COLLABORATION BETWEEN GENERAL AND SPECIAL EDUCATION TEACHERS: DEVELOPING CO-TEACHING SKILLS IN HETEROGENEOUS CLASSES

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Abstract

A considerable amount of research evidence suggests that collaboration between general and special education teachers is a pillar of the effective teaching for all students, including those with learning difficulties. Adopting the above position the present study aimed to present and discuss fifteen cases regarding co-teaching in the context of "parallel support", where a special education teacher supports a learning disabled student in a mainstream classroom. Particularly, after an in-service training for promoting effective instructional skills, fifteen pairs of general and special teachers were asked to record the co-teaching procedures in their classrooms. Data collection was carried out through the participants' self-evaluation rubrics. The quantitative analysis showed that in almost all cases, the collaboration between the pairs of educators was improved, they applied the in-service training knowledge in order to meet the different needs of all students, using the most effective strategies and procedures. The most interesting finding was that in most cases the initially adopted model of co-teaching was replaced by the parallel co-teaching where each teacher provides instruction to different students to the 'team teaching', where both teachers are responsible for planning and they share the instruction of all students. Thus, it seems that it is achievable to build an effective co-teaching model for heterogeneous classrooms.
Key words: *co-teaching, parallel co-teaching, team-teaching, self-evaluation rubric.*

Introduction

Two decades after Salamanca's statement (UNESCO, 1994), and more recently, after UNESCO's Convention on the Rights of Persons with Disabilities (UNESCO, 2006), inclusive practices have spread rapidly around the world, and certainly in Europe and in Greece as well. Thus, inclusive schools are those where after the proper educational and technical accommodations can host and educate all students in general education programs. That means that the students with special educational needs can attend the general school program and they are enrolled in age appropriate classes either for the whole or for most of the school day.

Over the years, the debate over inclusion focused on the attitudes of the teachers and other members of the school community and the acceptance of coexistence of students with special educational needs and their typical classmates within the same setting (Avramidis, & Norwich, 2002). Despite the recent political rhetoric towards strengthening equality and inclusion, empirical evidence revealed the unwillingness of an inflexible and under-resourced system to negotiate educational processes and outcomes and meet the diverse needs of its pupils (Strogilos, et al., 2011). As Zoniou-Sideri and her colleagues noted "*Students, parents and families feel trapped in a system that instead of promoting a democratic inclusive school, uses the rhetoric of inclusion*", (Zoniou-Sideri, et al. 2006, p. 289). However, as the institution of inclusion reaches maturity, there are steps leading towards the essence of education, the effectiveness of teaching

and intervention (Tzivinikou, 2015, in press; Tzivinikou, & Papoutsaki, 2014), and the creation of a sufficient repertoire of effective practices.

Problem of Research

The collaboration of special and general education teachers is one of the most important factors related to the effectiveness of the education of pupils with special educational needs, as indicated in relevant literature (for example, Beaton, 2007; Bauwens, & Hourcade, 1996; Blanton, & Pugach, 2007; Sledge, and Pazey, 2013; Sokal, & Sharma, 2014; Tzivinikou, & Papoutsaki, 2014; Vlachou, Didaskalou and Mpeliou, 2004; Strogilos, et al., 2011).

The present study reported the efforts made by special and general education teachers to promote their cooperative teaching in heterogeneous classes, including students with special educational needs. In the last fifteen years, according to the 2817/2000 law, (FEK, 78A) and the subsequent one 3699/2008, (FEK, 199A) a kind of individualized educational support for students with special educational needs, called parallel support [parallili stiriksi] has been promoted in Greek mainstream schools, providing assistance to these students. This support is supplementary to the other and dominant type of support, the resource settings of inclusive schools, (Strogilos & Tragoulia, 2013). The character of this service is vague (Vlachou, & Zoniou-Sideri, 2010; personal evidence from professional position), as it is adapted to the special characteristics of each specific school and personnel where it is taking place. Its vagueness lies in the roles of both, special and general education teachers, a frequently emerging issue in collaborative teaching (Sokal, Sharma, 2014).

In the context of this educational service, the cases analyzed in this study were studied with regard to their characteristics and their particular types of cooperation between two teachers and the kind of co-teaching that arose. The general and special education teacher-participants of each case received training on effective collaboration and co-teaching skills, as part of a 6-month in-service training program (for details, Tzivinikou, 2015 in press).

Research Focus

Teaching effectiveness as one of the most important issues related to education and its evaluation through quantitative and qualitative methods has preoccupied a considerable number of researchers for many years. In fact, it confirms that an effective teacher makes a positive impact on student achievement and their effective learning that is considered to be the mission of the school (Brownell, et al., 2012; Kane, et al., 2008; Hines, 2008; Sileo, 2011; Hang, & Rabren, 2009; Murawski, & Lochner, 2011; Scruggs,et al., 2007; Solis, et al., 2012).

In inclusive settings where the coexistence of two teachers is a key feature, the effectiveness of teaching becomes more complex as the issue of collaborative teaching or co-teaching emerges. This issue is quite different than that of collaboration between teachers and professionals from other disciplines, which is included in the most recent Greek legislation as "multidisciplinary collaboration" (Strogilos, et al., 2011) and it is not on the current study focus. The distinctive feature of cooperative teaching is that it involves direct collaboration between the general education and special education teachers as they are expected to work together in the same classroom most time of the day. Co-teaching is a well-known strategy and one of the fastest growing inclusive school practices. Co-teaching occurs when two or more professionals jointly deliver substantive instruction to a diverse, or blended, group of students in a single physical space.

Earlier research suggested that teachers' attitudes are a significant determinant of success in inclusive classrooms, and that teachers' attitudes affect behaviours and in turn influence the classroom climate and students' opportunities for success (e.g., Avramidis & Norwich, 2002). In inclusive education and special needs education, the latest studies concluded that teaching disabled students demands a higher level of preparation and specialized planning for the

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successful implementation of special education goals, involving general education curriculum modifications (Tsakiridou & Polyzopoulou, 2014; Sokal, Sharma, 2014), moreover, on a universal design curriculum context (Tzivinikou, 2014).

Another significant factor shown to affect teacher effectiveness in inclusive classrooms is teaching efficacy, (Gibson & Dembo, 1984; Tschannen-Moran and Woolfolk Hoy 2001; Tzivinikou, in preparation). Research findings indicate that efficacy affects the effort teachers invest in teaching, the goals they set and their capacities for planning and organization (Tschannen-Moran & Hoy, 2001). Finally, the collaboration of both, special and general education teachers affects effectiveness, as noted by the vast majority of researchers (Hines, 2008; Sileo, 2011; Hang, & Rabren, 2009; Murawski, & Lochner, 2010; Scruggs,et al., 2007; Solis, et al., 2012; Basham, et al., 2010; Murawski, & Hughes, 2009; Santamaria, & Thousand, 2004).

Teachers as professionals usually work independently and it is commonly believed that they perceive their classrooms as their personal spaces shared with their students as hosts. Thus, the need for cooperation comes against that established perception; therefore the development of cooperative practices in school is a strenuous and sustained effort of both the administration and the teachers themselves.

As educators initiate collaborative actions that reach the co-teaching, one should clarify the essential characteristics of co-teaching related to their personality, their professional strength and resistance as well as their teaching skills. First of all, primary aspect is that co-teaching is not a legal mandate, and it is a voluntary arrangement, wherein two adults work together to provide services for diverse learners in a coordinated fashion at the classroom level.

There is wide research evidence regarding the essential characteristics of professionals who make effective co-teachers, such as personal confidence; professional competence, good communication and problem-solving skills, avoidance of conflicts, flexibility and effective organizational skills, as well as team work experience and extra time investment for weekly planning (e.g., Beaton, 2007; Tschannen-Moran and Hoy, 2001; Hines, 2008; Sileo, 2011; Hang, & Rabren, 2009; Murawski, & Lochner, 2010; Basham, et al., 2010; Murawski, & Hughes, 2009; Scruggs,et al., 2007; Solis, et al., 2012; Daniels, & Walker, 2001; Graham, 2007).

Walther-Thomas and colleagues, (2000), offered a mnemonic strategy reminding the main elements of collaborative teaching, named "*PARTNERS''*, that is illustrated in figure 1.

Plan together weekly

Address classroom concerns proactively

Receive ongoing administrative support

Thrive on challenges

Nurture a sense of classroom community

Evaluate student performance

Reflect on practice and strive for improvement

Support each other

Figure 1: Mnemonic strategy for reminding co-teachers crucial co-planning behaviors proposed by Walther-Thomas et al., (2000).

Cooperative teaching was described in the late 1980s as "an educational approach in which general and special educators work in co-active and coordinated fashion to jointly teach heterogeneous groups of students in educationally integrated settings. In cooperative teach-

ing both general and special educators are simultaneously present in the general classroom, maintaining joint responsibilities for specified education instruction that is to occur within that setting" (Bauwens, Hourcade, & Friend, 1989, p. 36).

Moreover, Bauwens, Hourcade, and Friend, (1989), suggested three co-teaching arrangements through which co-teachers can share instructional responsibilities: a) complementary instruction, b) supportive learning activities, and c) team teaching. Additionally, co-teaching is described as having four components: (a) two educators, usually one general education teacher and one special education teacher; (b) instruction delivery by both teachers; (c) a heterogeneous group of students, including those with disabilities as well, are taught with their peers without disabilities; and (d) a single classroom where students with disabilities are taught with their peers without disabilities (Friend & Cook, 2007; Hang, & Rabren, 2009).

Co-teachers usually begin from a co-existence level and slowly move towards co-working, then co-instructing, and finally co-teaching sharing responsibilities with regard to presence, planning, presentation, problem solving, and processing (Murawski & Lochner, 2011; Sileo, 2011). Effective teams of teachers work together as equal partners in interactive relationships, each of them involved in all aspects of planning, teaching, assessment, and classroom management and behaviour.

In co-teaching, both professionals coordinate and deliver effective instruction. Specifically, they plan and use unique and high-involvement instructional strategies to engage all students in ways that are not possible when only one teacher is present. It is important to keep in mind that two qualified teachers or other professionals can structure instruction in a number of creative ways to enhance learning options for all students. With two teachers delivering instruction and increasing the instructional options for the students, all students have more opportunities to participate actively in their learning.

Co-teachers should be familiar with the five different methods that can be used in the classroom: one teaching, one supporting; station teaching; parallel teaching; alternative teaching; teaching together or team teaching (Friend & Cook, 2007; Hang, & Rabren, 2009; Murawski & Lochner, 2011; Sileo, 2011), briefly described below as following:

One teaching, one supporting: one of the simplest of the approaches to adopt. This approach has serious drawbacks, however, and frequently, the special educator, is being merely relegated to the role of assistant.

Station teaching: The co-teachers divide the instructional content, and each takes responsibility for planning and teaching part of it. The drawbacks to this approach include the noise and activity levels, which may be demanding for some teachers.

Parallel teaching: The teachers jointly plan the instruction, but each delivers it to a heterogeneous group comprised of half of the students in the class. This approach requires both that the teachers coordinate their efforts so that all students receive the same instruction and that grouping decisions are based on maintaining diversity within each group.

Alternative teaching: In this approach one teacher pre-teaches or re-teaches material to a small group of students while the other instructs the large group in some content or activity that the small group can afford to miss. This alternative teaching approach can also be used to ensure that all students in a class receive opportunities to interact with a teacher in a small group.

Team teaching: Both teachers are responsible for planning and they share the instruction of all students. Teachers may role-play, debate, simulate and model. Team teaching requires that the co-teachers are able to mesh their teaching styles. It is an approach that few co-teachers may ever be able to implement. Yet many experienced co-teachers report that this is the most rewarding type of co-teaching.

The present study was an attempt to improve the collaboration of special and general education teachers so as to increase in turn the quality of learning in fifteen heterogeneous classes. Specifically, this article presents fifteen cases in a collective effort to develop co-teaching procedures in general classrooms attended by diverse students, including those with learn-

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ing difficulties. The aims for each case was to provide the appropriate changes in the school, classroom and individual level in order to form the specific model of collaboration between the two teachers worked in the same classroom. The research questions were: (a) was it possible to promote cooperation of general and special education teachers and develop a model of co-teaching? (b) what type of co-teaching could be established?

Methodology of Research

General Background of Research

There is a considerable amount of research evidence on the difficulties in implementing collaborative practices between special educators and their colleagues in inclusive schools (Strogilos, & Tragoulia, 2013; Vlachou, Didaskalou and Mpeliou, 2004), and heterogeneous classes (Blanton, & Pugach, 2007; Beaton, 2007; Bauwens, & Hourcade, 1996). The difficulties listed by the abovementioned authors were the lack of specific policy and institutional schedule for conducting collaboration-related activities, rigid school structures and practices, lack of administrative support, lack of time for common planning, inadequate consultation skills, increased workload for both general and special education teachers, conflictual interpersonal relationships, different approaches and teaching methods which follow the general and special educators, different approach to students with special educational needs, lack of information and awareness of general educators on issues related to special education and the processes of inclusion, as well as the entrenched perception that the education of special needs students is an exclusive responsibility of special educators. The research took place in Thessaloniki, Greece, and it lasted six months.

Sample of Research

Fifteen classes as cases comprised the sample of the present study. Each case involved a general classroom with at least one student with learning difficulties, where a general teacher and a special educator coexisted. So, the participants-teachers were thirty in total, three of them were men, whereas 27 were women. Their average professional experience was about 10 years, ranging from one to ten years. The main feature of the classrooms regarding students was that the number of the students ranged from 18 to 21. In that number, special needs students were included as well. The students with special needs, were commonly students (seven of them in the 1st-grade, four in the 2nd-grade, two of them in the 3rd-grade and the last two in the 4th-grade) with mild autistic characteristics, ADD and behaviour problems.

Instrument and Procedures

A rubric was created for the needs of the study, evaluating the collaboration of both educators in each dyad, based on the literature evidence (Strogilos, & Tragoulia, 2013; Blanton, & Pugach, 2007; Beaton, 2007; Bauwens, & Hourcade, 1996; Conderman, G., et al., 2008). The elements of the rubric were the following: i) administrative support; ii) collaborative planning; iii) collaborative presenting/teaching; iv) common or different approaches and teaching methods for all students (special and general education teachers); v) different approaches and teaching methods for special needs student(s); used by special and general education teachers; vi) responsibility for special needs students support and education; vii) collaborative evaluation of all the students; viii) collaborative evaluation of the instructional procedures; ix) personal conflicts and interpersonal relationships (see the original rubric in index A). This rubric was applied in two phases, at first, before the training program and then, after the training, at the end of the 5-month training provided by their instructional consultant and the author of this article, as a member of a formal supportive team for teachers (called pre and post training rubrics).

Data Analysis

Descriptive statistics, especially paired-sample *t-test* was used as the most appropriate analysis, analyzing the two phase rubrics as dependent samples.

Results of Research

Quantitative analyses were carried out, specifically, descriptive statistics of the initial and final self-evaluation rubrics (Table 1). The data met the assumptions of the paired *t-test* that could calculate the difference between pre and post evaluation scores of rubrics. As table 1 shows all the differences were negative, in other words, the participants' post-self-evaluation scores were bigger than the pre-self-evaluation ones. That means, the collaboration of the participants was improved due to training.

In details, a two-tailed paired samples *t-test* revealed that special and general education teachers-participants evaluated themselves more positively regarding the following aspects, by order of *t*-value size from the largest to the smallest:

- Collaborative planning, $t(14)= -31,000, p\leq001$;
- Responsibility of special needs students support and education, $t(14)= -21,166, p\leq001$;
- Collaborative evaluating the instructional procedures (CE procedures), $t(14)= -14,789, p\leq001$;
- Common or different approaches and teaching methods for all students (special and general education teachers), $t(14)= -14,000, p\leq001$;
- Administrative support, $t(14)= -11,297, p\leq001$;
- Collaborative presenting/teaching, $t(14)= -10,693, p\leq001$;
- Collaborative evaluating all the students (CE students), $t(14)= -9,025, p\leq001$;
- Personal conflicts and interpersonal relationships, $t(14)= -7,432, p\leq001$;
- Different approaches and teaching methods for special needs student(s) (special and general education teachers), $t(14)= -6,614, p\leq001$;

The participants evaluated very positively the aspect of the administrative support, $t(14)= -11,297, p\leq.001$, so the difference in total scores of pre and post evaluation rubrics was very negative $t(14)= -28,964, p\leq.001$, as well.

Table 1: Descriptive Statistics & Paired Samples T- Test.

Outcome	Pre-test		Post-test		95% CI for mean Difference	t	df
	Mean	SD	Mean	SD			
Administrative	1,67	.488	3,53	.640	-2,221 - 1,512	-11,297*	14
Planning	1,40	.507	3,47	.516	-2,210 - 1,924	-31,000*	14
Teaching	1,07	.258	2,47	.516	-1,681 - 1,119	-10,693*	14
Teaching methods for all student	1,20	.414	3,07	.594	-2,153 - 1,581	-14,000*	14
Teaching methods for special needs	1,33	.617	3,00	.655	-2,207 - 1,126	-6,614*	14
Responsibility for special needs	1,20	.414	3,87	.352	-2,937 - 2,396	-21,166*	14
Evaluating all the students	1,07	.258	2,13	.352	-1,320 - ,813	-9,025*	14
Evaluating instructional procedures	1,13	.352	3,40	.507	-2,595 - 1,938	-14,789*	14
Conflicts and relationships	1,67	.900	3,87	.352	-2,835 - 1,565	-7,432*	14
Total collaboration	10,25	1.589	25,36	2.536	-16,230 -13,992	-28,964*	14
						*p < .001	

Discussion

Traditional teaching involves teachers working individually and acting as sole regulators of teaching and "owners" of the class and this is a common situation encountered in Greece, (personal evidence based on a long professional experience). However, a large amount of the literature evidence encourages collaborative practices between or among teachers as a means to improve the education of diverse students (Beaton, 2007; Bauwens, & Hourcade, 1996; Blanton, & Pugach, 2007; Sledge, & Pazey, 2013; Sokal, & Sharma, 2014). These collaborative practices are not easy to be implemented since the school community is not familiarized with the perceptions of collaborative learning and co-teaching, (Tzivinikou, 2015, in press; Tzivinikou, & Papoutsaki, 2014; Vlachou, Didaskalou & Mpeliou, 2004).

A very popular, recently implemented, parallel support programme for students with special education needs in general classes was established as a result of the strong desire of the parents of children with disabilities who wished their children to attend a welcoming, friendly mainstream school, able to handle their children's learning difficulties. Additionally, as literature supports (Vlachou, & Zoniou-Sideri, 2010) and according to the author's long-term professional evidence, there was a simultaneous and significant pressure in that direction on the teachers of the mainstream schools that seemed to be unable to manage the challenging behaviours and the highly intensive and special educational needs of these students.

Thus, for years the existing rhetoric of inclusion (Zoniou-Sideri, et al., 2006), was transposed into practice and became an educational practice through the institution of parallel support, where a special education teacher supports a learning disabled student in a mainstream classroom. However, the implementation of parallel support into practice has revealed some intrinsic weaknesses, the overcoming of which would assist the development of the institution itself. These intrinsic weaknesses were the pedagogical issues that emerged from the coexistence of two teachers in the same classroom. In order to deal with these difficulties, a training program was set up to provide the required upgraded and pedagogical knowledge and then a proposal for the comprehensive settlement of the problems associated with the implementation of parallel support was formed (for details, Tzivinikou in press).

The current study aimed to investigate the improvement of cooperation between general and special teachers that worked together in fifteen heterogeneous classrooms, the implementation of the parallel support programme, and the development of a co-teaching model that would function as an alternative proposal to the parallel support programme, contributing to the increase of the quality of education provided to all students and to the exploitation of the available but limited resources for this programme (Strogilos, et al., 2011), especially now in the context of the financial crisis in Greece.

The findings indicated that it is feasible to create the spirit of cooperation among teachers, which resulted in the development of collaborative teaching models that were tailored to the particular circumstances of the schools in Greece. These findings were in agreement with the literature, highlighting the significance of collaboration between special and general education teachers as an essential and crucial way to provide more effective education to all students regardless of their abilities and disabilities (Strogilos, & Tragoulia, 2013; Beaton, 2007; Bauwens, & Hourcade, 1996; Blanton, & Pugach, 2007; Sledge, and Pazey, 2013; Sokal, & Sharma, 2014; Tzivinikou, & Papoutsaki, 2014; Vlachou, Didaskalou & Mpeliou, 2004).

More specifically, the findings indicated that as regards collaborative planning and teaching, initially, a total lack of collaboration was recorded, this is in consistency with the Strogilos and Tragoulia (2013), a study with regard to co-teaching in Greek mainstream schools. But after the in-service training concerning collaboration improvement and promotion, the participants reported that they succeeded effective collaborative planning and teaching, however, the improvement of teaching was less. This finding confirms previous efficacy studies (Tschannen-Moran & Hoy, 2001; Hines, 2008; Sileo, 2011; Hang, & Rabren, 2009; Murawski, & Lochner, 2011; Scruggs,et al., 2007; Solis, et al., 2012) on the necessity to increase the effectiveness of co-teaching.

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To continue, the participants claimed that they initially, adopted different teaching approaches and they used completely different teaching methods for all students, including those with disabilities. After the training, they reported that they came to the conclusion that there was a need for the selection and use of commonly used teaching methods, and they started to use common teaching methods. These findings were related to the teachers' different backgrounds in relation to their undergraduate studies, where in some cases no emphasis on common approaches included teaching methods and good educational practices appropriate for all children, including those with learning difficulties. The following two common though alternative approaches are considered to be effective: a) differentiated instruction, which comes from general education and respects all the diverse students, (Santamaria, & Thousand, 2004), b) the response to instruction and intervention (RtI) model which comes from special education and supports all students by providing tiered instruction, (Basham, et al., 2010; Murawski, & Hughes, 2009).

Another important issue concerning the joint responsibility of the teachers towards the education of children with special educational needs emerged in the current study. Empirical evidence and research findings show that usually the responsibility belongs to the special education teachers, and the findings of the study's initial phase, were in consistency with this evidence (Sledge, & Pazey, 2013). However, the results from the second phase differ from the results of the first one, according to which the participants succeeded in a significant improvement of responsibility sharing, reaching the top score (3,87 out of 4). The above results could be interpreted as the outcome of appropriate teacher training undergone by the participants-teachers, which is a critical and imperative obligation of the State towards the educators and for the benefit of all students.

There was no significant improvement made in relation to commonly used procedures for students and instruction evaluation, despite being part of co-teaching (Friend & Cook, 2007; Hang, & Rabren, 2009). Although, the participants' scores were higher in the second phase, it seems that more time and efforts should be invested on that issue.

As regards the conflicts that arose between the teachers, the findings revealed that they were intense before the training, however, in the second phase, these conflicts were gradually resolved. This contributed to the improvement of the quality of teachers' relationships as the avoidance or the resolution of them is an important skill for collaborative teaching (Daniels, & Walker, 2001; Graham, 2007).

It is known that external factors can have a significant positive or negative influence on co-teaching (Strogilos, et al., 2011) and administration is one of these factors. A supporting administration can help to increase the opportunities for cooperation, giving the time and place for the growth of collaborative educational activities concerning instructional planning and delivery, and also, contribute to conflict settlement. The findings have shown a noteworthy improvement regarding the support provided to all teachers by the administration, and this could be said that it encouraged the processes of co-teaching and had a significant positive impact on the overall procedure of co-teaching.

Additionally, it was revealed that the participants in the initial phase included a little or no actions related to co-operative teaching in their daily instructional practice and this was consistent with Strogilos and Tragoulia (2013) findings. This could be attributed to the fact that the coexistence of two educators was according to legislation and not by choice and, often, creating tensions and conflicts among teachers, as described by Graham, (2007).

It seems however, that after receiving training with regard to collaboration and co-teaching, the participants (the teachers) changed their attitudes and showed great willingness to adopt the suggestions and new knowledge, by developing cooperation procedures and high quality collaboration skills. This was reflected in the total pre and post training scores in the self-assessment rubrics (initial score 1,14; final score 2,82 out of 4).

Finally, answering the second research question "what type of co-teaching eventually was established", it seems that the participants managed to develop the simple type of co-teach-

ing, the "one teaching, one supporting", which is the simplest of the approaches. In a few cases, the participants created the conditions for the development of the most demanding and effective type of co-teaching, as described by a number of researchers (e.g., Friend & Cook, 2007; Hang, & Rabren, 2009; Murawski & Lochner, 2011; Sileo, 2011), the "team-teaching".

Limitations and Implications for the Field of Education

Despite the positive impact of the training on the participants, the most important research limitation of the study is associated with the difficulty of generalization of the findings. Also, the validity of the findings was limited due to the collection method, this refers to the self-assessment of the participants themselves, owing to a very complex human behaviour, the collaboration. In order to eliminate these limitations, an ongoing analysis of data received from classroom observations of these 15 cases will be done, and then included in a future publication.

Although, the results of the study revealed the significance of educators' training for their professional development and the continuous development and improvement of the educational system, the great difficulty lies in the financial support, not available at the time being and the absence of relevant policies to support in-service training for all educators regarding collaboration.

One of the future suggestions could be the introduction of collaboration in teacher preparation programs. The understanding that all teachers will be working with both typical and special needs students should function as a springboard to this. Every teacher needs to study teaching techniques, subject area(s), disability, individualization, accommodation, and collaboration skills in the classroom.

Conclusions

Overall, the "parallel support" an educational institution supporting students with special education needs in mainstream classes was the focus of interest of the current investigation that it was reported and discussed in the collaboration of special and general education teachers in the context of co-teaching aiming to improve the education provided to all students, including those with special educational needs. The findings indicated that it was feasible to create culture of cooperation between teachers, which was resulted in the development of collaborative teaching models. The findings indicated that initially there was a little collaboration among teachers that it is in consistency with the literature. On the other hand, in the second phase, after the training of teachers, the findings were shown a significant improvement in collaboration. Thus, the participants were changed their attitudes and showed great willingness to adopt the suggestions and new knowledge for co-teaching, by developing cooperation procedures and high quality collaboration skills. Finally, the participants managed to develop the simple type of co-teaching, the 'one teaching, one supporting', which is the simplest of the co-teaching models and in a few cases, the most demanding type the 'the team-teaching'.

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Appendix

A. The rubric for evaluation the collaboration between general and special education teachers

Statement	1	2	3	4
Administrative support	impeding the cooperation	Ignoring cooperation	Emergent administrative support	Facilitations for improving cooperation
Collaborative Planning (CP)	Absence of CP	Initial CP	Emergent CP	Effective CP
Collaborative Presenting/teaching CP/T	Absence of CP/T	Initial CP/T	Emergent CP/T	Effective CP/T
Common or different approaches and teaching methods for all students	Completely different teaching methods	Emergent discussion of common teaching methods	Initial trials for common teaching methods	common teaching methods
Different approaches and teaching methods for special needs student(s)	Completely different teaching methods	Emergent discussion of common teaching methods	Initial trials for common teaching methods	common teaching methods
Responsibility of special needs students support and education	Special teacher responsibility	Special teacher responsibility and little interest from general teacher	Special teacher share a part of responsibility with the general teacher	Common responsibility
Collaborative evaluating (CE) all students	Absence of CE	Initial CE	Emergent CE	Effective CE
Collaborative evaluating the instructional procedures	Absence of CE	Initial CE	Emergent CE	Effective CE
Personal conflicts and interpersonal relationships	Often conflicts and low quality of interpersonal relationships	Several conflicts and low quality of interpersonal relationships	Rare conflicts and high quality of interpersonal relationships	No conflicts and high quality of interpersonal relationships

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