

Students with Autism Spectrum Disorders (ASD) in Co-Taught Classes. The Challenges for the Co-Teachers

Tryfon Mavropalias^{1*}, Maria Deligianni², Zoi Symeonidou³

¹School of Education, Department of Primary Education, University of Western Macedonia, Florina, Greece

²School of Education, Department of Primary Education, University of Western Macedonia, Florina, Greece

³Special Education Teacher

***Corresponding Author:** Tryfon Mavropalias, School of Education, Department of Primary Education, University of Western Macedonia, Florina, Greece

ABSTRACT

The purpose of this quantitative study was to investigate issues related to the attitudes and experiences of Special Education Teachers - SETs & General Education Teachers - GETs (co-teachers) who implement peer tutoring for students with Autism Spectrum Disorders (ASD) in co-taught classes. In particular, it was studied whether children with ASD stand to benefit from attending co-taught classes, the degree to which their peers are positively or negatively affected, and co-teachers' readiness to support children with ASD. Participants were 160 elementary school co-teachers (Grades 1-6) and students with ASD participated in their classes from Central Macedonia, Greece. A quantitative research method was used and the sample completed a questionnaire. The findings reveal that students with ASD attending in the general classroom generally help them to develop skills with a slightly higher average social skills value, and their peers are also slightly affected. Also, teachers feel that they are moderately prepared to support their students with ASD, but younger teachers' readiness to teach children with ASD is remarkable as well as postgraduate teachers.

Keywords: Autism Spectrum Disorders, co-teachers, co-taught classes, classmates, skills

INTRODUCTION

Students with Autism Spectrum Disorders (ASD) are one of the most difficult groups of children regarding their educational approach, and in any case, rarely does a child with ASD improve and progress without (any) appropriate special education (Hewart, 2011). According to Mavropalias & Anastasiou (2016), 32% of students with disabilities in Greece who participate in Parallel Support (PS) have been diagnosed with ASD.

The latest American Psychiatric Association (APA, 2013) diagnostic criteria, argues that the diagnostic subcategories (Autism, As per ger Syndrome and Pervasive Developmental Disorders (PDDs)) have been eliminated and there is only one diagnostic category of Autistic Spectrum Disorders (ASD), which is separated by ASD, depending on the severity of symptoms in three subcategories (Level 1, Level 2, Level 3). These levels, measured on specific indicators, show to what extent the person is affected by the symptoms and what kind of support that person

needs (DSM-V-American Psychiatric Association, 2013).

Students with ASD are increasingly placed in general classes, with the main aim of improving their social skills, thereby providing more opportunities for integration. Under the right educational conditions, children with ASD have the prospect of becoming "acceptable and visible" members of their peer group. A strong argument in favor of educating children with ASD in integration classes is that 'socially sufficient' children are important mediators for the development of their socio-emotional abilities (Bouton & Bryand, 2015).

The Greek co-teaching approach, called 'parallel support' (PS) presupposes that in order for a student with a disability to participate in a PS program, they must have an experts' opinion from the relevant Educational and Counseling Support Center (KESY), which determines the hours per week of parallel support that a child would receive over a period of time. Medical opinion for students with ASD is valid for two years (Law 3699/2008).

In the context of inclusive education, various effective personalized intervention programs for children with ASD can be developed by teachers. Some of these are the following:

Social Stories

Their creation relates to a problem that responds to reality with the support of visualized material aimed at facilitating the child to cope with various situations (Dodd, 2005). In addition, emotion recognition and expression strategies can be implemented so that children can recognize and communicate effectively (Konstantareas, 2006).

Music Therapy

Similar positive results have been identified by researchers in another technique, from the so-called 'music therapy'. More specifically, its use has improved communication, speech, behavior and social skills (Gold, 2006). Further research highlights the effect of music therapy on reducing stress and vigor plus on expressing moods and emotions. Finally, research such as Brown's (1994) argues that musical improvisation promotes the development of creativity and organizational skills, which enhances its usefulness (Oldfield, 2006).

Pivotal Response Training

Pivotal Response Training (PRT) uses physical learning opportunities that are designed to modify children's behaviors with autism to achieve broad positive outcomes for communication, behavior and social skills. Koegel and Koegel (2006) identified four key areas as a primary objective for PRT, addressing multiple stimuli, improving child motivation, enhancing self-management capacity, and enhancing self-management.

TEACCH Method

The TEACCH (Training and education of Autistic and Related Communication Handicapped Children) program is a tool that responds to and adapts to the individual needs of each child with ASD. Its key elements are its structured social and communicative environment, the arrangement of its daily activities mainly with the use of images but also the organization of materials so that the student with ASD can understand their daily schedule and be able to respond to this routine successfully (Virues-Ortega et.al., 2013).

Picture Exchange Communication System

The Picture Exchange Communication System is a tool that uses symbols, images, or objects to promote classroom communication. Research has shown that people who use this method have developed their verbal communication to a

satisfactory degree and thus increased their social interactions (Cannella-Malone et.al. 2010).

MAKATON Program

The MAKATON program is an alternative communication system. It is an appropriate tool for people with severe communication disorders and provides the ability of the immediate use of language. It relies mainly on visual communication and therefore uses sketches and symbols, is a flexible program that adapts to each person's needs and contributes to the development of oral competence (Vogindroukas & Sherratt, 2005). Some common packages are widgets and rebus symbols, which refer to the representation of a sound from an image (Panteliadou & Argyropoulos, 2011).

Applied Behavior Analysis (ABA)

In applied behavior analysis, children's tasks are divided into smaller feasible units. Each stage is accompanied by rewarding something that gives the child pleasure, such as playing a favorite toy; That is, the child is given an external motivation. It is important that the award be made with distinction, as for some children with autism, applause or cheering may be experienced as punishment (Lennard-Brown, 2004).

METHOD

Studies of students with Autism Spectrum Disorders (ASD) in co-taught classes have been undertaken drawing on a quantitative frame of analysis which was conducted during the school year 2018–2019. A hundred and sixty Special Education Teachers - GETs (co-teachers) supporting students with Autism Spectrum Disorders (ASD) participated in co-taught classes. The purpose of the research is to investigate the views and opinions of general and special education teachers (co-teachers) on the education of children with Autism Spectrum Disorders (ASD) in general education through the co-teaching. It will be examined to what extent students with ASD may benefit through inclusion, but also what issues may arise for the rest of the school community. The questions to be investigated are the following:

H1: To what extent it is useful for children with ASD to attend general classroom based on teachers' positions

H2: Whether students with ASD are positively or negatively affected according to teachers

H3: What is the degree of readiness for teachers in order to train students with ASD in an inclusive environment?

Participants

Participants in the survey were 160 elementary school educators (Grades 1–6) with students with Autism Spectrum Disorders (ASD). Three researchers contacted the Principals of 103 schools, which were located in Central Macedonia, Greece. The researchers informed the Principals for the purpose of the study. Then they asked for the provision of the teachers’ personal email address to mail the questionnaires. All data were confidential and anonymous. The questionnaire was delivered to 204 educators. However, a total of 160 returned the completed questionnaire (or 78.4% of the invited sample), 62 were male (38,8%), and 98 were female (61,3%). Eighty-six of them (53.8%) were Special Education Teachers (SETs), 74 (46.2%) were General Education Teachers (GETs), who implemented co-teaching in general classrooms. Of the 160 participants, 92 teachers (57.5%) had bachelor’s degrees, 9 of them (4.4%) had master’s degrees and 61 (38.1) had master’s degrees in special education.

DATA SOURCE

This quantitative study was conducted during the 2018-2019 academic year and a questionnaire was used for that purpose, consisting of 16 closed-ended questions and one open-ended question. The co-teachers were asked to complete a given questionnaire consisting of four sections. In the first section teachers were asked to provide personal demographic information as well as details on their professional experience, specialty, diplomas etc. In the second section the co-teachers were asked about the types of skills that children with ASD can develop in the general classroom and the degree of support for those students by their teachers. Co-teachers were asked about issues related to research questions on a five-point Likert-type scale with response anchors (1 = very little, 2 = a little, 3 = moderately, 4 = much, 5 = very much). Statistical analysis of the The vast majority of the teachers (N=98, 61.3%) had a permanent position and 62 of them (38.7%) had a temporary position.

Training in ASD

Of the 160 co-teachers, 91 (55.2%) declared that they have been trained in ASD, while 99 (44.8%) have not been trained at all. Of the 91 co-teachers, 47 (51.6%) were trained in seminars lasting less than 60 hours.

Table2. Number of Students with ASD, Age of Students, and Class Size

Variable	N	Mean	SD	Range
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data was done using the Statistical Package for the Social Sciences SPSS v.25 (Superior Performance Software System), after they were first categorized and expressed in frequencies and percentages. In the third section, co-teachers showed their perception about the extent to which children's classmates may be benefited from students with ASD and teachers' readiness to support children with ASD. Finally, in the fourth section, co-teachers were asked about the educational methods they use in order to teach students with ASD and the level of cooperation between them. An open-ended question was used to explore the co-teachers’ suggestions regarding the improvement of their children's with ASD education in mainstream classes. The credibility and internal coherence of the questionnaire were tested by the Cronbach’s Alpha criterion (Cronbach’s Alpha: 0.856).

FINDINGS

Characteristics of Teachers

Demographics

Most of the sample (41, 3%) belongs to the age group of 31-40 years old. Also most of the teachers in the sample have been teaching for 1-10 years. The demographic characteristics of participants are presented in Table 1.

Table1. Description of Participants According to their Age and Years of Teaching Service

Age	N	%
22-30	36	22.5%
31-40	66	41.3%
41-50	52	32.5%
>51	6	3.7%
Total	160	100%
Years of service in education	N	%
1-10	76	47.5%
11-20	44	27.5%
21-30	28	17.5%
>31	12	7.5%
Total	160	100%

Students’ Characteristics with ASD

Of the 176 children with ASD supported by teachers, 93 (52.9%) were diagnosed with “classic autism” and 83 (47.11%) with a diagnosis “As per ger Syndrome”. Table 2 shows the average age and number of students with ASD per class as well as the average size of classes containing students with ASD.

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Age of students with ASD	176	9.2	1.74	7–13
Class size for students with ASD	176	18.6	1.98	13–24
Students with ASD in class	176	1.1	0.87	1–2

Developing Students' Skills with ASD

In general, teachers responded that students with ASD attending in inclusion classrooms help them to moderate the development of their academic, social and emotional abilities. (Table 3)

Table3. Skills Development

SKILLS	Very Little N-%	Little N-%	Moderately N-%	Much N-%	Very Much N-%	Total N-%
Academic skills	2-1.3%	32-0%	80-50%	38-3.8%	8-10%	160-100%
Social skills	2-1.3%	8-5%	72-45%	62-8.8%	16-10%	160-100%
Emotional skills	16-10%	46-.7%	78-48.8%	18-1.3%	2-1.3%	160-100%

The above findings are also evidenced by the averages of each skill category (Social, Emotional, Academic). Specifically for academic skills the average is 2.81 on the Likert-type scale, for social skills the average is 2.79 on the Likert-type scale and for the

emotional skills it is 2.56 on the Likert-type scale. Note that the averages in all three skill categories do not exceed 3 on a scale of Likert-type with a probability of 95% according to the respective confidence intervals. (Confidence Intervals) (Figure1).

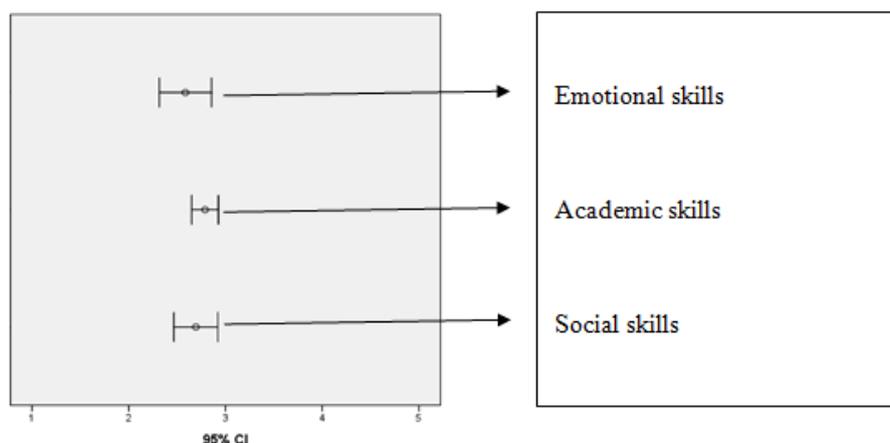


Figure1. Confidence intervals (95%) of averages for assessing skills development.

Degree of Teacher Support for Students with ASD

For the degree of support for students with ASD, teachers stated that they are at "average". The Cronbach's Alpha coefficient was used as the measure of internal consistency testing reliability for the Likert-type scale (Table 4).

Table4. Teachers' support to students with ASD:

Variables	Mean	SD
Support on school performance	2,113	,8267
Support in Communication	1,938	,8167
Support in social peer interaction	2,513	,7955
Support in developing students' autonomy	2,075	,5905
Supporting students' self-efficacy	2,138	,7247

In addition, the analysis of the sample responses revealed that teachers belonging to the 22-30 year-old age group believe that they support students with ASD to a greater extent than older teachers ($p=0,005$). Statistical significance also emerged for teachers with a master's degree ($p=0,003$) who stated that they support students

with ASD more effectively than teachers who only have Bachelor's Degree.

Peer Support Intervention on Students with ASD in General Classroom

Teachers responded that peers are moderately affected (56.3%) by the presence of the child with ASD in their classroom. The teachers also

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responded that the presence of a student with ASD in their classroom has not showed any evidence of a particular impact (66.3%) on other classmates (Table 5).

Table5. *Child's classmates with ASD*

Positive				
None N-%	Little N-%	Moderately N-%	Much N-%	Very Much N-%
0-0%	8-5%	90-56.3%	52-32.5%	10-6.3%
Negative				
None N-%	Little N-%	Moderately N-%	Much N-%	Very Much N-%
28-17.5%	106-66.3%	24-15%	2-1.3%	0-0%

Teachers' Readiness

Teachers answered 6 questions to ascertain whether they have the knowledge and skills to adequately support children with ASD in the classroom (Table 6)

Table6. *Teachers' Knowledge for ASD*

Questions	Disagree N-%	Don't Know N-%	Agree N-%	TOTAL N-%
Are Autism Spectrum Disorders also caused by heredity?	106-66.3%	50-31.3%	4-2.5%	160-100%
Was ASD diagnosed between 0-3 years old?	90-56.3%	56-35.0%	7-8.8%	153-100%
Do children with ASD have stereotypes?	2-1,3%	2-1,3%	156-97,5%	160-100%
Is it more important for children with ASD to develop social skills rather than developing academic skills?	24-30%	20-25%	116-72,5%	160-100%
Does effective communication take place mostly by using images for students with ASD?	8-5%	6-3,8%	146-91,3%	160-100%
Is the educational approach difficult for students with ASD?	10-6,3%	0-0%	150-93,8%	160-100%

Analysis showed no statistical significance for the correlation of students' knowledge and skills having ASD with the level of teachers' education ($p=0.0712>0.05$).

Placement

53,3% of general education teachers said that children with ASD should attend special school because they receive better educational services, while 76,4% of special education teachers stated that children with ASD should be in general school.

Educational Methods

Most teachers (142-88.8%) responded that cooperative teaching methods are used in their classrooms to communicate and support their students with ASD. However, 62.5% (N=99) of these methods are applied exclusively by special education teachers, while a small percentage of general education teachers (21-13%) stated that they collaborate with the special education teacher to implement these methods. Most educators though seem to make the most of the 'Social Stories' (Table 7).

Table7. *Educational methods*

METHODS	None	Little	Moderately	Much	Very Much	Total
TEACCH	18-11.3%	63-39.4%	52-32.5%	14-8.8%	13-8.1%	160-100%
Social Stories	7-4.4%	45-28.1%	48-30%	53-33.1%	6-3.8%	160-100%
Picture Exchange	36-22.5%	48-30%	29-18.1%	36-22.5%	11-6.9%	160-100%
Makaton	48-30%	74-46.3%	30-18.8%	8-5%	0-0%	160-100%
Other	59-36.9%	76-47.5%	31-19.3%	3-1.9%	1-1,6%	160-100%

It is worthwhile noting that the analysis of teachers' responses indicates a significant link between ASD education and training in relation to the development of communication skills with ASD diagnosed children. (Pearson=0,45, p-value=0,001) (Figure 2).

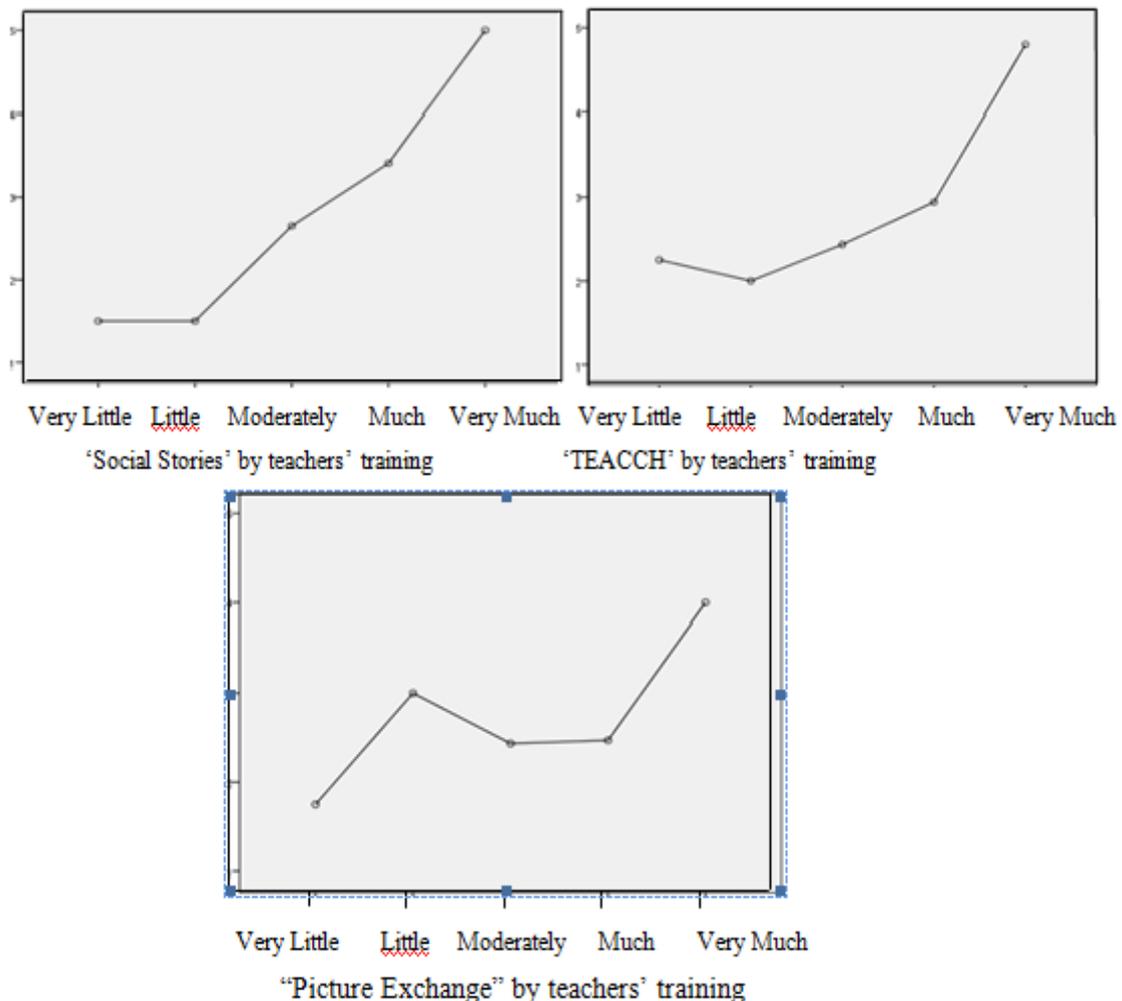


Figure 2. Educational Methods by teachers' training

Collaboration

The level of collaboration scale between co-teachers in education for students with ASD, was created by the following three variables: (a) Shared teaching planning, (b) classroom management issues, and (c) equitable use of classroom physical space. Specifically:

Of the 160 teachers surveyed who were asked to evaluate the common planning of teaching, most of them (62-39%) said “moderately”, 42 teachers (26%) stated “little”. Also 28 teachers (17%) said “much” and finally 14 teachers (9%) said “not at all” while 12 teachers (8%) stated “very much” ($x^2 = 7,02$ $df = 1,17$, $p < 0,001$). Thus, the above shows that most teachers think that they have a shared lesson planning with their co-teachers to a little or moderate degree.

Furthermore, of the 160 teachers interviewed who were asked to rate the degree of co-operation in classroom management, most said “average” (60-37%). The 44 (28%) teachers said “little”. Also, 30 (18.8%) teachers said “Very little”. Finally, 12 teachers equally (8%) said

“not at all” and 6 teachers equally to (3.8%) stated “very much. ($x^2 = 7,67$ $df = 1,22$, $p < 0,001$). It follows that the overwhelming majority of teachers think that teachers have a moderately common way of managing behaviors and interacting with students.

Additionally, of the 160 teachers surveyed who were asked if they shared the classroom equally, most teachers (58-36%) said “little”. 36 teachers (23%) said “average”, 26 teachers (16%) said “not at all”. Finally, 12 teachers (8%) stated “Too much” ($x^2 = 7, 54$ $df = 1, 19$ $p < 0,001$).

Roles

Most of the half teachers (88-55%) answered “average” as to whether there is a clear division of roles as GETs and SETs, in the implementation of teaching for students with ASD. 47 teachers (29.3%) answered “little”, 15 teachers (9.4%) answered “not at all”, 7 teachers (4.4%) answered “much” and finally 3 teachers (1.9%) answered “very much”.

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Seventy-two teachers (45%) responded “much” to the role of SET as an “assistant” to GET for teaching implementation with respect to students with ASD. 56 teachers (35%) answered “average”, 16 (10%) stated “very much”, 12 teachers (7.5%) answered “not at all” and finally

four teachers (2.5%) answered “little” ($\chi^2 = 10,86$, $df = 1,081$, $p < 0,001$).

Most teachers (114-71.3%) answered “much” with respect to the role of the SET in supporting students with ASD exclusively (Table 8).

Table8. Roles SET

Roles	Very Little N-%	Little N-%	Moderately N-%	Much N-%	Very Much N-%	Total N-%
Totally responsible for teaching students with ASD	0-0%	3-1.9%	21-13.1%	114-71.3%	22-13.8%	160-100%
Peer assistance	12-7.5%	86-53.8%	38-23.8%	22-13.8%	2-1.3%	160-100%
Replacement in GET's absence	1-0.7%	39-24.3%	76-47.5%	42-26.3%	2-1.3%	160-100%
Parent information sharing on classroom functioning issues by SETs & GETs	27-16.8%	74-46.3%	41-25.6%	15-9.4%	3-1.9%	160-100%

Needs

The following table (8) shows the main teachers' needs for supporting students with ASD more effectively in the general classroom

Table8. Teachers' needs

Variable	N	Mean	SD	Range
Materials & Resources	160	2.48	0.96	1-5
Class size	160	2.37	0.92	2-5
Training about ASD	160	2.51	0.97	2-5
Training for organizing co-teaching	160	2.49	0.88	2-5
More administrative support	160	2.77	1.03	2-5
Counseling GETs & SETs for their co-operation	160	2.37	0.87	1-5
Clear definition of SETs' & GETs' roles	160	2.40	1.01	1-5
Professional support (e.g. psychologists)	160	2.39	0,98	2-5
Reduced number of students per classroom for children's attendance with ASD.	160	2.23	0.84	1-5
Parent-Teacher co-operation	160	2.27	0.90	1-5
Improvement in cooperation with stakeholders (e.g. KESSY, schools principals & school advisors)	160	2.50	0.99	2-5

DISCUSSION

The purpose of the present quantitative study was to investigate issues related to the attitudes and experiences of GETs & SETs (co-teachers) implementing co-teaching for students with Autism Spectrum Disorders (ASD) in co-taught classes. Based on the teachers' responses, it seems that children with ASD attending general classes generally help them to develop moderately skills with a slightly higher average value for social skills. This finding also relates to one of the aims of co-teaching in education, which is to enhance the social participation of children with ASD, which is achieved through the coexistence of students with special educational needs with their peers who have no

disabilities (Mastropieri, Scruggs, Graetz, Norland, Gardizi, & McDuffie, 2005).

The survey also found that most teachers believe that students with ASD should attend general school, with several teachers insisting on the need for special schools for certain cases of autism spectrum. Marginally, over half the teachers gave the same answer. This differentiation may be due to the difference in philosophy that teachers and teachers may have with each other on integration issues, the degree of functionality for students with ASD and the positive or negative experiences they have had in their education (Mastropieri, Scruggs, Graetz, Norland, Gardizi, & McDuffie, 2005).

From the teachers' answers, it seems that the presence of a student with ASD in the general classroom does not negatively affect his peers. In a peer-to-peer environment, the teacher has the opportunity and time to seamlessly engage in the teaching of cognitive objects. GET may help other children besides the one who supports. There is also a growing awareness of classmates in peer assistance for students with disabilities. In addition, many parents of children with special educational needs find teaching to be very important, since they believe that their children stand to benefit greatly when most of their education is done in the context of general education coexisting with other children without special educational needs (Cardona, 2009).

The study showed that teachers were not sufficiently prepared to support students with ASD in co-taught classes. For most of the teachers involved in the research, there is a lack of a theoretical background to the work they have undertaken, and this is reflected in their professional skills and readiness to support students with ASD and the training requirements of the latter. In Greece, special education teacher training is optional, in addition to introductory training for all teachers, but also for those working in a co-curriculum (Mavropalias & Andronidi, 2017).

In terms of investigating the level of cooperation developed among co-teachers about the implementation of co-teaching for supporting children with ASD into classroom, the analysis of the quantitative data revealed that teachers cooperate with each other on issues of shared planning, classroom management but for the equitable use of classroom physical space, generally moderately. International studies relevant to the present study show that collaboration among teachers plays a huge role in promoting the success of co-teaching (Honigsfeld & Dove, 2008; Keefe & Moore, 2004).

The majority of co-teachers responded that their role in co-teaching is to support the child with ASD rather than a wider group of children or the whole classroom. They also feel that they have a difficult, responsible and demanding role to play, in addition GETs & SETs in the classroom do not have a clear role, the latter do not feel completely equal to the former, and do not even co-decide with them on class issues.

Teachers often contradict their role in the realization of co-teaching. That is, most of the

general education teachers consider themselves to be the dominant persons in the classroom. In contrast, special education teachers tend to provide at least some direct teaching of specific skills and concepts and focus on organizing the teaching environment to ensure that children have the opportunity to acquire and practice knowledge and skills.

CONCLUSION

The aim of the present study was an attempt to integrate children with educational needs and especially with Autism Spectrum Disorders (ASD) syndrome into co-taught classes. Given the need to integrate children with ASD in mainstream schools, it was necessary to investigate the statute of the parallel support for students with autism spectrum disorder, the degree of development of their skills through the program, as well as teachers' positions.

Theoharis (2007) mentions that studying students with disabilities in general classes is also a matter of social justice, as it enables disabled children - excluded from general education - to coexist and attend study programs with their typical peers. The teachers responded that children with ASD, in co-taught classes, develop their skills moderately. Classmates are also reaping the benefits from the presence of children with ASD in the classroom, as they are given the opportunity to create positive attitudes towards the children with ASD and work positively on the issue of accepting diversity. Finally, for more effective support for children with ASD, teachers are demanding more administrative support, appropriate training and educational resources and materials.

REFERENCES

- [1] American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th edition). Washington, DC: American Psychiatric Association.
- [2] Attwood, T. (2000). *Strategies for Improving the Social Integration of Children with Asperger Syndrome*. *Autism*, 4(1), 85-100.
- [3] Boutot, E. A., & Bryant, D. (2005). *Social integration of students with autism in inclusive settings*. *Education and Training in Developmental Disabilities*, 40, 14-23.
- [4] Cannella-Malone, H.I., Fant, J.L. & Tullis, C.A. (2010). *Using the picture exchange communication system to increase the social communication of two individuals with severe developmental disabilities*. *Journal of Developmental and Physical Disabilities*, 22(2), 149-163

- [5] Gold, C., Wigram, T. & Elefant, C. (2006). *Music therapy for autistic spectrum disorder*. Cochrane Database of Systematic Reviews, Issue 2.
- [6] Hallahan, D. P., & Kauffman, J. M. (2006). *Exceptional learners: An introduction to special education* (10th ed.). Boston: Pearson Education, Inc.
- [7] Heward, W. L. (2011). *Charisma and talent*. In A. Davazoglou & K. Kokkinos (Ed.), *Children with disabilities. An introduction to special education*. (pp. 570-626). Athens.
- [8] Honigsfeld, A & Dove, M. (2008). *Co-teaching in the ESL Classroom*. Delta Kappa Gamma Bull 74 (2), 8-14.
- [9] Horton, S. V., Lovitt, T. C., & Bergerud, D. (1990). *The effectiveness of graphic organizers for three classifications of secondary students in content area classes*. Journal of Learning Disabilities, 23, 12-29.
- [10] Juvonen, J. & Bear, G. (1992). *Social adjustment of children with and without learning disabilities in integrated classrooms*. Journal of Educational Psychology, 84(3), 322-330.
- [11] Juvonen, J. & Bear, G. (2002). *Social adjustment of children with and without learning disabilities in integrated classrooms*. Journal of Educational Psychology, 84(3), 322-330.
- [12] Kalyva, E. & Avramidis, E. (2005). *Improving communication between children with autism and their peers through the 'Circle of friends': A small-scale intervention study*. Journal of Applied Research in Intellectual Disabilities, 18(3).
- [13] Karayazi, S., Evans P.K. & Filer, J. (2014). *The effects of a social story intervention on the pro-social behaviors of a young adult with autism spectrum disorders*. International journal of special education, 29(3), 1-8.
- [14] Keefe, B. & Moore, V. (2004). *The challenge of co-teaching in inclusive classrooms at the high school level and what the teachers told us*. American Secondary Education, 32(3), 77-88.
- [15] Kibby, M. Y., Marks, W., Morgan, S., & Long, C. J. (2004). *Specific impairment in developmental reading disabilities: A working memory approach*. Journal of Learning Disabilities, 37, 349-363.
- [16] King-Sears, M. E., Mercer, C. D., & Sindelar, P. T. (1992). *Toward independence with Keyword mnemonic: A strategy for science vocabulary instruction*. Remedial and Special Education, 13, 22-33.
- [17] Kloo, A. & Zigmund, N. (2008). *Co-teaching revisited: Redrawing the blueprint. Preventing School Failure*, 52(2), 12-20.
- [18] Koegel, R.L. & Kern Koegel, L. (2006). *Pivotal Response Treatments for Autism: Communication, Social, and Academic Development*. Baltimore: Brookes Publishing
- [19] Konstantareas, M. (2006). *Social skills training in high functioning autism and Asperger's disorder*. Hellenic Journal of Psychology, 3, 39-56.
- [20] Koster, M., Pijl, S. J., Nakken, H., & Van Houten, E. J. (2010). *Social participation of students with special needs in regular primary education in the Netherlands*. International Journal of Disability, Development and Education, 57(1), 59-75.
- [21] Law 3699/2008. *Special education and education of people with disability or special educational needs*. Athens: FEK 199A/ October 2, 2008.
- [22] Lawton, M. (1999). *Co-teaching: Are two heads better than one in an inclusion classroom?* Harvard Education Letter. Ανακτήθηκε Σεπτέμβριος 2011 στο δικτυακό τόπο [http:// www. edletter. org/past/ issues/1999-ma/ coteaching. html](http://www.edletter.org/past/issues/1999-ma/coteaching.html).
- [23] Maheady, L., Sacca, M. K., & Harper, G. F. (1998). *Class wide peer tutoring with mildly handicapped high school students*. *Exceptional Children*, 55, 52-59.
- [24] Mastropieri, M. A., Scruggs, T. E., & Levin, J. R. (1985). *Mnemonic strategy instruction with learning disabled adolescents*. Journal of Learning Disabilities, 18, 94-99.
- [25] Mastropieri, M. A., Scruggs, T. E., Graetz, J., Norland, J., Gardizi, W., & McDuffie, K. (2005). *Case studies in co-teaching in the content areas: Successes, failures and challenges*. *Intervention in School and Clinic*, 40, 260-270.
- [26] Mavropalias, T. & Anastasiou, D. (2016) *What Does the Greek Model of Parallel Support Have to Say about Co-teaching?* *Teaching and Teacher Education*, 60, 224-233.
- [27] Mavropalias, T. & Andronidi, C. (2017). *The Metacognitive Deficits in Middle Schools in Athens*, *International Journal of Research in Humanities and Social Studies*, 4 (5) 26-31
- [28] McCormick, L., Noonan, M., Ogata, V., & Heck, R. (2001). *Co-Teacher relationship and program quality: Implications for preparing teachers for inclusive preschool settings*. *Education and Training in Mental Retardation and Developmental Disabilities*, 36(2), 119-132.
- [29] Meltzer, L. (1991). *Problem-solving strategies and academic performance in learning disabled students: Do subtypes exist?* Στο L. V. Feagans, E. J. Short, & L. T. Meltzer (Eds.), *Subtypes of learning disabilities: Theoretical perspectives and research* (pp. 163-188). Hillsdale, NJ: Erlbaum.

- [30] Mostert, M.P. (1998). *Interprofessional Collaboration in Schools*. Boston: Allyn & Bacon.
- [31] Murawski, W. W. (2009). *Collaborative teaching in secondary schools: Making the coteaching marriage work*. Thousand Oaks, CA: SAGE Company.
- [32] Murawski, W. W., & Hughes. C. E. (2009). *Response to intervention, collaboration, and co-teaching: A logical combination for successful systemic change*. *Preventing School Failure* 53(4), 267–277.
- [33] Oldfield, A. (2006). *Interactive music therapy- A positive approach*. London: Jessica Kinsley Publishers
- [34] Ormsbee, C. K., & Finson, K. D. (2000). *Modifying science activities and materials to enhance instruction for students with learning and behavioral problems*. *Intervention in School and Clinic*, 36, 10-21.
- [35] Ozonoff, S., Rogers, S.J. & Hendren, R.L. (2003). *Autism spectrum disorders: A research review for practitioners*. Arlington: American Psychiatric Publishing
- [36] Theoharis, G. (2007). *Social justice educational leaders and resistance: Toward a theory of social justice leadership*. *Educational Administration Quarterly*, 43(2), 221-258.
- [37] Villa, R. A., Thousand, J. S., & Nevin, A. I. (2008). *A guide to co-teaching: New lessons and strategies to facilitate student learning* (3rd ed.). Thousand Oaks, CA: Corwin Press
- [38] Virues-Ortega, J., Julio, F.M. & Pastor-Barriuso, R. (2013). *The TEACCH program for children and adults with autism: A meta-analysis of intervention studies*. *Clinical Psychology Review*, 33(8), 940-953
- [39] Walsh, J. M. (2012). *Co-teaching as a school system strategy for continuous improvement*. *Preventing School Failure*, 56(1), 29e36. <http://dx.doi.org/10.1080/1045988X.2011.555792>. Weiss, M. P. (2015).

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