The Role of Non-Expert Adult Guidance in the Dialogic Construction of Knowledge

El papel de guía de la persona adulta no experta en la construcción dialógica del conocimiento

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Abstract: As Lev Vygotsky defined the Zone of Proximal Development, he did not imagine children interacting only with adults who had teaching expertise, such as teachers; instead, he meant «adult guidance» in a broad sense. This article examines the interactions between students and adults with a wide range of backgrounds in various contexts of dialogic learning. A literature review, plus six case studies conducted in different European countries as part of the INCLUD-ED project, show that students learn more if they engage in activities with various adults in their community. This finding has clear pedagogical implications: non-expert adults provide new ways of teaching the same material, which transforms the traditional teaching, enriching the learning process and improving students' results.

Keywords: ZPD, Vygotsky, adult guidance, learning, school success.

Resumen: En la definición de Zona de Desarrollo Próximo, Vygotsky no limita las interacciones con personas adultas a las realizadas con expertos, como el profesorado, sino que se refiere ampliamente a «guía adulta». La investigación realizada en INCLUD-ED, tanto de revisión de literatura científica sobre el tema como a partir de los resultados de seis estudios de caso realizados en diferentes países europeos, ha demostrado ampliamente que la implicación en el aprendizaje escolar de diferentes personas adultas que se relacionan con las y los estudiantes es clave. Dentro de este marco, este artículo estudia las interacciones entre estudiantes y personas adultas con perfiles diversos en el contexto de entornos de aprendizaje dialógico en los centros. Esto tiene implicaciones didácticas claras: personas adultas no expertas aportan nuevas formas de enseñar contenidos escolares que transforman la didáctica tradicional, enriquecen los procesos de aprendizaje y mejoran los resultados.

Palabras clave: ZDP, Vygotsky, guía adulta, aprendizaje, éxito escolar.

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THE ROLE OF NON-EXPERT ADULT GUIDANCE IN THE DIALOGIC CONSTRUCTION OF KNOWLEDGE

Lev Vygotsky (1978) argued that human learning relies on our social nature; children pay attention to everyone, including teachers and other adults, and they learn from all of us. Through that process they grow into the intellectual life of the adults around them. He stressed the value of collaboration in learning: «what children can do with the assistance of others might be in some sense even more indicative of their mental development than what they can do alone» (p. 85). Similarly, Radziszewska and Rogoff (1991) describe «the cognitive reorganization that leads to development», which results from «shared resolution of problems, in which children interact with adults or with more capable peers» (cited in Aubert, Flecha, García, Flecha, & Racionero, 2008, p. 55). In defining the Zone of Proximal Development (ZPD), Vygotsky pointed to «the distance between» a child's «actual development level as determined by independent problem solving» and that child's «level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers» (p. 86). We argue that «adult guidance» mean all the adults who have relationships with students, among them teachers, family members, older friends, neighbours, adults from the cultural centre, university volunteers, former students, and many other adults.

Taking into account Vygotsky's basic ideas about how children learn and develop when guided by adults, in this article we focus on the ways that a diverse range of adults can contribute to children's learning. By diversity we mean adults with a variety of profiles: members of the family or the community, with different backgrounds, work situations and types of employment, educational experiences, and lifestyles. They also range widely in age and have different mother tongues. In short, they represent a diversity of life experiences. We call them non-expert adults, as they all interact with the children in addition to the qualified teachers, the experts or professionals in formal education.

We also explore the process of children learning through interaction with adults, remembering that this diversity of adults will provide wider experiences for the children. We investigate what happens when adults from the community are involved in the children's learning, and how their involvement helps the children succeed academically.

In Europe, until quite recently, few researchers have examined the involvement of family or community members in children's education. Most educational research in Europe has focused on teachers' education, as we explain below. Many researchers (Baumert et al., 2010; Dow, 2006; Trigwell & Prosser, 2004) have interesting findings about how to facilitate instrumental

learning in the various knowledge areas: mathematics, language, foreign languages, geography, history, sciences, etc. Meanwhile only a few researchers consider how to establish bridges between the school and the home, compared to research on this topic elsewhere in the world, especially in the United States and Australia.

Several studies in the United States and Australia confirm that students do better when the family supports their study (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Bennett, Weigel, & Martin, 2002; Brooks-Gunn, Berlin, & Fuligni, 2000; Barnett, Young, & Schweinhart, 1998). Researchers have also found that early attention and educational programs that include families as one component stimulate children's school success, in both the short and long term (Boethel, 2004; Jordan, Snow, & Porche, 2000; Campbell, Helms, Sparling, & Ramey, 1998; Christian, Morrison, & Bryant, 1998). Families and teachers, however, usually have different perceptions of what is appropriate for children to learn (Piotrkowski, Botsko, & Matthews, 2000). Those differing perceptions require further research, to better understand how children learn in interaction with expert and non-expert adults. Research should also address the decreasing involvement of families as children grow and progress through the educational system (Rimm-Kaufman & Pianta, 2004).

Researchers have adopted various approaches to study the participation of families or community members in their children's education. For example, Epstein (1991, 1995, 1998), who working in the United States, describes the school-family partnership, where families, schools, and communities have connection points that overlap and influence the students' learning. Epstein proposes six types of participation to help educators develop these partnerships: parenting, communicating, volunteering, learning at home, decision-making, and collaborating with the community. Another model widely cited in the literature is «democratic participation» (Apple & Beane, 2007). From this perspective, families and communities are social agents who have great potential for change and transformation, especially in the context of the children's education. By participating in schools, especially those with few resources, these people can start to reverse their experience of being excluded from the wider society.

Today, in international forums that address ways to overcome such social exclusion, more attention is being focused on how non-expert adults, family education, and family participation can help children succeed in school. At the European level, this topic has been included in one of the INCLUD-ED project objectives: to study communities involved in learning projects that help to reduce inequalities and marginalisation and to foster social inclusion and empowerment. The academic community sees the need for theories and practices that promote school success and that help us better understand how

community involvement affects this success. In particular, we need to know how diverse members of society can participate successfully in their children's education.

In response, in this article, we have three goals. First, we view the literature on the roles that non-expert adults can play in successful schools. Second, we explore in depth several examples of such involvement in different practices. Finally, we consider how these findings can be extended to educational practices around Europe to improve children's learning processes.

THE ROLE OF NON-EXPERT ADULTS IN CHILDREN'S ACADEMIC SUCCESS

One of Vygotsky's (1978) main contributions was that he invalidated Piaget's biological-based explanation about the relationship between development and learning. Piaget said that learning depended on the child's cognitive developmental level: as the child grows, he or she becomes more mature and able to understand and assimilate new knowledge. According to this thinking, certain concepts are very difficult for children of certain ages, and vice versa: others are suitable for children at specific stages of development. In developing his theory, Piaget did not consider the importance of the child's social context.

Vygotsky, however, became aware that the social context is a key element in cognitive development; in fact he focused his work on children's interactions with their environment. Vygotsky found clear evidence that led him to think about the guidance and support that adults can provide to children as they learn. He knew that this guidance is fundamental for children to achieve their fullest potential.

Since Vygotsky, and following his lead, other educational psychologists have pointed out the importance of interaction between adults and children. For example, Bruner (Wood, Bruner, & Ross, 1976) proposed the idea of scaffolding to refer to the assistance that adults give children to develop their capabilities. Scaffolding means offering the children guidance and tools that will allow them to learn by themselves.

Authors who focus on the socio-cultural dimension of learning say that, in addition to the teacher, children live together —and therefore interact with— a broad variety of other people of various backgrounds, who are not professionally trained for teaching tasks, including families, neighbours, and figures in the mass media. Children are always surrounded by adults, in different contexts, and learning is a process that extends far beyond the walls of the school. Aubert, Flecha, García, Flecha, and Racionero (2008) highlight the importance of considering all the contexts in which children live.

From this perspective, learning occurs through interaction with others. That is, a child learns what he or she sees and then experiments through contact and interaction with more expert people, within a particular lived context. Therefore guidance is extremely important, and this makes it crucial to reflect on the role of all the adults around the children. What role, then, do non-expert adults play in the process of children's cognitive development? This is a question on which we want to shed some light, using data from the European research project INCLUD-ED.

As part of the INCLUD-ED project we analysed 20 schools in which family and community members participated in learning activities. The 20 schools were included within the six Europe-wide case studies, conducted in five different European countries (Malta, Spain, UK, Lithuania and Finland). The cases were selected based on three major criteria. The schools had to be succeeding, within their context, as reflected by the students' academic scores. Second, the students came from families of low SES status and/or minority background. Third, the schools had strong community involvement, and were working to reverse social inequalities. We conducted our analysis using the critical communicative methodology, and focused on specific conditions that led either to people becoming more included in the wider society or continuing to experience exclusion. This selection and analysis facilitated our primary objective: to study schools and communities where integrated social and educational interventions are helping to reduce inequalities and marginalisation and to foster social inclusion and empowerment.

Our data show that by diversifying interactions, schools can offer children a frame of reference in which they can build their own scaffolding, which they will later use to continue learning on their own. Thus they create what Vygotsky called self-regulation: they internalise the information they receive from their environment, and integrate it within their own reference signs systems. The existence of such scaffolding, which is always both cultural and social, allows children to progress and reach new levels of knowledge without having to proceed step by step to learn all the details of a new concept or idea.

INCLUD-ED researchers have analysed traditional models of student grouping such as mixture or streaming, and have contrasted them to more productive activities and successful actions based on «inclusion» (CREA, 2006-2011). Some of the inclusionary actions take advantage of human resources already involved in the school (support teachers, family members, volunteers, etc.) and use them in the classroom to multiply the number of interactions that are possible in various learning activities. These human resources are often non-expert adults. Adults include all of us —academics and non-academics, experts and non-experts—and schools can use the resources

of the community to provide more adults, with a range of profiles different from the teachers', and thus provide unique experiences for the students. For example, other adults can explain activities or ideas in non-academic ways, use familiar expressions with children, or relate their explanations to community experiences and information that the children know well.

Finally, having contact with many people, from various cultures and contexts, expands children's horizons, and their expectations about what they can achieve. In our research, we followed several Romani girls who had frequent contact with university students studying education, and decided to become teachers themselves. Only after that frequent interaction did the girls became serious about going to university themselves, so that they could teach other girls in the future.

THE INFLUENCE OF NON-EXPERTS' INVOLVEMENT ON EDUCATIONAL PRACTICES

The INCLUD-ED project has identified educational practices in successful schools that include participation by a diversity of community members. Analyses of the six case studies have shown how crucial it is to have all of a child's important adults involved in her or his school experience (CREA, 2009). The case studies revealed many ways that community members could play important roles for the students, and here we focus on four of them: tutored libraries, tutored digital classrooms and shared instrumental learning activities. These non-expert adults not only improve children's learning and knowledge but also affect the ways that teachers function and relate to these children's families and other community members.

Tutored libraries

The tutored library is a space in the school where adults from the community support students in working on various tasks including homework and reading. Since these adults are not professionals in education they will likely help the students, and respond to their questions, in a different way from the teachers. This support, rather than contradicting what the children learn in class, provide them a new way to relate to their lessons, so they better understand the subject matter and can perform better in class. In addition, the tutored libraries serve as a bridge between school and home: learning interactions that start in the school library can be transferred to other settings, as the child takes the knowledge she has created with one adult and develops it further in other settings, at home or elsewhere. This learning support

is offered as an extracurricular activity during school hours; for students who have not been able to keep up with their classmates, it provides an opportunity for extra work that will let them learn as much material as the others.

In this context the adult's role is to provide guidance, helping the children to complete the assigned task. These adults not only collaborate directly with the children but also promote peer interaction. Children develop a feeling of success when they all believe they can complete their tasks and ask for support if needed. Therefore, we suggest that solidarity is an element that deserves further exploration, as students not only learn from these adults but are also willing to help their classmates. One of the family members interviewed for a case study described how valuable this work is for the children:

> Of course it's good! When they leave the school building imagine what it is like for those who do not stay behind in the tutored library. They go home and they have to do their homework and, well perhaps they don't know how to do that homework and they have no one at home to help them with that homework. On the other hand the ones who stayed got help because there were five of us in the library and when they leave there they can then do something else because they've done their homework. It's very good.

Teachers also value the collaboration of these adults in the tutored library:

> We incorporate people... [The children] improve when someone comes into the classroom to help little by little, and what we do promote is helping the children who do have certain difficulties and they can stay in the tutored library because it is there that sometimes we [experts and non-expert adults] provide help to do their homework and to accelerate learning.

Researchers have found that these adults' participation in the tutored library leads children to succeed academically. For example, one mother has observed significant improvements in her child's school work since he has been receiving extra support in the tutored library. She appreciates the important role that the volunteers play. In addition to observing how her son's reading has improved, this mother has also helped at the tutored library. Her participation has transformed the family environment because it brings into the family context some of the academic interactions that increase learning:

> «He loves it, he loves it. And when we get home he says, «mum, read me another of those stories that you read in school, go on», and we work at home in the same way».

Tutored digital classrooms

Tutored digital classrooms are school spaces filled with technology that children can use for various learning activities. They are open during regular school hours, and after school hours are also open to the community; adult tutors provide access to everyone in the neighbourhood, including children who come with family members. With these two practices—the tutored library and the tutored digital classrooms—in place, the «educational centres leave behind the idea of being an inaccessible space monopolized by the expert people on education» (Aubert et al., 2008, p. 225). Frequently, educational activities are led by community members who are experts not on education but on technology and computers.

In these after-school spaces, open to all students, children benefit in various ways. Not only do the adults help some of them catch up with their classmates; they also anticipate the work the teachers will present in the near future, so the children can be ready before the activity is first presented in class. In addition, as the children interact closely with these adults, they begin to break down stereotypes towards different groups and communities. For example, the stereotype that older adults do not know how to use technology will vanish when they work with a grandparent or older adult from the community who has worked with technology and computers for many years or is an expert in developing some sort of technology.

Shared instrumental learning activities

The practice of involving family members and other adults from the community in shared activities involving instrumental learning also helps improve children's reading. One of the actions we found from analysing the case studies is the shared reading sessions. In these sessions, when adults other than the teacher participated in the classroom or session, children were more motivated to work on their reading; they wanted to improve their skills in order to please these people who are important to them. In fact, we found that children who had extra adults around them when they were starting to read made quicker progress than their classmates who started reading without these extra adults present.

In these sessions, adults support the children not only by helping with the reading itself but by sharing their life experiences that relate to the text. Here is where they can play a key role. Through the readings they bring together real life and literature, mixing culture, language, politics, and history with the instrumental learning. Children become much more interested in learning, understand more, and make more progress in reading skills when they

share more of their reading experiences with a range of adults: not only the teacher but also their family members, classmates' family members, neighbours, or university students. A school administrator described how children behave differently when they are alone with a teacher, compared to when they have a non-expert adult volunteering in the reading sessions:

> When the teacher is alone, because I'm in the office I can see children strolling down the corridor to go to the toilet, but they go to the toilet a lot because of the boredom they feel in the classes. It's not that they are misbehaving but they are just bored and trying to get out a bit and this physical need is created, but when… there are volunteers in the classroom who help them to do a reading activity for example, those corridors are empty. And this is significant: they are in classes, they are fine, they feel at ease and they are learning, and taking advantage of the time they have.

The shared reading sessions are a demonstrated success, as they have improved the reading levels of both boys and girls. The head of studies at a primary school describes how the children in her school read better and are more motivated by the idea of learning to read since their family members, especially their parents, have been coming into the classrooms to help them: «the children who improve their reading are the ones whose parents have come along».

Therefore we can state that this activity contributes to a clear improvement in learning. Children who could not read have now begun to do so, because of family participation in the classroom. This has led to better attitudes about reading outside of school, and has increased their motivation to come to school:

> The children are much more encouraged to learn. They take books home to read, because they are already reading with their father or mother. Also [there is the idea of] «I know how to read now» because before they did not know how to because they [just] learned this year. So of course,… because they are more motivated, they want to come along.

Another action which involves shared work in instrumental learning is the dialogic mathematics workshops. Based on the INCLUD-ED findings (INCLUD-ED Consortium, 2009) that stated the impact family education has on students' learning, a study (Díez-Palomar, et al., 2010) was conducted to analyse this experience. Besides being an activity for family education, it also constitutes a practice in which children and non-expert adults' engage together in instrumental learning. The after-school dialogic workshops in mathematics bring the children together with a variety of adults, usually the children's family members, to investigate different aspects of the mathemat-

ics in the school curriculum. To these sessions the adults bring all their prior knowledge and all their concerns to help their children do better in mathematics, for example with their homework. The adults' prior knowledge can be very diverse, so the point of these sessions is to get the children and adults working in the same way to solve the same mathematical problem, since a teacher's explanation in the classroom can differ from the explanation a parent may provide. The explanations can differ for many reasons. The ways of explaining mathematics have changed over time so that they are actually different from one generation to another; in addition, adults have learned different solutions for mathematical situations in different contexts.

For example, in school, a teacher may give the children an equation that consists of two fractions or rational expressions, and ask them to determine the value of the variable by cross-multiplication. But if non-experts in math are teaching the same idea, they will try to get the same response from the children by using «the rule of three» which is a shorthand version for a particular form of cross-multiplication. Another example would be the multiple ways children can be taught to add numbers. When they share these experiences with non-expert adults, children will soon learn that there are many ways to do quick, mental additions, and that they can learn from all of them. They will learn not to use the exact number or amount given in the exercise, but to find an approximate result, for example by counting by tens and hundreds instead of exact units.

The opportunity to interact with more adults, who have a range of life experiences, also provides the students with broader perspectives on their society and the world around them. When students have contact with these various adults, they develop a much broader understanding of activities, theories, and practices than if they only interacted with their teachers. The other adults' multiple ways of explaining and using mental resources add to those of the teachers.

In turn, this diversity, whether religious, cultural, or a matter of age or educational levels, increases the types of interactions the students have. Now, more than ever before in human history, children learn in many different contexts and through different relationships. Therefore, if children experience diversity as part of their school day, it naturally represents one more way to accelerate their learning (CREA, 2009).

In fact, the educators greatly value the voluntary participation of these adults because they are role models for the students. Often their backgrounds or family characteristics are similar to the children's; more importantly, having such role models makes their education more meaningful—yet another fundamental element in anyone's learning process (Flecha, 2000).

Overall then, our analysis of the six case studies conducted in Europe as part of INCLUD-ED Project 6 (CREA, 2009) points out several ways

that these non-expert adults can enrich the children's learning experience; here we highlight three of them. These interventions have an impact not only on children's instrumental learning but also on their non-academic knowledge. First, their participation, for example in the tutored digital classroom, can help to overcome stereotypes, since interacting with adults who have different educational backgrounds, occupations, or lifestyles can help the children to learn different points of view and thus move past the stereotypes. Second, the presence of these other adults led to better over-all relationships amongst the students, and thus to better behaviour overall. With more adults present, they were less distracted—and they could relate well to these adults who came from the community and thus were often closer to their own experience than the teachers.

Third, these adults made the learning more meaningful since the children could learn with their own, or their classmates' family members; this created new kinds of relationships among family members, as in the shared instru-mental learning activities. Fourth, by their very presence these adults pro-moted democratic values: they intervened as moderators and children learned to respect the opinions and ideas of others. Fifth and finally, their participa-tion led to better relationships between parents and teachers; as they worked together for the children's sake, they got to know each other better. This in-teraction led immediately to their better understanding of each other and be-ing even more interested in future collaboration. As teachers and non-experts work together to promote the children's learning, they provide the children with an image of community. The different members of this community are able to understand each other in addition to being able to offer their different ways of knowing, teaching and doing based on their own diverse educational experiences.

DISCUSSION

This analysis, conducted within the larger INCLUD-ED project, gathers examples of successful actions that combine instrumental learning and the guidance of non-expert adults to help children progress academically. These examples have highlighted a specific form of adult guidance that includes both experts in education and non-experts, coinciding with Vygotsky's ideas on child development and learning. We found that children's learning im-proved in both academic and non-academic ways. By academic learning we mean instrumental learning such as reading or mathematics. The kinds of non-academic learning are related to ways of knowing: understanding differ-ent discourses including aspects of daily life experiences that are intimately related to learning but occur outside the school environment.

The involvement of these other adults in educational spaces such as the tutored library or the shared instrumental learning activities has had a positive impact on children's instrumental learning and their continued academic success. When these adults participate in these ways, children can more easily experience various ways of learning and teaching, and see more role models and ways of living their lives. It is extremely enriching for them to learn from the different ways that people do things, and to experience different styles of guidance, given the adults' various occupations, educational trajectories, cultural backgrounds, and lifestyles.

Both the tutored libraries and the tutored digital classroom have transformed the family environment because they let children take home the academic interaction that increases learning. When families participate in shared instrumental learning activities, they ensure that the children work on those issues more intensively, thus improving their reading level and their mathematics competence. In addition, this participation increases their motivation to learn and to show others what they have learned. In fact, the non-expert participation also improves their classroom relationships, by increasing their solidarity and meaningful collaboration. When teachers, educators, and community members work together with the children, they all communicate the idea that learning is important, and they all share the aim of succeeding in school.

In sum, the more diverse the volunteers in the classrooms, the more they can overcome various kinds of stereotypes. And family participation in the classroom makes learning more meaningful for the children because they learn in relationship with family members. This leads them to have more respect for their classmates, as they want to show the adults how much they know, and they want to behave well for them. Finally, when families share the learning spaces, they together create an environment in which everyone has something to offer and they all rely on each other.

Finally, all these findings demonstrate the need for further research in this area, for a rigorous series of studies focusing on educational theories and learning practices that can improve children's instrumental learning. Learning more about the roles that non-expert adults can play in increasing children's learning can help extend this involvement to other schools and can ultimately enhance social cohesion in Europe.

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