Preparing Teachers for Collaborative Classrooms

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Summary and Keywords

Many educational reforms highlight the need for collaboration, understood not only as a competence to be learned but also as a way of learning and teaching. Two types of collaboration can be found in classrooms: peer collaboration and teacher collaboration. The first focuses on how the teacher restructures interactions between pupils organized in pairs or groups. This permits cooperative learning practices, either by peer tutoring or through systems of cooperative learning. By implementing peer collaboration, the teacher is able to develop a new and transformative role which facilitates functions such as continuous assessment or immediate personalized attention, which are more difficult to carry out in environments where a traditional teaching approach is used. However, both the organization of the classroom for peer collaboration and this new teaching role require teacher training. Experiential learning is a key aspect of the training.

Different levels of teacher collaboration exist, but the most complete is co-teaching: two teachers planning, implementing, and assessing the same lesson for a group of students. Co–teaching allows teachers to attend to the individual needs of their students; that is why it is such an important tool in inclusive education. Furthermore, it is a learning tool for teachers. Co-teachers can foster mutual observation, reflection, and planning of innovative practices, making working together a form of professional development. However, to ensure that pupils receive better attention and that teachers learn from each other, there has to be teacher training, and again, it must be addressed from an experimental perspective.

Keywords: collaboration, cooperation, co-teaching, peer learning, peer tutoring, teacher professional development, teaching education, teaching role, teacher training

Collaboration in the Classroom: Peer Collaboration and Teacher Collaboration

Teachers can promote collaboration between pupils as a learning mechanism by placing them in pairs or groups and structuring interaction so that they learn from each other. The first section of this article examines this process and explores the teacher’s new role

in this type of classroom. Moreover, in the classroom, teachers can collaborate with each other, not only to better respond to students' needs but also to learn from each other. The second section of this article analyzes this last aspect.

Peer Collaboration: Structuring Interaction Through Cooperative Learning and Peer Tutoring

Piaget states that learning occurs when there is interaction with others, and Vygotsky added, especially when "these others" (mediators) possess slightly more knowledge than the learner (Vygotsky, 1978). Seeing the teacher as the mediator, traditional teaching methods assumed that peer interaction was of little relevance and therefore should be eliminated, or at least minimized, in the classroom. However, for some time now we have realized that when interaction between pupils is appropriately structured, it leads to peer learning.

A wide range of peer learning scenarios exist. The distinction that Damon and Phelps (1989) proposed is a classic example. This situates peer learning on a continuum with three main scenarios. Based on the participants' characteristics, objectives, and type of interaction, the authors distinguish between peer tutoring (an asymmetric relationship between two pupils with different levels of skill or knowledge in a given area), cooperative learning (relationships based on the acquisition and/or application of knowledge in a group with heterogeneous, or near heterogeneous, skills), and collaborative learning (a relationship based on the acquisition and application of knowledge between two or more students with similar abilities).

Although the authors conceived of these three scenarios as a continuum, in practice the distinction is sometimes unclear. While the distinction between peer tutoring and cooperative learning is transparent because of the asymmetry existing between the role of the tutor and tutee, the distinction between collaborative and cooperative learning is less clear and generates controversy. The degree to which interactions between the team members are structured can distinguish both scenarios (McWhaw, Schnackenberg, Sclater, & Abrami, 2003). Cooperative learning constitutes a more structured scenario in which the teacher's role is that of a facilitator who organizes relationships between team members to help them reach their objectives (Davidson & Major, 2014). Collaborative learning, on the other hand, gives pupils greater freedom to organize themselves as a group, as happens ad hoc in informal learning or professional contexts in which the members normally possess sufficient social skills and motivation to jointly solve a real problem (Topping, Buchs, Duran, & Van Keer, 2017). In formal education, especially within schools, pupils are beginning to learn how to cooperate but are still developing the complex social skills required to work in teams created artificially in order to complete tasks that they may sometimes perceive as unrelated to them.

In this context, you cannot group pupils together and hope that cooperation will simply occur. The teacher must provide structured frameworks that will help create learning through pupil interaction.

The success of peer learning, and especially cooperative learning (CL), is documented in hundreds of studies ranging from preschool to university level and in different curricular areas (Johnson & Johnson, 2009). Authors (e.g., Dillenbourg, Baker, Blaye, & O'Malley, 1996; Rodríguez, Fernández, Escudero, & Sabirón, 2000) have distinguished at least three generations of research.

The first generation compared how effective cooperation was in relation to competition and individual work. These studies show that cooperation is more effective than interpersonal competition or individual effort at all levels of education (Johnson, Maruyama, Johnson, Nelson, & Skon, 1981) and has powerful effects on achievement, socialization, motivation, and personal development (Johnson & Johnson, 2002). Better social relations are built because of it (Roseth, Johnson, & Johnson, 2008). Synthesizing two major contributors (Johnson & Johnson, 1989; Slavin, 1983), we can conclude that although cooperation is a powerful tool in the learning process, its benefits are not automatic.

Simply putting students into groups to work cooperatively is not enough (Baines, Blatchford, & Kutnick, 2008). Group work, especially within a school context, can be characterized by the dissipation of responsibility, with one pupil working harder to compensate for, or sometimes hinder, the work of the others (Lindauer & Petri, 1997). To overcome these disadvantages and change group work into teamwork, or cooperative work, the teacher must organize the interactions between team members to ensure that the five principles, proposed by Johnson and Johnson (2009) are fulfilled. These principles are Positive Interdependence, Individual Accountability and Personal Responsibility, Promotive Interaction, Appropriate Use of Social Skills, and Group Processing. These are widely accepted by the scientific community, with a few minor variations (Kagan & Kagan, 2009; Villa, Thousand, & Nevin, 2013).

In order to help structure interaction so that groups become teams, cooperative structures have emerged. These structures can be divided into the methods and techniques or formal and informal CL (Johnson, Johnson, & Holubec, 2008). Methods are viewed as complex and sophisticated structures, which usually require time and initial training periods for the students; implementing them regularly is advised. *Learning Together* (Johnson & Johnson, 2002), *Group Investigation* (Sharan, 1994), *Reciprocal Teaching* (Palincsar & Brown, 1984), or *Jigsaw* (Aronson, 1978; Slavin, 1980) stand out among the multiple methods available. Techniques, on the other hand, are simple structures which can be implemented with a few easy steps, without the need for initial training (Kagan & Kagan, 2009).

The second generation of research on CL focuses on how effective CL methods are. Slavin (1980) reviewed studies on the use of CL in primary and secondary education. Results showed improvements in reaching goals, more positive interracial relationships, mutual interest, and greater self-esteem. Newmann and Thompson (1987) obtained similar re-

sults when comparing CL methods at the secondary school level and emphasized the necessity of rewards or group recognition, as well as individual responsibility. Slavin (1996) also stresses the effect of group rewards. Nastasi and Clements (1991) reported the importance of higher-order thinking, motivation, and social skills to explain the benefits of CL for cognitive development, academic performance, and socioemotional development.

Other meta-analysis (Lou, Abrami, Spence, Poulson, Chambers, & d'Apollonia, 1996) shows that learning in small groups has positive effects on performance and attitudes in both primary and secondary education. Positive results of CL methods are consistent at all levels of education (Vermette, Harper, & DiMillo, 2004). Cohen, Kulik, and Kulik (1982) were the first to provide a meta-analysis on peer tutoring, concluding that greater effectiveness is connected to the initial training the tutors receive, the distance inability between tutor and tutee, structured interaction, and longer-term projects. Bowman-Perrott, Davis, Vannest, Williams, Greenwood, and Parker (2013) analyzed 26 case studies in schools and found peer tutoring to be effective. Leung (2015), after reviewing 72 papers, concludes that peer tutoring is effective for all age groups, especially those in secondary education.

With the power of cooperation and the effectiveness of CL methods proven, the third generation of research is focusing on the interaction process within teams and analyzes the exchanges and joint activities between team members, attempting to explain how and for what reasons students learn by cooperating together.

Unfortunately, there is a large number of these third-generation studies and they cannot all be covered here. Undoubtedly, more meta-analyses and reviews will be published soon. This will encourage theories to emerge, explaining the elements responsible for the effectiveness of CL.

Notwithstanding, we would like to offer some explanations that the studies on peer tutoring have provided and which can be generalized to CL. On the one hand, there is the possibility to adjust the pedagogical help that one-to-one or very small group relationships allow. In this privileged interaction, in which the teacher has deliberately structured the prototype dialogue between the teacher and the group of students—referred to as IRF—is divided into three phases: teacher initiates dialogue (I), students respond (R), and teacher offers feedback (F). In CL, this dialogue is enriched by one of five phases: IRFCE (Person & Graesser, 1999). In this interaction, both tutor and tutee follow the IRF structure but, because there is cooperation (C), responses from both pair members may improve and the quality of this joint response is what the tutor finally evaluates (E). The cooperation phase is the key to explaining the effectiveness of peer tutoring and its potential advantages. Enriching interactive mechanisms, some more tutorial in nature (led by the tutor) and others more collaborative (led by both tutor and tutee), emerge in this one-to-one scenario, when tutors display their skill and pedagogical strategies (Duran & Monereo, 2005).

This explanation allows us to understand how the pupil receiving pedagogical help from his or her teammate learns. However, we need to refer now to the pupil who offers help and the possibility of learning by teaching (Duran & Topping, 2017). Research into how pupils learn by teaching their classmates suggests that for learning by teaching to occur, as Roscoe and Chi (2007) suggested, interaction must be structured and pupils must be taught how to get away from simply "telling" knowledge and move toward a constructive process of reflection by explaining and questioning things. This is a crucial element to be built into classrooms, where pupils not only learn from their teachers but also from the mutual pedagogical help they give each other.

Teachers' Role in Peer Collaboration: From the Transmissive to the Transformative

Incorporating peer collaboration in the classroom requires the transmissive model of teaching (where pupils adopt a passive role and learn only what the teacher teaches them directly), in order to give way to a more transformative model (where the teacher adopts a new role and organizes the learning process so that the pupils can also learn from each other).

Developing this new transformative role is one of the main challenges facing the introduction of and the endurance of cooperative learning in schools (Sharan, 2010). The teacher is no longer a transmitter of knowledge but, rather, someone who builds scenarios which ensure suitable interdependence and interaction between pupils, who promotes and supports productive and constructive relationships, dialogue, and communication, and by doing so, hands over the control and leadership of the activity to the pupils (Mayordomo & Onrubia, 2015).

The teacher's role in a cooperative classroom has been outlined theoretically (Gillies, 2007; Sharan, 2015) and some empirical studies have started to define what functions the teacher should develop. Kaendler, Wiedmann, Rummel, and Spada (2015) present an initial theoretical framework for the teaching competencies required to introduce CL in the classroom. They distinguish between three moments: before pupil interaction takes place (preactive or planning stage), during the interaction between pupils (interactive), and at the end of the activity (postactive or reflective stage).

Preactive or planning actions refer to the role of the teacher, which starts with designing the interaction between team members, establishing the criteria and procedures to build the teams, and creating work guidelines. The pupils cooperate to learn, but at the same time, they learn to cooperate. So, the teacher must prepare learners for constructive interactions, create a positive framework for learning in interactions, inform families, and train students to use cooperative skills appropriately (Topping, Buchs, Duran, & Van Keer, 2017).

Interactive actions (while pupils are collaborating) refers to the teacher's performance of several actions (e.g., monitoring):. Through observation, the teacher assesses the quality of the interaction within the teams on three levels: collaborative (active participation and

idea-sharing; Johnson, Johnson, & Holubec, 2008), cognitive (asking key questions and providing detailed explanations; Webb, 1989), and metacognitive (processes involved in the preparation of the activity, its execution, the team members' comprehension of the activity, mistakes made, and assessment; Zimmerman, 2002).

Postactive actions are conducted upon completion of the activity. The teachers reflect on their role, the work processes utilized, and the degree to which the objectives have been reached. Any continuous assessment carried out provides information with which to proffer sufficient formative feedback on pupils' progress (as individual learners and as team learners), and on the role of the teacher.

This transformative role of the teacher faces challenges (e.g., sharing teaching skills with our pupils). In peer collaboration-organized classrooms, students take on the role of mediators—teachers—of their classmates. This can only occur if the teachers are prepared to share their monopoly: the ability to teach. They need to create situations in which pupils offer each other pedagogical help, by equipping them with the skills and tools to become tutors to their classmates. In this way, teachers are no longer the only ones who teach in the classroom.

1. *Learning by teaching*. Current teaching and learning conceptions hold that in the "zone of proximal development," the most capable participant also learns (Wells, 1999). As we have mentioned before, the complexity of teaching others is a superb way of learning for the person teaching (Duran & Topping, 2017). If this principle, learning by teaching, is understood by teachers, pupils, and their families, then they will also understand that the pupils who are tutors learn through the help they offer classmates. Pupils with greater learning difficulties are particularly welcome, because they are the ones who offer all of us more opportunities to learn.
2. *Support*. Through observation, the teacher decides in which groups and when and how to intervene. Although teacher intervention may come after a spell of observation, it normally happens in the form of feedback obtained during the monitoring phase. This support can be provided on different levels: offering clues, making suggestions or providing reminders (Ge & Land, 2004), advising, asking questions, or providing explanations. The support can be adjusted for the group, and peer support can also be used.
3. *Consolidation*. The teacher provides the pupils with cognitive and metacognitive stimuli in order to raise awareness of what knowledge they are missing, how to approach different problems, and how complex the concepts are.

Research by Duran, Corcelles, and Flores (2017), on the role of the teacher while pupils were cooperating in peer tutoring, shows that transmissive actions directed to the whole class are limited to opening and wrapping up the session and are replaced by actions which would be uncommon in a traditional classroom. The teachers observe while walking around and listening to the interactions between the pairs and they intervene only when necessary. By using observation techniques, they offer specific help, with different

scaffolding levels and very few direct replies, thus encouraging the pair to use their own resources; immediate attention is provided when the pairs request help.

Without a doubt, the teacher training required to be able to adopt this role is different and, in some ways, more complex than traditional transmissive-role training.

Teacher Training for Peer Collaboration

A great deal of research on CL exists, but implementing it in the classroom is still fraught with difficulties and resistance, regardless of the geographic or cultural framework (Fernández, González, & De Juanas, 2012; Galton & Hargreaves, 2009; Kagan, 2005; Sharan, 1994). Sharan (2010) synthesizes the paradox between CL's pedagogical value and the difficulty of putting it into practice and offers elements to overcome this: train teachers in CL's conceptual bases, distinguish different types and methods, organize interaction within the teams, and develop the teachers' new transformative roles.

Focusing on the first element, many studies on teacher training agree that the difficulty in implementing CL is related to the fact that the methodology is either unknown or poorly understood (Gillies & Boyle, 2008). Results from a growing number of initiatives designed to develop initial teacher training (Baloche & Brody, 2017; Cohen, Brody, & Sapon-Shevin, 2004) indicate that at least two elements should be considered. The first element is the use of experiential learning (Sharan, 2015), based on CL simulations, which allows students to go beyond just learning about CL to learning *through* CL; by doing this, making the conceptual change becomes easier (Koutselini, 2009). The second element is the necessary "coordination between what the interns see and do at universities and what they see and do in actual classrooms" (Cohen, Brody, & Sapon-Shevin, 2004, p. 10).

Results from these studies show that training is necessary, but it is not enough (Abrami, Poulsen, & Chambers, 2004; Sharan, 2010). The challenges seem to lie in getting teachers to adopt this new role, which surpasses the traditional transmissive role. The role of the teacher in CL-organized classrooms requires developing certain competencies (Gillies, 2007; Sharan, 2015). Referring again to Kaendler, Wiedmann, Rummel, and Spada (2015), although the actions during the planning and reflection stages can and should be taught in CL conceptual training, the skills required while students are working in groups can only be learned experientially, by placing education students in CL-organized classrooms (Jolliffe, 2015).

Offering future teachers the chance not only to understand how they should develop this role but also how to experience it, may well be a powerful tool to improve the expectations of the use of CL. These expectations are related to the teacher's conceptions of the teaching and learning processes, that is, to say what they understand by teaching and learning in a CL environment and what their role in this process is (Ruys, Van Keer, & Aelterman, 2014). As Veenman, van Benthum, Boosma, van Dieren, and van der Kemp (2002) point out, the more teachers become familiar and skilled in CL, the more favorable they will be toward it, thus making it easier to implement in their classrooms in the future. So, the conceptions teachers hold about CL are a key aspect in explaining, to a large

extent, whether they will adopt CL as an innovative style of teaching, how effective it will be, and how persistent they will be in its use (Abrami, Poulsen, & Chambers, 2004; Gillies & Boyle, 2008; Ruys, Van Keer, & Aelterman, 2014).

Within the field of in-service training, and with the goal of introducing and maintaining cooperative practices in the long term, Ishler, Johnson, and Johnson (1998) designed a program of professional development in several schools and showed that collaborative work among the staff was a key factor in determining which schools continued using CL after three years. Krol, Sleegers, Veenman, and Voeten (2008) designed a two-year staff-development plan. During the first year, teachers implemented CL and a staff development specialist gave them regular feedback. In the second year, situations of mutual support between teachers were organized and a clear leadership team (that included the teachers, the school-management team, and the staff development specialist) was established. They suggest that a good staff-development program should focus both on those teachers who work directly in the classroom and on the development of a teacher leadership team.

Jolliffe (2015) also suggests that schools working together, with a community of facilitators providing support, demonstrate a greater ability at using CL. She notes that collaborative cultures in the school, although slow to develop, are the key for sustainability.

Teacher Collaboration: Toward Co-Teaching

In the classroom, not only students, but also teachers, can collaborate. If we follow the classical definition by Friend and Cook (1992), teacher collaboration can be characterized as an interaction between at least two teachers, who act as peers, with the opinion of either having the same value regardless of their role in the school. Also, although the school should promote this interaction, the teachers decide if they want to collaborate or not. Decisions will be made in order to reach a common goal in a shared, but not necessarily identical, way. This allows for the differences in teachers' contributions, which are affected by their knowledge and/or role in the school.

A wide consensus exists in the academic field (Brown & Poortman, 2018; Hargreaves & Fink, 2006; Hargreaves & Fullan, 2012), and among studies carried out by international education organisms (Organisation for Economic Co-operation and Development, 2009; Schleicher, 2016), on the need to develop and adjust teacher collaboration in schools and collaboration networks. Teacher collaboration has been promoted as a decisive factor which contributes to school improvement and teacher development (Fulton & Britton, 2011; James, Dunning, Connolly, & Elliot, 2007). It is widely recognized that teacher collaboration is directly linked to the improvement of practices in innovative educational situations, because of the learning processes it promotes in the participants, and which have positive effects on students' achievement (Doppenberg, den Brok, & Bakx, 2012; Meirink, Imants, Meijer, & Verloop, 2010; Ohlsson, 2013; Ronfeldt, Farmer, McQueen, & Grissom, 2015).

Professional learning communities are a good example of such collaborative practices (Little & Horn, 2007; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006), which allow innovative methods to be implemented and sustained. Examples also exist of the creation of very promising networks between these communities (Katz & Earl, 2010; Miquel & Duran, 2017).

After reviewing studies on collaboration, Kelchtermans (2006) argues that joint work by teachers must be, but sometimes is not, correctly organized; its success can depend on the school context. Vangrieken, Dochy, Raes, and Kyndt (2015) present the diversity of perspectives and ways of understanding teacher collaboration on a continuum, ranging from a group of individuals who simply work together to highly collaborative teams. They underscore that the benefits are greater the more deeply rooted collaboration is among teachers (they feel more motivated, more efficient, experience a lighter workload, their communicative skills increase, and teaching strategies become more student-centered), among pupils (improving understanding and performance), and among the school (there is a positive influence in the perception that the school is supportive of innovation, making a cultural shift to more equity, greater school-wide attention to the needs of students, and a professional culture of intellectual inquiry).

Vangrieken et al. (2015) identify an array of factors which influence teacher collaboration, including those factors referring to the characteristics of the participants (positive attitudes toward teaming, experience, and knowledge of team processes), group structure characteristics (staff continuity, meeting time, and including them in decision-making processes), characteristics of working together (strong sense of team community, relationship-building, clear direction and common goals, observation and discussion of each other’s practices, and self-management), and characteristics of the school and the support received from the school (school administration’s commitment to teaming, pre-service, and in-service training). However, they also identify teachers and schools strongly opposed to collaboration. Some factors which hinder teaching collaboration are a lack of skills or training, unwillingness to collaborate, balkanization, individualism in school culture, and ineffective leadership (Plauborg, 2009). In conclusion, Vangrieken et al. (2015) define two basic aspects of effective collaboration: the work process supported by the school principal and the outcomes obtained from effective collaboration.

These studies do not dedicate attention to the differences between divergent collaborative teaching styles. We find styles of indirect collaboration (using the classical terminology of Bauwens & Hourcade, 1995) which examine collaborative relationships between teachers in planning, preparing, and discussing aspects related to teaching-learning; each teacher then implements it into practice individually. We will now focus on cooperative teaching or co-teaching, the most genuine form of direct collaboration.

Co-teaching is defined as a situation in which teachers, normally two, share responsibility for educating the whole class, within an inclusive classroom, by designing a program adapted to everyone, implementing the agreed upon procedures,and reviewing the results obtained (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010; Murawski &

Dieker, 2008). The teachers who collaborate are usually general- and special-needs teachers, but any teacher, even the students in the school, can adopt the role of co-teacher (Villa, Thousand, & Nevin, 2010).

Most of the studies on co-teaching focus on describing the different roles and relationships between teachers or other organizing aspects that are established in the classroom, rather than demonstrating its impact on student achievement and other key outcomes (Friend et al., 2010). These studies insist, however, on the benefits both participating teachers and pupils gain from co-teaching.

With reference to pupils, research on the efficacy of co-teaching considers different dimensions, such as the improvement in learning, social skills, and behavior, especially among pupils with learning difficulties (Hang & Rabren, 2009; Scruggs, Mastropieri, & McDuffie, 2007; Strogilos & Stefanidis, 2015). Co-teaching is proving to be a useful strategy in the advancement of inclusive education (Pancsofar & Petroff, 2016; Villa, Thousand, & Nevin, 2010). This is for a variety of reasons. First, it supposes that support is available to those who require it constantly, as well as to those who require support only occasionally. A second reason is that support can be given in all areas and in different content, not just in specific or isolated skills which usually occurs when support is provided outside the classroom. Additionally, co-teaching makes it easier to assess the pupil's needs and to provide the best support at a particular moment. And finally, co-teaching makes it easier to use teaching resources, which might otherwise be impossible if teaching was done individually. These resources may include strengthening oral expression, monitoring the class by focusing on the pupils, or making video recordings to analyze afterward. All these situations, demonstrating the use of co-teaching in the classroom, are designed to favor greater learning among the pupils.

Co-teaching also benefits teachers; it allows them to share and design new materials and methodologies, share the processes of assessment and monitoring, offer mutual support in difficult situations, and favor classroom management and the working atmosphere (Nevin, Thousand, & Villa, 2009). One of the most beneficial aspects that co-teaching offers, which comes from constructive discussions together, is that it acts as a strategy for which teachers can build knowledge (McDuffie, Mastropieri, & Scruggs, 2009; Pratt, 2014). Thus, co-teaching should be seen not only as a form of support for students but also as a source of learning for the teachers involved—and therefore an essential element in promoting improvement in the school (Pancsofar & Petroff, 2013; Rytivaara & Kershner, 2012).

Recent studies on the implementation of co-teaching as a model for the teacher education practicum also illustrate these benefits for both student teachers and their mentors (Baeten & Simons, 2014; Guise, Habib, Thiessen, & Robbins, 2017), and is thus an optimal strategy in pre-service and in-service professional development programs.

Teacher’s Role in Co-Teaching

Organizing joint work in co-teaching can range from providing support to an individual pupil in the classroom, or to the whole group when they are working in teams, to specific contributions in areas that one teacher masters more than the other. Maximum collaboration occurs by working together to plan, implement, and assess all classwork (Scruggs, Mastropieri, & McDuffie, 2007; Villa, Thousand, & Nevin, 2010).

Of special interest in the literature are explanations of different ways of organizing co-teaching (Baeten & Simons, 2014):

1. *The observation model*. One teacher teaches and the other observes. The observer’s role is passive and consists of collecting the information that both teachers had previously agreed upon. Once the session is over, the teachers analyze and discuss this information.
2. *The coaching model*. The observer has more responsibility in this role than in the observation model. He or she can make suggestions, offer help and support, and propose alternatives and solutions to any problems that may arise. The coach is normally an experienced teacher.
3. *The assistant teaching model*. One teacher leads the session and the other moves around the classroom offering support. This role requires an important level of joint planning and the ability to anticipate any problems in the classroom, as well as to ensure the answers that either teacher provides are consistent with one another.
4. *The equal status model*. Both teachers share equal status or roles in the classroom and the student group is divided into three teaching possibilities: sequential teaching (content and activities are divided up so that each teacher is responsible for one of them), parallel teaching (students are divided into two subgroups, each with a teacher, and they work on the same material), and station teaching (both the group and the tasks are divided and students circulate among stations overseen by one teacher).
5. *The teaming model*. This model requires the maximum collaboration. Both teachers share the same status and all the activities related to the learning process: planning, executing, and assessing. They are both in the group and make the most of this situation in order to exchange ideas and encourage discussion with the students.

The school should be organized to provide areas where teachers who participate in co-teaching can coordinate how they will interact in the classroom. The range of co-teaching approaches, depending on the class, the material being studied, or the teacher’s aptitudes and competencies, mean that each situation requires making decisions adapted only to that approach. In this sense, the recommendation is to use guidelines to help plan, revise, and assess how well the joint work was implemented, so that any changes can be made (Murawski & Dieker, 2004).

We also need to consider how to assess this organizational structure, which should, of course, take the protagonists’ thoughts and reflections into account. One example could

be to use the answers they provide in “The Co-teaching Rating Scale” presented by Gately and Gately (2001).

Teacher Training for Co-Teaching

Despite the obvious benefits, different obstacles exist which hinder the implementation of co-teaching and its transformation into a sustainable strategy in schools. Three of those obstacles are: (a) a lack of understanding of the advantages of having a support teacher in the classroom, rather than merely relying on external help for pupils with learning difficulties (Rytivaara, 2012; Strogilos & Stefanidis, 2015); (b) the individualistic approach of the teaching profession, or the feeling of being judged if another teacher is in the room and offers constructive criticism (Pancsofar & Petroff, 2013; Rytivaara, 2012); and (c) a lack of a supportive school culture, making teachers feel unsupported when faced with new challenges and initial insecurities (Friend et al., 2010; Rytivaara & Kershner, 2012; Scruggs, Mastropieri, & McDuffie, 2007).

Information and training systems for teachers in the initial stages of their careers, as well as throughout their teaching careers, have to be considered if we are to overcome these obstacles and implement co-teaching (Pancsofar & Petroff, 2016). There are authors who have designed a range of resources and materials to help implement co-teaching (Friend et al., 2010; Murawski & Dieker, 2004; Villa, Thousand, & Nevin, 2010), and who have explained in-service teacher training initiatives aimed at promulgating and improving co-teaching practices in schools.

The main topics which should never be missing from training programs are support in (a) planning for co-teaching before the sessions begin (organizing areas to coordinate work during the course; assessing the class’s needs and the appropriate support required, determining each teacher’s role, and accessing guidelines and materials which will help to advance the joint work); (b) implementing it for a period of time (collecting information on the process of working together, on how pupils learn, and on whether initial objectives are being fulfilled); and (c) the assessment of the whole co-teaching process (analyzing the data and deciding how to continue and improve both interaction between teachers and the entire structure of organized classwork). Support and training should not only be for those participating in co-teaching, but also for principals and school administration bodies (Lofthouse & Thomas, 2017; Morel, 2014; Villa, Thousand, & Nevin, 2010).

Nevin, Thousand, and Villa (2009) focus their attention on pre-service teacher training and point out that to be effective in collaborative work, future teachers need opportunities to practice. Student teachers learn from real experiences and this provides them with a model they can follow in their professional career, and in this sense, they highly value these co-teaching experiences in teacher education programs. These authors describe university practices in which two lecturers co-teach a class. The findings, although interesting, conclude that co-teaching at a university level requires assessment methods on quality and on the impact on students. They also detect a lack of a well-defined curriculum with administrative and logistic support to prepare lecturers in co-teaching.

Different studies (Baeta & Simons, 2014; Guise et al., 2017; Van Velzen, Volman, Brekelmans, & White, 2012) insist on the need to delve deeper into university teaching models, which link theory and practice, by focusing their attention on one particular subject, field experiences. Traditionally, teaching practice has been characterized by student teachers observing lessons before teaching on their own. However, different universities, especially those in America, have been experimenting for over a decade with the in-school relationships between the student teacher (or teacher candidate) and the mentor (or cooperating teacher) in co-teaching relationships (Bacharach, Heck, & Dalhberg, 2008, 2010; Kamens & Casale-Giannola, 2004). They offer opportunities to co-teach, which would otherwise be difficult to do in a traditional teacher training program.

At the start of the school year, all student teachers and mentors from schools participating in field experiences receive some hours of training. Both are given information related to the aspects necessary to carry out co-teaching experiences satisfactorily (Baeta & Simons, 2014; Goodnough, Osmond, Dibbona, Glassman, & Stevens, 2009; Kamens, 2007). Different research has highlighted both the advantages and disadvantages for those involved. The disadvantages are due primarily to adapting and improving co-teaching relations during the phase of internship. Advantages include learning from each other, professional support, comprehensive feedback about teaching and classroom practice, and pre-service teacher confidence, all of which result in professional and personal growth; the learners benefit from rich and varied lessons.

Conclusion

This chapter shows the need to convert the classroom into a space for collaboration and has put together guidelines from the literature on how to implement that change in practice. The teacher should facilitate peer collaboration by organizing interactions between students in such a way that the classroom becomes a community of apprentices in which students learn, not only through the pedagogical help from the teacher but also through the mutual support they give each other. Students both learn and teach under the supervision and guidance of the teacher. Cooperation is a valuable learning resource, so future research must explain more clearly how students learn from each other and how these learning strategies can be optimized.

At the same time, we have argued that the classroom also permits collaboration between teachers. In co-teaching, the most direct form of collaboration, two teachers share the planning, teaching, and assessment of a group of pupils. Collaboration like this not only means that pupils receive attention of a higher quality, but it also fosters peer learning between teachers. Teachers who practice co-teaching have an opportunity to reflect on and improve their teaching style, which in turn favors professional development. In this sense, future research has to ascertain how teachers learn from one another when they work cooperatively, in order to understand co-teaching as a tool for professional development.

Both forms of collaboration in the classroom can be mutually supportive (Jolliffe, 2015). Although it has been suggested that, when promoting peer collaboration, it is important that students see their teachers working together (Morel, 2014), teachers are equally encouraged to collaborate when they see their pupils doing it effectively and they understand cooperation as a learning mechanism (Miquel & Duran, 2017). Achieving collaboratively organized classrooms, where both pupils and teachers learn, means that schools can be created as institutions which learn, and thus adapt well, in a knowledgeable society.

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