still an educational challenge for all teachers due to its heterogeneity of cognitive and behavioral profiles. On the other hand, national and international scientific literature shows that inclusive dynamics are strongly influenced by teachers' opinions, attitudes and sense of self-efficacy on students with ASD. Based on these premises, the current study explores the opinions of future support teachers about their role in promoting the full participation of students with ASD and, particularly, whether attendance of the Specialization Course for educational support activities for pupils with disabilities may influence their opinions.

Key words: teachers opinions, training courses; inclusion; student with Autism Spectrum Disorder

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1. Introduction

The study presented in this paper aims at investigating future support teachers' opinions about their role in promoting full participation of students with ASD. The fundamental premise is that usually people's attitudes are shown through their opinions and that the success of inclusive education appears to be influenced by teachers' attitudes toward inclusion (Leatherman and Niemeyer, 2005; Aiello *et al.*, 2019).

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Gall, Borg and Gall (1996) define attitude as: «an individual's viewpoint or disposition toward a particular "object" (a person, a thing or an idea, etc.)» (p. 273). Moreover, they point out that an attitude might have three different components:

- *cognitive*, associated to an individual's opinions or knowledge about the object;
- *emotional*, made up of person's sentiments regarding the object;
- *behavioral*, related to individual's inclination to act in a specific manner toward the object.

Within this theoretical framework, this contribution focuses on the cognitive component of attitudes, as school inclusion of students with Autism Spectrum Disorder (ASD) is still an educational challenge for all teachers due to the heterogeneity of cognitive and behavioral profiles which characterize this disorder. Several researches, aimed at investigating opinions and attitudes of teachers towards students with ASD, show that the main obstacles to the inclusive process are represented by possible implications of their peculiar way of functioning on the way they develop personal autonomy, imitative, communicative, socio-relational and play skills, along with difficulties on academic learning and the adoption of adaptive behaviors within the school context (McGregor and Campbell, 200; Cassimos *et al.*, 2015). It is consistent with other studies on inclusion of students with other Special Educational Needs that show how this process may be strongly influenced by: the severity of child's disability, the level of in-service training received, previous experience with students with these needs, as well as by other environmental factors (Avramidis and Toulia, 2020; Bellacicco, 2019; de Boer *et al.*, 2013; Pijl and Minnaert, 2011; Kraska and Boyle, 2014; Yada *et al.*, 2018).

Moreover, as showed by Russell, Scriney and Smyth (2022), sometimes teachers demonstrate a strong willing to include students with ASD when they consider themselves able to do it and training and previous experience play a pivotal role on this perception. Indeed, teachers who attend specific training courses seem to increase awareness about the impact of teaching strategies on the learning process and on school inclusion (Boyd *et al.*, 2003; Calvert, 2016; Ciraci and Isidori, 2017; OECD, 2019; WHO, 2011; Lanterman and Applequist, 2018; Kisabu-Sakarya and Doenyas, 2021). Actually, teacher training may provide teachers with greater confidence when working with students who have ASD and may encourage the adoption of inclusive strategies to support their learning process; whereas a lack of training has been associated to increased teacher anxiety and low level of inclusiveness (Humphrey and Symes, 2013). Actually, professional development on ASD shows potential in terms of raising teachers' understanding, as well as improving their opinions, attitudes and self-efficacy (Aiello *et al.*, 2018; Antonios, 2022; Boulourian,

2022; Leblanc *et al.*, 2009; Park and Chitiyo, 2010; Parsons *et al.*, 2016; Sala *et al.*, 2017; Syriopoulou-Delli *et al.*, 2012). In spite of that, even if it is confirmed the impact that teachers' training may have on fostering students with ASD inclusion and the importance of considering the personal sphere of teachers to develop an inclusive professional dimension (Aiello *et al.*, 2018; Aiello *et al.*, 2017; Barned *et al.*, 2011; Fiorucci, 2014, 2019; Forlin and Chambers, 2011; Ianes *et al.*, 2010; Murdaca *et al.*, 2016; Sala *et al.*, 2017; Sharma *et al.*, 2008), only few studies explore how training courses may impact on teachers' opinions about their role in promoting inclusion of students with ASD.

2. Method

1.1 Objective

The study aims at investigating the opinions of future support teachers about their role in promoting the full participation of students with ASD and whether attendance of the Specialization course for educational support activities for pupils with disabilities¹ (a.y. 2021/2022) may influence their opinions.

1.2 Sample

The study involves a convenience sample composed by 275² future lower secondary support teachers enrolled at the above mentioned training course at the University of Salerno. The sample is asked to voluntarily and anonymously complete a questionnaire both at the beginning and at the end of the course.

¹ In Italy, this specialization course is composed of 60 ECT of which: 2 ECT are on Didactics and Special Pedagogy of generalized developmental disorders (related to ASD), 18 ECT on Didactics and Special Pedagogy (related to classroom management in inclusive settings, design of individualized plan and life project, strategies to support students with sensory impairments and with intellectual disabilities, and metacognitive approach and cooperative learning). 9 ECT are of laboratories and 6 ECT Indirect stage/apprenticeship which includes Information and Communication Technology. It is suggested to read: *Gazzetta Ufficiale* n. 78 del 02-04-2012. *Decreto 30 settembre 2011. Criteri e modalità per lo svolgimento dei corsi di formazione per il conseguimento della specializzazione per le attività di sostegno, ai sensi degli articoli 5 e 13 del decreto 10 settembre 2010, n. 249*; Aiello P., Corona F., and Sibilio M. (2014). Ipotesi di evoluzione funzionale dell'insegnante di sostegno in Italia. *Italian Journal of Special Education for Inclusion*, 2(2): 21-34.

² This sample has undergone a reduction (n = 124) as the procedure envisaged the selection of data collected from future support teachers who attended all the educational activities envisaged by the course (direct and indirect internship, lectures, laboratories, ICT), and that filled out the questionnaire both at the beginning of the course and at the end.

With a response rate of 49,60%, the final sample consist of 124 respondents (102 females, 22 males). The mean age of the sample is 36 years. In terms of teaching experience, 36% report to have previous experience as a support teacher, whereas the 40% have experience as a general teacher.

Given the focus of the study, none affirme to have attended courses on strategies to support students with ASD, but the 20,97% affirme to have attended Master or other professional development activities related to inclusive strategies for students with Special Educational Needs and Specific Learning Disorder. Furthermore, the 58,12% affirm to know people with ASD: the 46,5% of the sample know friends or students on the spectrum, the 6,64% have members of the family who have ASD, the 4,98% have a colleague with ASD at the workplace or at the university or at school. Moreover, the 28,26% of the sample claim to have some knowledge on ASD due to the opportunity to read book, to watch TV series or to listen about it.

1.3 Instrument

The tool used for the study is a Google-Form semi-structured questionnaire which is divided into two parts:

- the first one aims at collecting socio-demographic data, such as age, educational qualification, professional position, previous work experience as a teacher (mainstream and/or support teacher) and knowledge of people with Autism Spectrum Disorder;
- the second part consists of six open-ended questions that aim to explore opinions and representations of the participants regarding the inclusion of students with ASD. In the current paper, only the results deriving from the analysis of the question about the role of support teachers in promoting the inclusion of students with ASD will be presented.

1.4 Data analysis

Data collected with Google Forms were examined with a descriptive statistical analysis and a reflective thematic analysis (Braun and Clarke, 2006, 2012, 2019). The first one aims to process socio-personal information and to quantify the frequencies of the segments identified in the entire textual corpus. The second one is used, by adopting an inductive technique, to detect key concepts emerging from participants' statements (Braun and Clarke, 2006, 2012, 2019; Gioia *et al.*, 2013). The rich textual corpus coding process is managed using MAXQDA (VERBI©), a qualitative and quantitative analysis program that facilitate the organization of relevant code configurations and give

visualizations of essential aspects, thanks to different built-in capabilities (De Gregorio and Lattanzi, 2012).

The phases of theme analysis, as outlined by Braun and Clarke (2006), enable both a systematic approach of looking for and process qualitative data using “coding” and employing six stages of theme analysis:

- Data familiarization which involves transcribing, reviewing and re-reading data, marking down the initial thoughts. For each transcript, major concepts are marked and written down. At this stage notes are considered as: “a stream of consciousness, a messy rush of ideas, rather than polished prose, [...] memory aids and triggers for coding and analysis” (Braun and Clarke, 2012, p. 61).
- Generating initial code. During this phase, interesting features of the data are classified as a brief phrase or keyword indicating a single notion (Braun and Clarke, 2012). The abundance of such data requires the identification of codes and sub-codes after a comparison between meanings belonging to the same category (Semeraro, 2011, p.104; De Gregorio and Lattanzi, 2012). This procedure follows a bottom up approach as codes and sub-codes always adhere to data’s content and participants’ meanings (Gioia *et al.*, 2013).
- Searching for themes across the data, that is organizing codes into potential themes. According to the Braun and Clarke (2006) theme “captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set” (p. 82). Hence, data are reviewed and re-read several times to reduce the amount of codes and organize them into distinct themes. Then, codes are studied and classified into two major themes, as detailed later.
- Reviewing potential themes. Participants’ answers are read again to confirm codes and themes. This involves a recursive process by which developed themes are reviewed according to coded data and the entire data set, when necessary, and defined during the 5th phase (known as “Defining and naming Themes”).
- Producing the report. During the last phase, several key features describing the data are retrieved to illustrate final outcomes as statements in the form of concepts or sentences, as well as graphic representations also made with MAXQDA (VERBI©).

3. Results and discussion

As previously explained, the thematic analysis is conducted with an inductive approach through MAXQDA (VERBI©) that give the possibility to

manage a total of 389 segments (140 segments of the answers collected at the first administration, 249 of the answers collected after the second one).

In Fig. 1 the pre and post common retrieved codes are presented. In particular, it emerges that most of the retrieved segments coded are those related to the importance of promoting positive classroom climate (22,88%; 89/389 segments); knowing and understanding peculiarities of students with ASD (11,31%; 44/389 segments); fostering social interactions with peers (9%; 35/389 segments), and collaborating with colleagues and caregivers (5,91%; 23/389 segments).

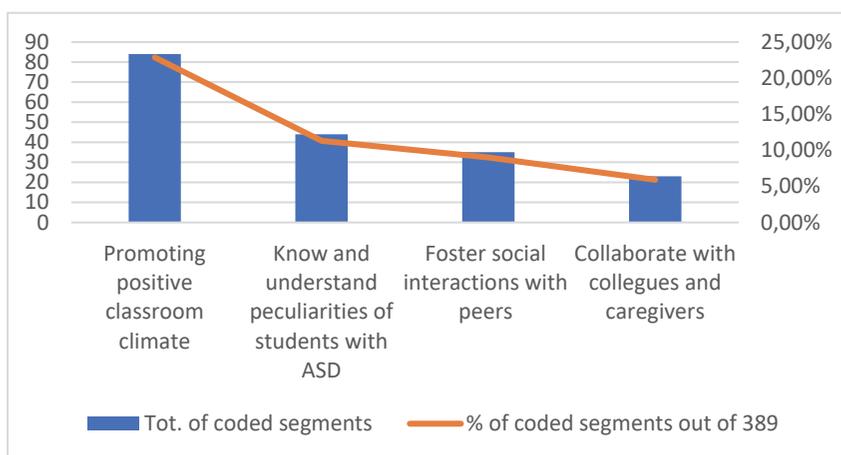


Fig. 1 - Percentage of common codes generated both after pre and post administration

Most of the contents and codes seem to be coherent with the Profile of inclusive teachers (EDSNE, 2012) and pedagogical scientific literature about inclusive practices, so all the codes are grouped into the following themes: supporting all learners, valuing learner diversity, working with others, working individually with student with ASD (See Tab. 1; Tab. 2). In this paper only common themes will be discussed, which are: *Supporting All Learners* and *Working With Others*.

Tab. 1 - Themes, codes and n° of segments collected after the first administration.

Themes	Codes and n° of segments	Tot. of coded segments	% of coded segments out of 140
<i>Supporting All Learners</i>	Promoting positive classroom climate (36 segments)	132	94,29%
	Organize small group activities (31 segments)		

	Active involvement of all students during the activities (21 segments)		
	Foster social interactions with peers (16 segments)		
	Know and understand peculiarities of students with ASD (22 segments)		
<i>Working With Others</i>	Collaborate with colleagues and caregivers	10	7,14%
<i>Working individually with student with ASD</i>	Work 1:1 (teacher:student with ASD)	4	2,86%

Tab. 2 - Themes, codes and n° of segments collected after the second administration.

Themes	Codes and n° of segments	Tot. coded segments	% of coded segments out of 249
<i>Supporting All Learners</i>	Adopt inclusive strategies and methodologies (68 segments)	226	90,76%
	Promoting positive classroom climate (53 segments)		
	Develop various skills (44 segments)		
	Foster social interactions with peers (19 segments)		
	Know and understand peculiarities of students with ASD (22 segments)		
<i>Valuing Learner Diversity</i>	Support the need for predictability and clarity (10 segments)	10	4,02%
<i>Working With Others</i>	Collaborate with colleagues and caregivers	13	5,22%

3.1 Supporting All Learners

As showed in the Tab. 3 after the second administration of the questionnaire, codes underwent some variation. In particular, few codes improved the number of segments (*Promoting positive classroom climate*: +32; *Foster social interactions with peers*: +3) and other were replaced or inglobed within new ones.

Tab. 3 - Codes of the theme "Supporting All Learners" identified during PRE and POST training

Time of administration	PRE training	POST training
	Promoting positive classroom climate (36 segments)	Adopt inclusive strategies and methodologies (68 segments)
	Organize small group activities (31 segments)	Promoting positive classroom climate (53 segments)
	Active involvement of all students during the activities (21 segments)	Develop various skills (44 segments)

	Foster social interactions with peers (16 segments)	Foster social interactions with peers (19 segments)
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Related to the first code *Promoting positive classroom climate*, according to the scientific literature this aspect has an important impact on the quality of learning of all students and it refers to a set of attitudes, relationships and behaviors that characterize being and working together in the same environment to foster full participation and everyone teaching-learning process. For this reason, it is essential that everyone believes they are in a welcoming environment that recognizes their peculiarities, and that each member of the classroom (peers, teachers or other professionals) support and encourage everyone in school achievement (Cottini, 2018). Hence, positive climate should be characterized by a sense of belonging, enjoyment and respect among students and in the teacher-student interaction (Khalfaoui *et al.*, 2021). Moreover, it calls for the implementation of prosocial educational didactic activities tailored to promote prosocial behavior, including moral reasoning, social skills, civic engagement, social-emotional learning, and respecting each individual’s distinctive traits and characteristics (Brown *et al.*, 2012; Roche, 2002).

Consistent with it, the sample draws the attention on facilitating learning situations by raising awareness and informing the class, having theoretical knowledge on the way students with ASD learn and models of teaching that support their learning process (PRE = 22 segments; POST = 20 segments), managing the physical and social environment of the classroom to support learning (PRE = 14 segments; POST = 33 segments). For this reason, *Promoting positive classroom climate* may be considered as a suitable code for these segments.

In the following lines, the most significant segments related to the facilitation of learning situations by raising awareness and inform the class are quoted:

PRE	POST
«We could raise awareness and inform the class on peculiarities of the student with ASD to include and support him during the activities» [but we could also] «help his classmates to understand the most suitable approach to use to interact with the student with autism».	«The teacher could identify strategies that involve interaction with classmates, previously informed about peculiarities and difficulties of their friend on the spectrum, but also to speak about these topics involving both classmates and student with ASD». «The teacher should raise awareness the class to issues related to disability and the valorisation of differences».

About the importance of having theoretical knowledge on the way students with ASD learn and models of teaching that support their learning process (PRE

= 22 segments; POST = 20 segments), before the training the sample focuses on ASD peculiarities (9 segments), severity and difficulties (7 segments), strengths (3 segments), interests (3 segments).

Whereas, at the end of the training course, the sample seem to adopt another approach, a more positive and complex one, by considering not merely the difficulties (1 segment), but especially students with ASD peculiarities (9 segments), strengths (4 segments), interests and preferences (5 segments) and ways of functioning (2 segments). According to this, teachers should address the differences by identifying, selecting and adopting methods and strategies that give value to differences. It is consistent with the inclusive education perspective. As Goussot (2014) states: «pedagogical observation should detect the potential, without ignoring the difficulties and problems, and not go searching for symptoms and disorders» (p. 162). Hence, inclusive teachers should turn their attention to *individual originalities* (Aiello, in Aiello, Sibilio, 2015, p. 22) emerging from a complex interaction of several factors that determines individual way of functioning.

In the following Tab some of the sample’s statements about this topic.

PRE	POST
<p>«Obviously the teacher should choose teaching strategies and methodologies ad hoc by considering student difficulties».</p> <p>«First of all, classmates should be informed about the difficulties that this disability entails and the way everyone should act in order to include student with ASD».</p> <p>«Support teacher should develop and enhance student strengths and natural inclinations/as a resource to the whole class».</p>	<p>«Considering that each support teacher should change his [/her] own way of acting to adapt it to the characteristics of students with ASD. It requires a reorganization of knowledge and skills teachers have in their professional “toolbox” in order to address this purpose. [...] Fundamental is the recognition of the student’s peculiarities».</p> <p>«Non-generalization of educational strategies is pivotal for the teacher as he [/she] has to modify his own behaviors and relational models based on the student's characteristics».</p> <p>«Support teacher should take into account students with ASD habits and preferences. Based on the sensory profile of the student (visual, auditory, tactile, kinesthetic) the teacher should also try to modify his [/her] own way of interaction, to adapt it as much as possible to the characteristics of the student».</p>

Moreover, as suggested by different researchers who studied how to promote positive climate (Cottini, 2017), the sample highlights teachers’ pivotal role in managing physical and social environment of the classroom to support learning (PRE = 14 segments; POST = 33 segments). Some significant extracts are reported below:

PRE	POST
<p>«Welcoming diversity, without prejudice, but letting peers consider the person as a whole and not at his or her weaknesses».</p> <p>«Prepare a welcoming and structured environment where problematic behavior are welcomed and reduced by making classmates aware of student's needs».</p>	<p>«The environment should not be excessively stimulating from a sensory point of view and it is also advisable to create a corner of the classroom dedicated to them in which to carry out any individual or small group activities when the student need to take a break».</p> <p>«Design space, time and materials, use visual agendas or other cues to support comprehension, adaptability, participation».</p>

As regards the second code, “*Organize small group activities*”, it seems relevant to discuss about it as after the first administration 31 segments were coded. At first, the sample usually emphasize the potential of activities carried out in small groups (13 segments) to improve and promote «socialization through small group work (extremely small groups), when possible», using peer tutoring (6 segments) and cooperative learning (12 segments) strategies. After the training, the second coding of the new answers shows 32 segments referred to the importance of adopting *cooperative methods* as: «To achieve true inclusion, it is not enough for the student to belong to the same class as his peers. Classmates play a pivotal role for inclusion within cooperative learning activities, because they support the achievement of cognitive, affective-emotional learning objectives both for the peers and student with Autism Spectrum Disorder». Furthermore, it should be noted that teachers involved in this study consider peer tutoring strategies (14 segments) and other cooperative learning strategies (12 segments) useful for «activating relational literacy pathways», «promoting active participation» or for increasing «trust and self-esteem in themselves and their and others’ skills».

In addition, references to various inclusive strategies and methods are detected after the training, so it seems appropriate to integrate “*Organize small group activities*” code into a new one, named “*Adopt inclusive strategies and methodologies*” (Fig. 2). According to the future support teachers, they may serve to *Develop various skills*, such as:

- communication skills (18 segments);
- personal autonomy and self-determination development (12 segments);
- social skills (10 segments);
- emotional skills (4 segments).

At last, the theme “*Foster social interactions with peers*” (PRE= 16 segments; POST= 19 segments) is the most coded. The *Profile of inclusive teachers* underlines the importance of *implementing positive behaviour management approaches that support learner’s social development and*

interactions. In line with it, at the beginning, the sample emphasize both the importance of fostering interaction with peers and teachers role to facilitate interpersonal relationships in classroom and within the school context. This is clear also in the answers the future support teachers give during the second administration.

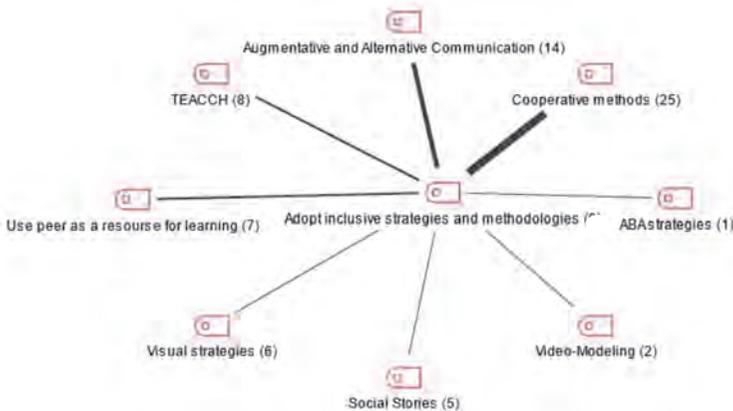


Fig. 2 - Inclusive strategies and methods and n° of segmentes coded with MAXQDA (VERBI©)

According to the sample, support teachers look like a *technician of pedagogical mediation* (Goussot, 2014) that may encourages participation of students with ASD and peers by introducing all students to social interaction and teach them how to interact with others and wich are the most useful strategies according to their preferencies. It is consistent with the Ministerial Decree of 30/09/2011 which state that «The support teacher deals with educational-didactic activities through support the class in order to encourage and promote the process of integration of pupils with disabilities» (*Gazzetta Ufficiale*, 2012, p. 5).

Some extracts of the sample's answers are quoted below:

PRE	POST
<p>«Through the activity of mediation/facilitation of interpersonal relationships within the school community».</p> <p>«[...] acting as an intermediary between the students with ASD and classmates, but also between the student and the other teachers».</p> <p>«Favoring moments of social interaction with others and not isolating him».</p>	<p>«It could start with pair work, pairing the student with a pupil with the same interests or promoting interaction and cooperation with others through the use of social stories and in simple, everyday school activities».</p> <p>«The support teacher may play the role of mediator between classmates and student with autistic disorder, encouraging the use of PECs (if the student does not express himself verbally)» / «[The support teachers] Could use social stories to</p>

	<p>prompt and inform the student with ASD on how to start social interaction with peers».</p> <p>«Students with autism spectrum disorder often have major problems in social interaction. A method to encourage social interaction with peers could be to create opportunities for closeness and common work, to stimulate the sense of belonging to the group and to encourage prosocial behaviours».</p>
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3.2 Working with others

The latest theme is that of “*Working with others*” whose unique and predominant code is “Collaborate with colleagues and caregivers” (PRE = 12 segments; POST = 22 segments). Collegiality and responsibility with mainstream teachers and other caregivers are essential in order to support the inclusion process. It is consistent with national regulations that describe support teachers as learning support teachers share all responsibilities of the class or classes to which they are assigned with the mainstream teachers where they are assigned. They actively participate in the planning, implementation and evaluation of all teaching activities and they are part of all school committees, such as the classroom, interclass, and teachers’ boards (*Gazzetta Ufficiale* n. 78, 2012, p. 5; *Gazzetta Ufficiale*, serie generale n. 39/1992). These assumptions are also in line with the international Profile of inclusive teachers (EDSNE, 2012), as well as the Profile for Inclusive Teacher Professional Learning (EDSNE, 2022) where collaboration and teamwork are considered essential approaches for all teachers and other education professionals. According to these documents, working with others is a competence whose core values relate to:

- working with parents and families;
- working with a range of education professionals.

In particular, working with students with ASD requires this collaboration in order to support educational continuity and co-teaching aiming at the harmonious development of the student with the co-definition of learning objectives, co-design of educational activities, taking account of student preferences and progress made in the other environments.

Moreover, at the beginning of the course, the future support teachers usually emphasize critical issues they should face in order to reduce clinical manifestations or aggressive one. Although, after the training, the sample do not refer on the disorder, but on students’ strengths and on the importance of creating networks and building meaningful relationships with all caregivers, as inclusion «cannot be delegated only to the support teacher».

Some significant extracts are reported below:

PRE	POST
<p>«Coordinating, with the other teachers and operators, rehabilitation actions to alleviate aggressive or hyperactive manifestations».</p> <p>«It is important not to isolate the student and the teacher, but to manage critical issues of the student with ASD collectively and with classmates».</p> <p>«Raise awareness of the member of the classroom board and the class about the disorder and how to value the student, adapting the activities of the curriculum».</p>	<p>«The support teacher has to reduce complexity and therefore has to create networks and support the students with ASD and his classmates, colleagues and collaborate with other professionals. But he also has to establish positive relationships of fruitful collaboration with the learner's family».</p> <p>«The teacher could promote the inclusion of the student with Autism Spectrum Disorder by working in a co-teaching perspective with colleagues so that the student may always actively participate to several activities».</p> <p>«Undoubtedly inclusion cannot be delegated only to the support teacher».</p>

4. Conclusions

Data analysis shows that the attendance of the course influenced students' opinions on the inclusion of students with ASD due to the acquisition of a deeper knowledge on inclusive teaching. In particular, it is important to highlight that the attention is drawn on the role of the support teachers as a *mediator* who can sustain all the educational community (Aiello *et al.*, 2014; Canevaro, 2004; de Anna *et al.*, 2015), who interact and take care of students with ASD. It is interesting to notice how the training give the opportunity to raise future support teachers awareness on their multifaceted role. In fact, to recognize, value and respond to learners diversity (Ainscow *et al.*, 2006), without excluding students with ASD; they should employ methodological, social and negotiation competences to:

- adapt relational and physical environments.
- Improve the sense of belonging, enjoyment and respect among students thanks to the implementation of prosocial educational didactic activities.
- Facilitate communication and social interactions employing visual strategies (such as, AAC, TEACCH and social stories).
- Promote the development of fundamental skills for foster some dimensions of Quality of life (autonomy, self-determination, social interaction, emotional well-being).

In the end, the use of a positive language towards the students is also noted with a significant reduction of references to student's difficulties, as well as a more articulated argumentative skills and the accurate adoption of pedagogical

vocabulary in line with the ICF perspective. Further studies are needed to investigate the impact of these opinions on their practice within classrooms attended by student with ASD, but also how other attitude's components (Gall *et al.*, 1996) may be influenced by the attendance of this specialization course.

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