Cooperative Learning
in Escuela Nueva Activa®

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"If you have an apple and I have an apple and we exchange these apples then you and I will still each have one apple. But if you have an idea and I have an idea and we exchange these ideas, then each of us will have two ideas."

George Bernard Shaw

Abstract

Cooperation exists when individuals and groups work together to enhance individual and collective outcomes (Johnson & Johnson 1989). Cooperative learning draws together educational research, theory and practice to form a powerful pedagogy. Drawing from psychology, anthropology, sociology, politics and economics, the breadth, depth, generalizability and applicability of the research validates its use and utility, perhaps more so than any other approach.

Translating the principles of cooperation into pedagogic practices necessitates nuanced understanding and close integration between the conditions and components of cooperation. Fundación Escuela Nueva has successfully created an approach that is infused both implicitly and explicitly with these principles, and sees them as crucial to the achievement of critical academic and affective outcomes, as well as to a collective social change.

Various studies have emphasized the use of cooperative learning in the Escuela Nueva Activa® model to promote participation in the classroom and a pedagogic approach that privileges the learner. Escuela Nueva Activa® is emphasized as exemplifying the use of cooperation to cultivate achievement, esteem and civic conduct, as well as to shift the conversation around effective teaching and learning, and the role of education in community and society.

The purpose of this publication is to provide a comprehensive conceptualization of how cooperative learning is integrated into, and infuses, all aspects of the Escuela Nueva Activa® model. It aims both to illustrate how this has strengthened the model, as well as to suggest how the approach itself has furthered understanding of the effective implementation and impact of cooperative learning. This paper commences with an overview of cooperative learning, as it is understood in the literature. It then undertakes an analysis of why this is critical and useful in the context of Colombia, and illustrates how this is manifest in the Escuela Nueva Activa® model. The paper concludes with a discussion of how cooperation has been applied in alternate educational contexts, with implications for future improvements and advancements.

1   An Overview

As one of the greatest success stories in the history of educational innovation, there is an abundance of research that emphasizes the correlation between the application of cooperative principles and improvements in individual and collective outcomes; indeed, the concept of working together towards a common goal is so purposeful and productive that it stands as one of the strongest principles in psychology (Slavin 1999).

This chapter provides an overview of cooperative learning as a teaching and learning strategy and relies on a review of published literature within education. To this end, it seeks to summarise the concepts within which the strategy is situated, and identifies the conditions under which it is implemented, so as to provide a functional understanding of cooperative learning and facilitate its application to the Escuela Nueva Activa® Model.

Cooperative learning is a versatile concept that can be used for a variety of purposes: to teach specific content, to activate cognitive skills, or to enable support and solidarity for learning (Johnson, Johnson & Holubec 1998). Effective implementation of cooperative learning in the classroom necessitates that educators have a nuanced understanding of how it is distinct from other types of learning, and how it is developed through their teaching.

Implemented with integrity, cooperation leads students to accomplish shared goals and seek outcomes that affect all in equal measure. Students are enabled to discuss their work, assist and enhance each other's understanding, and to encourage each other to invest optimal effort. Accountability is maintained to ensure all students are contributing and learning, consequently leading to an outcome that is greater than the sum of the potential outcomes of all students. Such successful implementation necessitates a number of structures and strategies, supported by studies across a range of disciplines. Structures refer to created conditions, such as the classroom environment and curriculum scope and sequence, whereas strategies refer to the activities and interactions that occur in learning. These combine to ensure that the critical elements of cooperation are established.

The exact name, number and importance of each of these elements varies from author to author, as multiple methods of effective implementation of cooperative learning maintain specific characteristics that are appropriate to specific contexts (Mashile 2002). However positive interdependence, promotion of interaction, processing of interaction, individual accountability and heterogeneity are consistently identified as essential.

1.1 Positive Interdependence

The concept of cooperation is situated in social and developmental psychology, from which notions of attraction, repulsion and interdependence are understood. A fundamental element of cooperation therefore is positive interdependence, wherein what affects one affects all in equal measure; this is in contrast to negative interdependence, where what affects one affects all in inverse measure, and to no interdependence, where what affects one has no effect on others. Allport (1954) extends this understanding in his investigation of integration, identifying essential conditions under which interaction translates to positive interdependence: shared objectives and equal status. It is imperative that students comprehend and accept that everyone in the group must learn and demonstrate a common set of information and skills. Students must also feel that they have an equal chance to learn the content, develop competencies, and earn accolades for success. Thus, in a classroom where all learners are equally equipped and able to contribute, a desirable interdependence is created when all are invested in the objective of learning, and feel equally accountable to contribute to the outcome, both for their own benefit, as well as for the benefit of others.

This interdependence can be structured through division of resources, allocation of roles, or shared reward and serves to motivate learners. In traditional classrooms where students are solely reliant on the teacher for reinforcement, students are forced to compete for attention; however in cooperative environments, students are able to seek reinforcement from multiple sources including their classmates. This steers students to encourage and enable the success of others; acknowledgement from the teacher is no longer seen as a scarce commodity, as it is shared. As all students experience success, over time, this serves to internalize cooperative actions and attitudes in the learner (Bandura 1977, Skinner 1985).

1.2 Promoting Interaction

The interactions between students and teachers, and between students and other students are critical to learning. Communication is organised uniquely in cooperative learning classes: as students learn, they consequently engage in extensive and intimate discussions (Shachar & Sharan 1994). Developmental theory describes learners as experiencing disequilibrium through this dialogue: when a students existing understanding of a concept is confronted by an opposition, it creates cognitive conflict, forcing the learner to examine, evaluate and justify their schema of understanding (Piaget 1980). The critical thinking abilities of students therefore evolve through reconciling existing and emerging understandings triggered through interaction. Learners in a constructivist, cooperative environment repeat and restructure information and ideas to internalize them and communicate them, and thus experience greater cognitive growth (Craik & Lockhart 1972, Wittrock 1974). This is supported by neurological evidence, with neuroimaging evidence showing that the more a student is engaged in a learning activity with multiple sensory modalities, the more parts of the brain are actively stimulated (Willis 2007). Cooperative learning is hence associated with increased neural activity in relational and emotional memory connections and memory storage as a result of repeated interactions and reinforcement.

These interactions also serve to ensure that all students are operating in their zone of proximal development; a term that refers to the interval between what a student can and cannot do. Within this zone, a student functions with assistance, until their conceptual understanding and applications are consolidated and they can function independently (Vygotsky 1978). Purposeful pedagogy ensures that learning is personalized, such that instruction and activities are neither too easy nor too hard for learners, and that they are consistently operating in an area that is challenging yet comfortable. Cooperative principles enable this personalization, as students are able to access the support of more able students, as well as to support other less able students at various instances.

Webb (1989) observed that children are often more aware of what other children do not understand, so, by helping them to focus on the relevant features of the problem, they can often explain it to them in a way that can be readily understood. Thus, this supportive environment serves to scaffold their learning and transition them through the zone of proximal development.

1.3 Individual Accountability

Coupled with these interactions is the critical notion of individual accountability. As it is individual contributions that enhance collective effort, for students to be successful, each must complete a number of internal information-processing tasks aligned with targeted objectives, such as comprehending, translating, making connections, assigning meanings, organizing the data, and assessing the relevancy and uses of the information they study. Accordingly, each student is held individually accountable for investing their share of effort and for achieving the intended learning objectives, achieved by testing individuals or selecting individuals to represent the group.

The interdependence, interactions and individual accountability in which cooperation is situated empowers students with the abilities and freedoms to learn in ways that they see as aligned to their own interests and aspirations (Dewey 1966). Students are transformed from recipients of content to active co-constructors of understanding, and enjoy enhanced autonomy, as learning becomes a humanistic exploration and endeavour, rather than a replicated process or procedure. Accordingly, cooperation is aligned with scholarship related to student identities as citizens, as they are encouraged to show concern for others and exercise agency in matters concerning peace and development in their classroom, school and community. As students engage with these issues as individuals and as a collective, they are enabled to internalise their understandings of justice, equality and rights, and are empowered to act upon them to create peaceful and democratic environments (Kohlberg 1963, Lewin, Kohlberg & Hewer 1985).

Studies suggest that cooperation is a complex process that takes time and effort to master; as the teachers knowledge, skill and experience of the structures and strategies improves, so too does the effectiveness and efficiency of the learning (Johnson et al 1993). Baloche (1998) asserts that cooperative learning is neither simple nor straightforward; teachers and students alike need to be patient and persistent as they investigate ways to harness the power and potential of cooperation in the classroom, ensuring that expertise is gained through constant and consistent use (Bassett, McWhirter & Kitzmiller 1999).

Instruction is a critical component of effective cooperation: it is insufficient to seat students together and to assign them to work collectively. Rather, students must be taught to shift perceptions of what effective learning is, and equipped to move from being passive recipients of content to active co-constructors of understanding. They must therefore be taught the skills to drive discussion and deal with conflict, to exercise leadership, communicate and influence, seek clarification, offer constructive criticism, and overcome conflict. In the absence of explicit teaching, students cannot be expected to function purposefully; investing time in this preparation is therefore imperative.

1.4 Heterogeneity

Cooperative learning is carefully structured by the teacher: they must clearly define the objectives and intended outcomes of the lesson, and describe in clear and precise terms the order of activities and expected outputs. Teachers must also ensure that students are seated so as to maximize heterogeneity, whether by academic ability, ethnicity, language or gender, understanding that optimal combinations of students lead to optimal interaction and achievement between students, encouraging

empathy and tolerance for diversity, and enabling a rich discussion of differing perspectives (Johnson & Johnson 1999, Kagan 1994, Mueller & Fleming 2001, Toumasis 2004). Such combinations ensure that students feel accepted and valued in the collective learning process, given their ability to make unique contributions (Johnson & Johnson 1999).

1.5 Processing Interaction

Whilst students work together with each other, teachers intervene to assist students with specific interpersonal skills associated with the instruction (Thompson & Taymans 1996). Teachers must ensure that they provide students with adequate time to learn the targeted information and abilities to the extent expected, as well as incorporate time for students to stop and process their interactions. This is a vital element of effective implementation, as it enables students to think metacognitively about cooperation, to discuss their relationships and progress, to solve problems and to systematically reflect upon how they helped each other to comprehend the content, engage in activities, and use materials. Collective examination of their attitudes and actions, coupled with constructive criticism, praise and purposeful planning, enables the entire group to improve and achieve enhanced outcomes in the future.

Figure 1 summarises the critical elements of cooperative learning.

ELEMENT	DESCRIPTION
Positive Interdependence	In contrast to individual learning, where student outcomes are unrelated, and competitive learning, where the efforts of others are detrimental to the individual, cooperative learning promotes interdependence such that students share mutual goals.
Promoting Interaction	Where students challenge and encourage each other through sharing of perspectives, dialogue and debate.
Processing Interaction	Where students discuss their relationships and progress towards goals, and define and solve problems together.
Individual Accountability	Where students are encouraged to make individual contributions to enhance collective effort by testing or selecting individuals to represent the group.
Heterogeneity	Optimal combinations of students and contribute to interaction between students, promote respect for others and encourage tolerance of diverse perspectives.

Various studies refer to variations in implementations of cooperative learning that rise from a lack of understanding of its specific characteristics. Thus, it is common to see teachers simply seat students together, or assign them tasks together under the assumption of implementing cooperative techniques; students exhibit little interest in working together, and fail to perceive that their progress is dependent on the progress of their peers and vice versa. Implemented thus, students tend to be distracted or disruptive and to achieve less than they would have with independent effort; less diligent students are able to exploit the efforts of more diligent students, creating an imbalance that leads to disengagement or disillusionment. Weak implementation therefore results in outcomes that are less that the sum of the potential outcomes of all students.

Achieving cooperation in the classroom that leads to meaningful, balanced outcomes extends far further than this. Strong implementation requires that teachers structure lessons that engage students in working together and invest them in sharing knowledge and resources, and

also that they employ instructional strategies that encourage peer interaction and assistance as well as individual roles and responsibilities. Understanding these elements and developing knowledge and skills in applying them, eventually allows teachers to adapt cooperative learning to the unique circumstances and requirements of their students, to fine-tune their use of the cooperative techniques, and to prevent and address problems students may have in working cooperatively. Effective and consistent use of cooperative techniques in the classroom eventually becomes a theme throughout the school (Jacobs 1997).

2   The Case For Cooperation

Colombia has a history of armed conflict, with various leftist guerillas and rightist paramilitaries clashing with the state in a long, low intensity war. The consequences of this have had a devastating impact on the country, both socially and economically. Education and educators have suffered serious consequence, including the destruction and devastation of schools, the death and displacement of teachers and students, and the disintegration of entire communities. However, education also provides an avenue through which reconstruction of society and reintegration of communities can occur.

Education can neither mimic structures seen in society, nor can it mimic utopian arrangements, that cannot be situated in present realities. It can instead extract the traits of society that illustrate the idealism of the future, and use these to criticize and transform (Dewey 1990). In the context of Colombia, therefore, education is critical to confronting the causes and effects of the conflict through an approach that privileges participation and cooperation, and promotes the development of peace. Cooperative learning is an integral, even central, element of this approach.

As Colombia pursues peace and democratic principles, pedagogic practices must be moulded to promote dialogue and debate, and to encourage civic engagement and cohesion. Whereas traditional teaching views learning as an exclusive and individual affair, there is a need for innovations in schools and classrooms that transform education into a necessarily collective and cohesive endeavor, such that the civic ideals necessary for citizenship are embedded and encouraged into the system, and effect society.

Further, as an emerging economy, it is imperative that Colombia is able to prepare its citizens to participate in competitive international markets. A 2014 OECD report shows that while student scores on the Programme for International Student Assessment (PISA) tests increased between 2006 and 2009, they are nevertheless inadequate to drive greater innovation and growth that are integral to the survival and advancement of the economy. These competitive markets require people who are not only academic achievers, but also students who are able to think critically, work collaboratively, communicate effectively, influence and activate in challenging environments. It is imperative therefore that these capabilities are exercised within the educational system, such that they facilitate transition into employment in the market.

The principles and practices of cooperation in the classroom have the potential, when applied, to create powerful and sustainable change in student attitudes and actions. Fundación

Escuela Nueva has created a pedagogic approach that understands and operationalizes these principles, as an important contribution to the construction of a peaceful and productive country.

3 Cooperation
In Escuela Nueva Activa®

Fundación Escuela Nueva aims to improve the lives of the underserved through an educational model focused on the learner; the systematic integration and infusion of cooperative principles into the model serves as a critical catalyst of improvement outcomes, as this chapter will show.
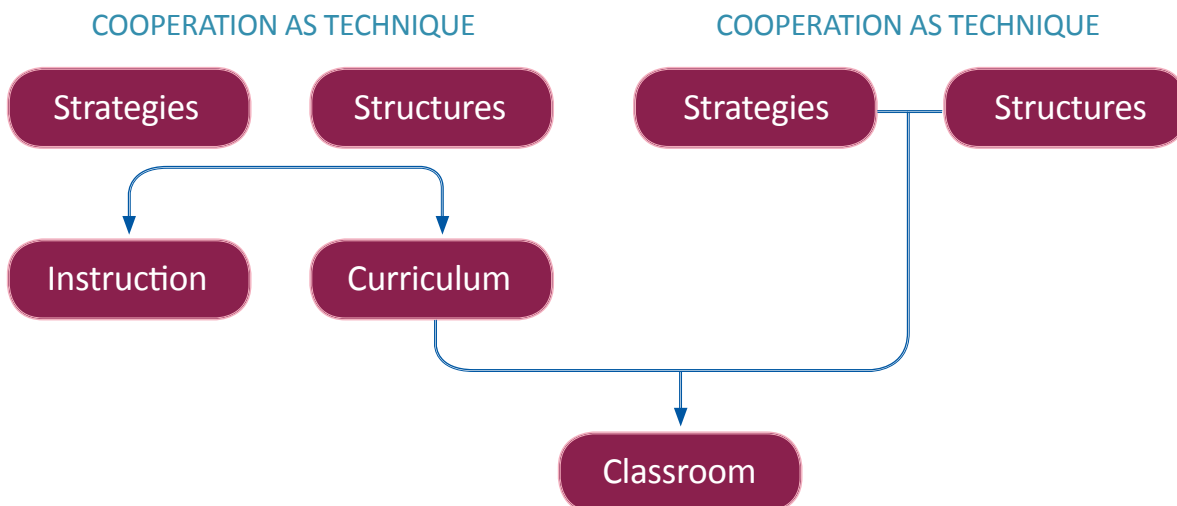
From its inception, Escuela Nueva Activa® has asserted attention on both academic and affective outcomes, founded on the reciprocal and reinforcing nature of both. Accordingly, pedagogic practices within Escuela Nueva Activa® maintain a precise balance between cooperative and personalized learning, acknowledging the interdependence of both. Thus, although there is an inherent tension between the two, the model leverages flexible advancement for the individual to develop their affect intelligence, encouraging able students to assist and support their peers and therefore develop competencies critical to social cohesion.

Cooperation is at the core of Escuela Nueva Activa®; it manifests both in a technical sense, through explicit instruction and activities, as well as in a thematic sense, through its implicit influence on the lives and actions of students, parents, teachers and communities. In the case of the former, the model draws from deliberate applications of cooperative principles to structures and strategies implemented in the classroom and school, whereas in the case of the latter, inherent understanding of the underpinning principles of cooperation affect all interactions between students, schools and communities. Thus, whilst cooperation is implemented across classrooms and schools everywhere, Escuela Nueva Activa® offers a unique interpretation of the structures and strategies that comprise cooperation, and a unique illustration of how these are synthesized to optimise outcomes.

3.1 Conceptual Framework

Cooperation in Escuela Nueva Activa® is carried out as aforementioned through explicit techniques and inherent themes. Although interventions are not categorized as such, this creates a conceptual frame that facilitates analysis and understanding of its application to Escuela Nueva Activa®. It is important to note that even as these categories have been isolated for analysis, they often overlap and intersect; their impact ultimately lies in the integration of these categories into a cohesive implementation.

Figure 2 conceptualizes the connections between these components and illustrates how cooperative principles are translated into practice; an analysis that examines each component follows.

COOPERATION AS TECHNIQUE   COOPERATION AS TECHNIQUE

Strategies   Structures   Strategies   Structures

Instruction   Curriculum

Classroom

3.2 Cooperation As A Technique

In its explicit implementation of cooperative principles, Escuela Nueva Activa® applies a set of structures and strategies that create the conditions for and catalyse cooperation; significant elements are analysed as follows.

3.2.1 Classroom Structure

Classrooms in Escuela Nueva Activa® schools contain elements that promote interaction and interdependence. Students are seated in circular groups, ensuring frequent face-to-face interaction, and the formation of a learning community. By actively engaging with one another, students are encouraged to share information and materials, as well as to continually discuss and engage in dialogue with the peers. This has a range of meaningful implications: initially, students are able to access immediate support for learning from their peers, and are empowered to support their peers, both of which create a safe and supportive environment where students develop confidence and concern for others. They are then enabled to consolidate learning through explanation and interaction with others, to develop confidence in communicating and influencing, and to contend with diverse and different understandings.

Classrooms in Escuela Nueva Activa® also contain learning corners, wherein students can access books and educational materials. This serves to create a sense of interdependence, as students recognize the need to share resources, and to ensure they are maintained for themselves and for others.

Arguably unique about the Escuela Nueva Activa® classroom is the incidence of structures that subtly yet significantly encourage elements of cooperation. The "self-attendance records" (autocontrol de asistencia), wherein students are expected to track their own attendance, promotes both individual accountability as well as interdependence; students are invested with the right and responsibility to maintain their own records, and are also encouraged to observe the attendance of their classmates, and to offer support and assistance to those absent. Whereas in a traditional classroom, the teacher would carry out these administrative tasks, in the Escuela Nueva Activa® classroom they activate student engagement with the school environment. Similarly, the "friendship mail" (correo de la amistad) enables students to reflect on their interactions, and to provide praise and appreciation to their peers. This serves to reinforce immediate processing of cooperation during learning, through a permanent mechanism and in particular, emphasizes concern, compassion and cohesion.

Thus, through the aforementioned techniques, the classroom set up illustrates the Escuela Nueva Activa® focus on the learner, and on the learning community; by transferring attention from the teacher as in traditional classrooms; the student is encouraged to develop autonomy and accountability as an active and engaged learner.

3.2.2 Curriculum Structure

The curriculum is a central element of Escuela Nueva Activa®; whilst it is closely aligned with the national curriculum standards and associated competencies, the design and delivery of the curriculum through the Escuela Nueva Activa® Learning Guides is such that it is a critical tool in facilitating classroom cooperation.

The Learning Guides integrate the content with cooperative learning principles. The construction of the Learning Guides enable students to complete activities through interaction and support from other students, with teacher intervention at critical junctures. Students assimilate content from this interaction, rather than through teacher instruction alone, as in traditional classrooms.

Language is used to great effect in the Learning Guides: the consistent use of the terms *we* and *our* throughout immediately create a sense of a collective, and imply that activities can be completed effectively only through collective effort. It is further used to explicitly integrate the principles of cooperation, through the use of instructions such as 'we express our opinions' and 'we make sure to let everyone participate'. In this way, students are subtly, but surely, drawn into cooperating with each other constantly.

Learning is therefore a significantly social activity, with the Learning Guides directing students to discuss and debate as they engage with ideas and address the accommodation and assimilation of concepts. This consistent dialogue ensures that students are able to share their understanding of concepts, as well as to contend with other understandings that either consolidate or change their initial interpretations. Through this process, they strengthen their conceptual notions, which enables application of concepts to unfamiliar or challenging contexts, a significant element of learning and understanding. They also develop confidence in communicating effectively and efficiently, in persuading others to accept opinions, and in offering empathy and openness to other perspectives or approaches.

The Learning Guides also promote participation from parents and families, by requiring students to 'include your family in this process'. Often the activities necessitate active engagement from relatives, asking students to complete activities together with them, again creating a sense that learning occurs not in isolation, but through interaction and engagement with others. The Learning Guides thus leverage the knowledge and skills of families to enhance learning, as well as create a sense of a learning community that extends beyond the school.

Like the classroom, the curriculum too is constructed such that it encourages individual accountability. The Learning Guides are structured in accordance with the Gradual Release of Responsibility model, as students transition from understanding and investigating concepts together to applying and consolidating them independently. At each stage, students are asked to 'show (my) work to the teacher to assess (my) progress', ensuring that all students have done the activities and demonstrated the associated competencies.

Escuela Nueva Activa® Learning Guides are often shared by students, and used across years. Embedded even within this is the notion of interdependence, as students are expected to ensure the Learning Guides are kept in good condition. Further, a committee of the student

government is tasked with collecting, organizing and storing the Learning Guides each day, ready for the following day. Such a simple activity serves to show students that their actions affect those of others and vice versa, thus promoting social concern, courtesy and consideration.

3.2.3 Instructional Strategies

Escuela Nueva Activa® understands cooperative pedagogies as being instrumental to instruction, and thus trains teachers to create conditions for cooperation at all times. Although planning and preparation are provided through the curriculum, it is important to note that these ensure that teachers and learners have clear objectives for the lesson, which in turn invests them with the autonomy to engage actively in their learning, as both teachers and students are aware of what is to be achieved.

In a dramatic departure from the notion of the teacher as a dictator and deliverer of instruction, teachers are trained instead as facilitators who focus on development students as learners. Critical to this is the notion that the teacher is no longer the sole source of information and support; rather, students are the agents of learning, and seek support from each other, with the teacher offering interventions at critical junctures. These junctures are indeed crucial for effective cooperation necessitates explicit instruction in the attitudes and actions that accompany it. The teacher therefore ensures that students are taught strategies to communicate clearly with each other, to encounter and address conflicts, and to translate interactions into learning. The teacher also encourages the agency of the learner, offering them options on how they can find required information instead of revealing answers. Escuela Nueva Activa® therefore creates an important revolution in the attitudes of the teacher, empowering them to understand student learning in a holistic, multidimensional sense, and to see themselves as the facilitators of affective as well as academic growth. Teachers are thus shifted away from traditional teaching practices that bank content in students, to innovative pedagogies that carefully construct relationships and environments that encourage curiosity, autonomy and accountability.

Escuela Nueva Activa® empowers teachers to function in this transformed environment by training teachers just as they are expected to teach; thus, the teacher training exemplifies the cooperative structures and strategies that these teachers will eventually implement. The Training Guides mimic the Learning Guides, encouraging interaction and creating a sense

of interdependence between the teacher and the community, through activities that ask the teacher to compare conclusions with colleagues, and to interview and engage with parents in the process of understanding the Escuela Nueva Activa® pedagogical approach.

3.3 Cooperation As A Theme

An implicit understanding and appreciation of cooperative principles infuse the Escuela Nueva Activa® approach, and influence interactions between students, schools and communities; significant elements are outlined as follows.

3.3.1   School

The Escuela Nueva Activa® approach encourages cooperation throughout the school, between and amongst students, teachers and administrators. The introduction of a student government is a unique intervention, as interested students are elected to lead the school through various committees, including sport, environment and others. These students work closely with the educational community to improve and enhance the school.

Various studies of Escuela Nueva Activa® have emphasized the student government as a structure that promotes social development, democracy, participation and rights. It is also, importantly, a structure that promotes cooperative principles, as it illustrates the interdependence of the students on each other and the administration. It transfers sole accountability for the school and its success away from the teachers and the administration to the students, who collectively accept the right and responsibility to undertake activities that affect the whole school.

The Escuela Nueva Activa® approach also facilitates cooperation between teachers, commencing with the offering of microcentres, wherein teachers are brought together at intervals to refresh their training and to share and reflect on their pedagogical practices. Teachers also participate in the global Escuela Nueva Activa® Learning Community, educating themselves and sharing ideas and information; consequently there is a clear sense amongst teachers that each of them is a contributor to an overall school community, and that their success is reliant on the success of all their colleagues and students, a notion that guides and influences all their interactions. This often translates into teachers engaging in independent interactions every day, sharing and supporting each other to develop skills and reflect on strategies.

3.3.2   Community

Schools that employ the Escuela Nueva Activa® approach have close connections with the community. This is inherent within the curriculum, which encourages students to engage with the community to learn in context and apply their learning to their lives, and comprises activities such as creating a calendar of community events, a map of the community, and a socio-cultural community monograph. It is also evident in community involvement in school councils and school activities, as well as through teacher familiarization with the community and contribution to community life. Escuela Nueva Activa® therefore encourages horizontal rather than vertical

interactions between stakeholders, enabling multidimensional relationships that are reciprocal and reinforcing.

There is an implicit but integral notion of interdependence in this too, as the school relies on the community for support and investment, and simultaneously, the community relies on the school to function as a site of safety, security and social cohesion, the effects of which are infused through community life.

It is thus apparent that cooperation is infused throughout the Escuela Nueva approach. Whilst the implementation and integration of the structures and strategies varies from school to school, it is clear that they underpin the functioning of the model. It is important to note here that this approach does not se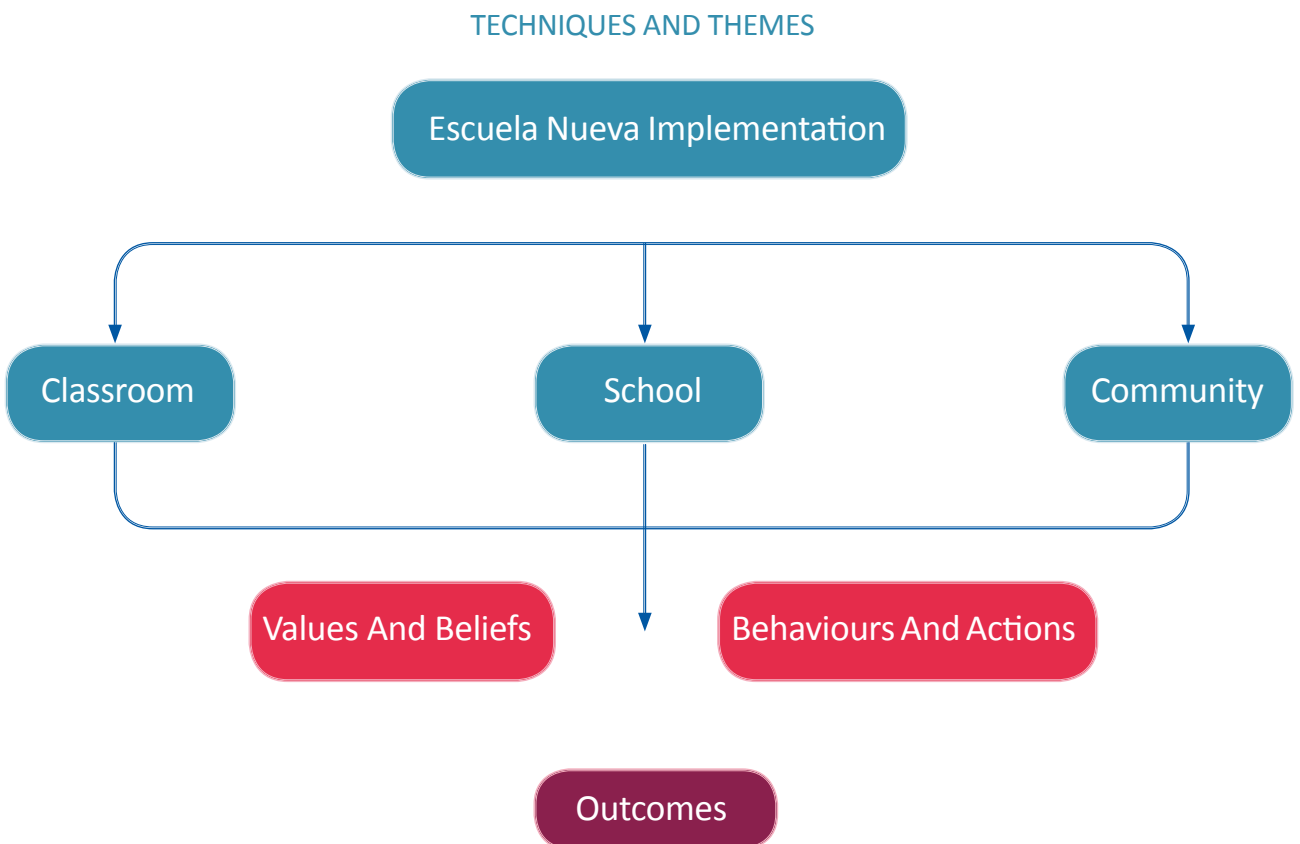e students as the objects of cooperative principles and processes; rather, the student is privileged as an active participant, and is invited to 'improve the process of cooperative learning'.

4   Outcomes And Impact

The infusion of cooperation into Escuela Nueva Activa® has had significant impact on students, teachers, and on shifting the education conversation in Colombia and elsewhere. Figure 3 illustrates how the integrated model leads to transformations in attitudes and actions, which in turn leads to academic, affective and social outcomes.

This chapter analyses these dimensions of impact, drawing on evidence from existing studies, recent observations of Escuela Nueva Activa® schools and classrooms, and conversations with staff, teachers and students.

Figure 3

TECHNIQUES AND THEMES

Escuela Nueva Implementation

Classroom   School   Community

Values And Beliefs   Behaviours And Actions

Outcomes

4.1 Student Impact

Escuela Nueva Activa® encourages an environment of learning in which students develop knowledge, skills and attitudes through exposure not just to the teacher and to the content, but also through exposure to their peers. The use of cooperative strategies both drives increased self-awareness and self-efficacy amongst individuals, as well as social awareness and social integration, all of which compound to enhance and advance academic and affective achievement.

Cooperation in the classroom yields a range of cognitive outcomes, including critical thinking, concentration, transfer of learning, reasoning and retention. Several evaluations of Escuela Nueva Activa® emphasise the occurrence of these outcomes through studies of academic achievement, showing that third grade students in Escuela Nueva Activa® exhibit increased outcomes in Spanish and Mathematics when compared to third grade students in conventional schools; this holds true for Spanish scores in fifth grade (Colciencias, 1982; Castillo & Rojas, 1989; Psacharopoulos, Rojas & Velez, 1993; McEwan, 1998). These studies are supported by statistical results from SABER, Colombia's national standardized tests, illustrating that average academic achievement in Escuela Nueva Activa® schools is advanced compared to conventional schools (Pitt 2002).

Cooperation in the classroom also serves to support engagement, investment, independence, self-awareness, self-esteem and leadership. As students interact constantly with their peers, learning is rendered relevant and relatable, thus increasing engagement with the school environment and with study. As reinforcement is offered through multiple means, students are therefore able to feel included and successful; the opportunity for immediate constructive feedback in a cooperative environment ensures that students can access encouragement and assistance. Thus, extrinsic motivation is eventually translated into intrinsic motivation that encourages independence, love of learning and leadership of self and others. Chesterfield (1994) supports this asserts, showing that

Escuela Nueva Activa® students are more apt to lead others to accomplish tasks.

The same studies cited above demonstrate that repetition and drop out rates are reduced in Escuela Nueva Activa® schools; it can therefore be assumed that the increased engagement and opportunity for success in Escuela Nueva Activa® promotes retention.

The integration of cooperative principles into pedagogic practices creates a civic environment

that is founded on a strong sense of civic values. Students are therefore afforded opportunities to engage in moral and ethical reasoning, to identify and address prejudice by encountering and engaging with diversity in people and perspectives, and to internalize ideas of identity and citizenship in the community. By participating and cooperating in collective efforts to achieve, students develop democratic attitudes, which drive social integration and cohesion. A cooperative environment eliminates competition, and thus students are inclined to assist and support each other.

Studies of the application of Escuela Nueva Activa® in Guatemala show that students demonstrate egalitaria nattitudes, interpersonal effectiveness and increased involvement (Chesterfield 1994). Students are also advanced in democratic indicators, including the ability to express egalitarian ideas, practice interaction with peers and adults, and become involved in school and community life. These outcomes are attributed to a stable and support classroom environment where students are free to share ideas and opinions and learn to spontaneously take turns, choose between viable options, and influence others, both in the classroom as well as through student government and community involvement.

4.1.1   Escuela Activa Urbana®

In September 2014, an evaluation study was undertaken in Escuela Activa Urbana® schools. A comprehensive instrument assessing student perceptions of cooperative principles, and their perceptions of classroom conditions conducive to cooperation was implemented across four schools, two of which have been participating in the Escuela Nueva Activa® program for a period of time, and two of which intend to participate in the future. Whilst the outcomes from the study are not available at the time of writing, observations and conversations undertaken during the course of

the study suggest that students have a greater propensity to participate in class, exhibit greater concentration and focus, and are able to direct themselves and peers to complete tasks. It is intended that information obtained from the evaluation will be used to analyse the correlation between student perceptions of cooperation, academic achievement, and affective outcomes including self-esteem and civic attitudes.

As the Escuela Nueva Activa® model conceptualises cooperative learning as a theme that infuses all aspects of interdependence and interaction between communities, schools, and students, and further conceives cooperative learning as a technique that influences a transformation of student values and beliefs, the use of cooperative principles leads to transformed behaviours and actions. Ultimately, Escuela Nueva sees that these cooperative principles lead to social transformation in specific contexts through improved academic, affective and social outcomes; as well as manifest in subtle but significant ways to inspire change and cohesion throughout society.

4.1.2   Escuela Nueva Learning Circles®

Escuela Nueva Learning Circles® is a unique adaption of the Escuela Nueva Activa® model designed to address the needs of students

displaced as a result of conflict in Colombia, that illustrates the potential for the approach to promote change and cohesion. Created, implemented and successfully evaluated in 2003, the program involves a satellite system of small learning spaces that support the transition of displaced students into conventional schools. In offering the capacity to address the struggles of integration and adaptation endured by these children, Escuela Nueva Learning Circles® promotes pedagogical practices that predicate a caring and compassionate environment.

Even as the program explicitly uses cooperative principles within the instruction and curriculum, there is also an implicit occurrence of cooperation in the establishment of a safe and stable learning environment. Acknowledging the impact of violence on the lives, attitudes and actions of these children calls for an approach that invests students with the independence and autonomy to create and contribute to a supportive community, and relies on the collective efforts of all students to support and sustain each other. Thus, the creation of a peaceful, productive space relies on the efforts of the teachers and students, and the ability to reflect, improve and reform their circumstances together.

Such a setting ensures that students are not alienated by a loss of learning due to displacement, and encourages students to form a supportive and cooperative community through peer teaching and learning. This community is critical both in enabling academic advancement, as well as in establishing a safe and stable learning environment suited to the sensitivities of the children. It further creates an environment in which civic competencies and values are understood and applied: through constructive communication and interaction, conflict management, peaceful coexistence, and social integration, children gain the attitudes expected of contributing citizens, which serve to alleviate their internal and social isolation.

4.2 Teacher Impact

A unique outcome of the Escuela Nueva intervention is its impact on teachers. Through its

transformation of traditional conceptualisations of teaching and learning, Escuela Nueva Activa® has transformed the values and beliefs of teachers, which in turn has affected their actions in the classroom and the school.

Conversations with Escuela Nueva Activa® trained teachers suggests that the approach alleviates them of the pressure of planning and preparing lessons; presented with the learning objectives and scope and sequence in the Learning Guides, the teachers are free to accommodate the lesson to the context of the community and classroom, and to turn their attention to students who require additional assistance and support. The teacher's actions are therefore focused on ensuring learning, rather than teaching is occurring.

These actions are translated from attitudes that give authority to the abilities of the learner. Observational evidence gained during the aforementioned evaluation study suggests that Escuela Nueva teachers maintain a calm

countenance in the classroom, which allows them to assert a careful balance between control and constructive pedagogies. Though the classroom is centered on the learner, the teacher nevertheless exercises an implicit authority, carefully ensuring that the conditions of cooperation are in place, and that the learning process is progressing.

Thus, in contrast to traditional classrooms where teachers exercise authority from the front of the classroom, and often through punitive methods of punishment, the Escuela Nueva model affects a meaningful shift in the teacher's mindset. Teachers see themselves as collaborators in a constructive process of learning, and accordingly treat their students with respect and regard; contrary to assumption, this then allows them to hold students accountable to high standards, as they are increasingly engaged and invested in their teacher and in learning. .

Through the use of cooperative techniques in the classroom, the teachers also suggest that they apply the same in their interactions with colleagues. Teachers in Escuela Nueva Activa® schools see themselves as part of a collective educational endeavor, and accordingly, are motivated to meet with each other regularly to share challenges and strategies to overcome these. Conversations with teachers also suggest that they are more involved in school life outside the classroom, taking the initiative to lead school and community activities, and to collaborate with parents and families.

4.3 Changing The Conversation

A critical outcome of the Escuela Nueva Activa® approach has been its contribution to the conversation on effective education for all. Various studies show that the sustaining and scaling of the Escuela Nueva has served to shift understandings of teaching and learning throughout the world. The operationalization of an approach that prioritises not only academic but also affective outcomes through the use of cooperative principles and pedagogies has increased attention on the need for education

that is comprehensive and rounded, that interacts with all the dimensions of a students development. Through continual improvement and strengthening of the operational model, it has served also as a methodological reference for cooperative learning in action. The sheer scale at which the Escuela Nueva approach is understood or implemented has therefore changed this conversation in Colombia, where teaching and learning is understood dramatically differently to how it was five decades ago.

In a context that necessitates the promotion of participation and peace, it has also emphasized the utility of an educational approach that has expanded the traditional emphasis on individual achievement to a focus on collective outcomes. Thus, Escuela Nueva Activa® offers a comprehensive illustration of how education may be contextualized to catalyse the advancement of the country, and how this commences with the operationalization of innovative cooperative pedagogies into immediate, actionable approaches. In this way, it has shifted understanding of the critical nature of education for development.

4.4 Issues Of Implementation

As aforementioned, achieving optimal outcomes using cooperation in the classroom relies on effective and consistent implementation. In this context, it is worth illustrating that the application of Escuela Nueva Activa® model varies tremendously across schools; given the scale and spread of schools implementing the approach, it is inevitable that the effectiveness of the implementation is inconsistent.

McEwan (1998) identifies that achievements are constrained by the absence of all the mandated aspects of the model; as the components are designed to work together and serve to reinforce each other, incomplete implementation cannot achieve ambitious outcomes. Fundación Escuela Nueva has taken important measures to address these inconsistences, through the introduction of evaluation tools that assess the level of implementation.

Even in the case of strong implementation of the Escuela Nueva Activa® approach, it is apparent that understanding and application of cooperative principles are not necessarily deliberate. Rather the model, through its structures and strategies, embeds these principles into practice. Thus, it is entirely possible that excellent schools with excellent outcomes are achieving these objectives without explicit effort to implement the cooperative elements. However, Fundación Escuela Nueva acknowledges that understanding the theoretical foundations of the approach is critical to improving implementation; this study is intended to serve as a trigger for this effort.

5 Cooperation To Collaboration

Collaboration occurs in a situation in which two or more people learn or attempt to accomplish something together (Dillenbourg 1999). Cooperation and collaboration are connected but distinct concepts and are situated in similar theoretical understandings; however whilst cooperative learning facilitates the accomplishment of a specific outcome through careful structuring and instructing,

collaboration empowers learners to assume complete ownership of an outcome by working, changing and improving together (Matthews 1995). Even as they overlap considerably, the cooperative model sees teachers controlling the learning process and procedures, whereas the collaborative model sees learners managing this themselves.

Students advance from cooperative to collaborative learning as they gain confidence and capabilities. Escuela Nueva Activa® has employed this conceptualization to extend the theme of cooperation to alternative education environments, using collaborative approaches for unique, adult or experienced audiences. Accordingly, Fundación Escuela Nueva has partnered with Fundación Capital, an NGO that aims to alleviate extreme poverty through financial inclusion initiatives, in an effort to integrate these pedagogical practices into their approach.

The project, modeled on Escuela Nueva Activa®, seeks to effect changes in the financial attitudes of families in poverty, through educating them on managing financial resources, using financial services and develop entrepreneurial and social skills. The application of collaborative learning principles is particularly useful in this context, as this change requires the development of an ethos of participation and peace, and of leadership, autonomy and agency.

Collaboration requires that learners organize themselves independently, and to encounter issues without the assistance or intervention of a perceived effort. They are instead reliant on the support of their own understandings and on their peers; accordingly, they independently assess progress, plan ahead and produce outcomes. The project works with adult participants, and aims to cultivate the independent acting and reflecting abilities for them to incorporate positive financial practices into their lives. Given the realities of participants, and their lack of access to expertise, collaborative principles therefore serve to cultivate their ability to independently and collectively address challenges, adopt practices and to support each other within a community with shared objectives.

Thus, as Escuela Nueva Activa® fundamentally aims to transfer the focus of education from the teacher to the learner, it continues to seek ways to leverage powerful pedagogies of cooperation and collaboration in various contexts.

6   Conclusions And Recommendations

The Escuela Nueva Activa® approach, in the classroom and school and in its alternate applications, presents a thorough illustration of cooperative principles in practice. The strength of the approach stems from its ability to operationalize the structures and strategies integral to cooperation, and to implement them in an integrated fashion. This leads to a centrality of cooperation in teaching and learning that enables the individual to improve academic achievement and enhance affective attributes, and encourages collective concern and cohesion.

Cooperation in Escuela Nueva Activa® is understood and implemented in an advanced sense, and is infused into all aspects of the approach; it is extended beyond a classroom technique, to a theme that influences all exchanges between students, school and community. The critical elements of cooperation – positive interdependence, promoting and processing of interaction, accountability and heterogeneity – are therefore implicitly and explicitly evident throughout, and are used to transform the teaching and learning experience.

The Escuela Nueva Activa® model offers a timely example in the context of Colombia. As education emerges as a focus on the agenda, with President Santos articulating aspirations to have Colombia lead Latin America in educational indicators by 2025, the call for innovative and contextually appropriate pedagogies is more critical than ever. Cooperation as a pedagogic practice is critical to both peace and productivity, and the success that Escuela Nueva has seen in its operationalization and implementation of

cooperative techniques and themes, poses a compelling proof point for politicians and policy makers to turn their attention to. In particular, the adaptation of the approach to conflict affected regions and its extension to alternate environments have great potential for further application; these also function as examples to educations everywhere.

The achievements above nevertheless offer further scope for improvement. Cooperation is such a central component of the Escuela Nueva Activa® approach and so infused into its activities, that it is often an implicit rather than explicit endeavor. This study and conceptualization has been undertaken by the organisation in an effort to create a more robust understanding of cooperative principles, to identify its manifestations, and to encourage a more rigorous implementation. To achieve optimal outcomes, it is important that cooperative structures and strategies are intricately understood by teachers and students alike; this awareness is critical to further the effectiveness of the approach. Accordingly, it is advisable that Fundación Escuela Nueva leverages this study to examine the extent to which these elements are explicitly addressed in the curriculum and training, and to develop a more deliberate approach to implementation amongst teacher trainers and teachers, where time and resources permit.

It is also desirable that Fundación Escuela Nueva accentuates the successful use of cooperative elements in its model in its literature: whilst the occurrence of interaction and accountability is frequently illustrated, the interdependence that is achieved can be stressed. As the unique integration of cooperative techniques and themes make a critical contribution to achieving academic and social outcomes, it is imperative that this connection is emphasized.

Thus, it is apparent that Fundación Escuela Nueva is committed to advancing its innovative approach and continuing to achieve outcomes for children and communities through the use of cooperative principles.

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