Cultural Intelligence in the School

Inteligencia cultural en la escuela

Mimar Ramis* and Līga Krastiņa**

*Universitat de Barcelona, **Baltic Institute for Social Sciences

Abstract: A wide range of research, including Scribner’s cultural psychology, work by Rogoff and Lave on daily and situated cognition, and the notion of funds of knowledge (Moll & González, 2004), has demonstrated that all people have cultural intelligence which allows them to address and resolve many problems in daily life. In the same vein, the study of successful educational actions within the framework of the INCLUD-ED project reveals that more types of intelligence must be included in schools if educators are to respond successfully to the educational demands of highly heterogeneous classrooms. Using two case studies of community-based educational projects in Spain, this article shows how it is essential to recognize the cultural intelligence of all students in order to connect learning in classrooms with life outside school and thus provide meaning and a context for school knowledge.

Key words: Cultural intelligence, funds of knowledge, communicative intelligence.

Resumen: La psicología cultural de Scribner, los estudios sobre la cognición cotidiana situada (como los de Rogoff y Lave) y nociones como la de «fondos de conocimiento» (Moll & González, 2004) han demostrado que todas las personas tienen «inteligencia cultural» que permite afrontar y resolver con éxito múltiples problemas de la vida cotidiana. En esta línea, el estudio de actuaciones educativas de éxito en el marco del proyecto INCLUD-ED muestra que es necesario diversificar las inteligencias presentes en los centros escolares si queremos responder con éxito a las demandas educativas que plantean aulas altamente heterogéneas. A través del análisis de datos de dos estudios de caso de proyectos educativos basados en la comunidad en el contexto español, el artículo muestra cómo el reconocimiento de la inteligencia cultural es clave para conectar el aprendizaje en las aulas con la vida fuera de la escuela y así dar contexto y sentido al conocimiento escolar.

Palabras clave: Inteligencia cultural, fondos de conocimiento, inteligencia comunicativa.
INTRODUCTION

Traditionally, the concept of intelligence has often been limited to an Intelligence Quotient (IQ) that can be measured through standardised tests, such as those of Wechsler or Binet, but the value of such tests has been disputed for decades. This concept holds that intelligence is passed on genetically, and that people «have» a specific amount of it. However, studies such as those by Schaie (1983) in the 1950s already revealed the clear influence that school and other experiences have on the results of IQ tests (Wechsler, 1958), drawing on his cross-sectional studies, came to believe that intelligence declined after age 30, but Schaie, using longitudinal studies, revealed Wechsler’s methodological error: the cross-sectional tests compared people of different generations, who thus came from different historical and educational backgrounds. Along the same lines, cultural biases and differences between the school experiences of Spanish and Ethiopian students, for instance, have a strong impact on their respective scores on IQ tests.

Other researchers have disagreed with the very concept of the nature of intelligence, regardless of the instruments and procedures used to measure it. The traditional concept limited intelligence mainly to academic and formal abilities, since they have to be demonstrated in individual, written test situations. Thus, the issue is not only that Spanish and Ethiopian students will answer the questions on an IQ test differently because of their experience rather than their natural, genetic abilities. More importantly, their results reflect not their intelligence but instead a specific sample of imposed abilities which are seen as being the most valuable. Several researchers have displaced the old one-dimensional assumption of intelligence. Among them are Cattell (1987) and Horn (1966), who distinguished between fluid and crystallized intelligence, Scribner (1988), who suggested practical and theoretical intelligence, and Gardner (1985) with his «multiple intelligences.» From these perspectives, a student from a poor area, or an illiterate adult, can be considered to be intelligent in many other ways in addition to whatever score they earn on an IQ test—and can be considered to have valuable knowledge to share with others.

In this article we address the concept of cultural intelligence as a broader notion of intelligence, including academic, practical, and communicative intelligence. This concept allows us to move beyond educational practices based on correcting deficits, and has a positive impact in terms of learning for the whole school.

This concept of intelligence is especially significant in multicultural contexts such as today’s classrooms. Since teachers within these contexts belong to the majority culture, they often find themselves without the specific knowledge they need to help minority students improve their learning.
However, a range of educational actions, such as having family members participate in the classroom and special type of classroom organisation, allow students to participate on an equal level. They also involve people from the community contributing the useful knowledge that students need in order to learn more.

To explore these ideas more deeply, we offer two theoretical sections. First, we review the work of authors who have gone beyond the traditional concept of intelligence and consider the implications for education of their work. In the second section we analyse how curricula can be extended in new dimensions through educational practices based on cultural intelligence. These practices improve students’ outcomes and promote the participation of those who have traditionally been left aside. Finally, we show how the concept of cultural intelligence contributes to improvements in the educational processes.

THE UNIVERSAL HUMAN CAPACITY TO COMPLETE COMPLEX TASKS

The theory of different types of intelligence has helped educators to move beyond the academic concept of intelligence which exclusively values academic knowledge—and thus leads schools to value only what the school culture legitimises. Before the principle of cultural intelligence was developed, various authors played a role in this change, contributing theories that helped to break away from the idea that only one type of intelligence is valid.

One author who contributed to this change was Cattell (1971), with his concepts of fluid intelligence and crystallised intelligence. Fluid intelligence refers to universal capacities, and is related to neurological development. Crystallised intelligence, on the other hand, refers to the way that people select and use specific cognitive skills (including fluid intelligence) to resolve problems or engage in daily life activities. In Cattell’s analysis, people will choose to use certain kinds of abilities and capacities based on the needs or situations they encounter in their most immediate socio-cultural contexts. Later, Sternberg and Wagner (1986) differentiated between academic and practical intelligence, and thus pioneered in transforming the classic concept of intelligence. They saw academic intelligence as related to what people learn in academic contexts, while practical intelligence is what people acquire and use in daily life contexts (family, neighbourhood, work, etc). Thus they moved one step beyond the conception that only one sort of intelligence (academic) exists and that those who have less of it are less capable of engaging in certain learning processes and addressing certain kinds of situations. Combined with the work of other authors, this thinking has helped to
provide a broader and more realistic picture of the concept of intelligence, going beyond reductionist points of view which consider only academic intelligence.

Cole and Scribner (1974) carried out research to look for discrepancies between the cognitive knowledge of people who have grown up in various cultural environments. They concluded that it is not possible to compare the abilities or evolution of people from different socio-cultural contexts using tools such as intelligence tests. They said these discrepancies cannot be found in people’s mental structures or cognitive abilities, which they recognise as being equal in all cultural groups; rather, they said, the discrepancies arise from the different ways that skills evolve and are used in each cultural context. This research began to contradict many racist prejudices based on the traditional concept of intelligence, for example seeing certain cultural groups as less able to carry out academic tasks. Along these lines, Sylvia Scribner (1988) studied adults in workplaces and concluded that in certain circumstances, operations carried out using the brain and the hands are functionally equivalent. This made it possible to dismiss the idea that people can carry out certain tasks only if they have established academic knowledge.

These studies thus imply that in considering how intelligence develops, we must consider not only the individual aspects that cognitive psychologists establish, but also other existing social variables (interactions, cultural referents, historical backgrounds, etc.) that are a part of each person’s development process. In fact, as these authors show, these social variables are key in showing how our intelligence is being developed and in which direction. Therefore, the fact that a child understands one concept better than other children does not depend on him or her being any more intelligent, but rather on the opportunities that he or she has had to recognise this knowledge within a given context. Therefore, to talk about intelligence without considering these contextual elements would bias any analysis of how humans learn.

These contributions question the general establishment in education of certain learning processes that consider only the academic knowledge required to reach a consensus and to carry out a certain type of learning. They also force us to question why other types of practical skills are not considered valid, since they are equally useful in terms of learning and completing assigned tasks (Cole & Scribner, 1974; Scribner, 1988).

The research of Cole and Scribner opened up a new perspective in cognitive studies, introducing the importance of social facts such as the individual’s context and the social group to which each of us belongs. Following them, various authors, including Barbara Rogoff (1990, 2003), Jean Lave (1988, 1991) and Luis Moll (1992, 2004) have also discussed the link between the social and cultural contexts of various learning processes. They all
reach the same conclusion: learning is not the result of an individual cognitive process, but a complex process embedded within the cultural and social context in which the person is involved.

Rogoff and Lave (1984) studied this link through the concepts of daily and situated cognition, based on a contextual aspect of humans. The contexts in which people find themselves every day provide them the tools and schemes to solve problems:

For example, people seldom commit a list of shopping items to memory in preparation for a trip to the grocery store. Rather, they make use of aids such as a written list of items, they ask other people to remind them of what to purchase, or they use the grocer’s arrangement of items to jog their memory as they peruse the aisles for the needed items (Rogoff & Lave, 1984, p. 4).

This means that any interaction between students, or with teachers within the academic context, cannot be separated from the context or from the student’s cultural and historical construction (Lave & Wenger, 1991). This phenomenon is linked to the fact that thoughts are located in specific physical and social contexts; therefore we must consider all cognitive processes in terms of the relationship between people and their situations or specific contexts and not as activities that occur only in the mind. This concept is based on the idea that knowledge is an action that occurs in the specific context in which people live; thus changes are needed at an educational level, not only in the field of education, but also in the models that transmit knowledge. That is why, to ensure that all students can do better academically, the curriculum must reflect the experiences in each student’s own daily life, in what Lave and Wenger (1991) call situated learning. Moreover, the curriculum should contain contextualized activities: activities that link theoretical concepts with practice to facilitate understanding, and that connect to the knowledge that students already have from their own daily lives.

Based on this concept, like others along the same lines, the community plays a significant role in learning (Rogoff, 1990), since it is there that students acquire much of the knowledge they find most useful in their daily lives. Bringing this concept of learning into the classroom, then, we would be talking about communities of students, or, in the words of Lave and Wenger (1991), communities of practice. Therefore learning is achieved and promoted based on the activities being carried out in these specific contexts in which the idea of community is meaningful to students.

Luis Moll (González, Moll, & Amanti, 2005; Moll et al., 1992; Moll & González, 2004), delved in greater depth into the study of funds of knowledge; this idea is based on the belief that everyone is competent and has
knowledge, and that their different experiences continuously provide them with more knowledge. This phenomenon forms the basis of the knowledge that each cultural community has, and becomes the guide for our learning or actions. Specifically, a study in Tucson, Arizona, with working-class Mexican immigrants (Moll et al., 1992), demonstrated how members of students’ families use funds of knowledge in the different circumstances where they find themselves. We can see how families can develop social networks that interconnect with their environments; then, when they face social and economic problems, they can exchange resources, knowledge, and skills in order to improve their lives, adding to their previous knowledge.

In contrast to this real-life situation, classrooms are isolated from the social world and community resources, and thus ignore the funds of knowledge belonging to families or other members of the community. Teachers do not use these funds of knowledge to promote learning; instead they provide lessons that are not contextualised, thus creating a «world apart» in the classroom. Meanwhile, with each exchange in their communities, people (friends, families, neighbours, etc.) constantly create contexts in which learning takes place. In these spaces, children have the opportunity to participate and community members believe they can do it well. In fact, children’s participation is often crucial to the functioning of their homes; for example, immigrant children can use their knowledge of their adopted country to explain situations for their families, or to translate conversations so others can understand. They can also help them understand paperwork, help with housework, and look after younger siblings.

Therefore, the term «funds of knowledge» does not involve replacing the concept of culture; instead it requires that we be more precise, and emphasize «strategic knowledge and related activities essential in households’ functioning, development, and well-being» (Moll et al., 1992, p. 85). Specifically, funds of knowledge are what develop when people in a local community are involved with each other economically, socially and productively. In line with these contributions, the author recommends to highlight the value of these very rich funds of knowledge from the students’ homes bringing them into our classrooms, through activities similar to those that take place in the family. Doing so would help to incorporate this knowledge in schools, since it is a significant pedagogical resource for academic learning.

**CULTURAL INTELLIGENCE IN SCHOOLS: AN ELEMENT THAT PROMOTES LEARNING**

The concept of Cultural Intelligence, a principle of what has been called Dialogic Learning (Racionero & Valls, 2008), moves one step beyond the ex-
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Revista de Psicodidáctica, 2010, 15(2), 239-252

excellent work of the researchers mentioned above, and others, to transform the traditional concept of intelligence.

Cultural intelligence goes beyond the concept that intelligence is based solely on cognitive and/or practical skills. Taking one more step, it combines the various contributions made so far, and emphasizes communicative skills as the central axis of learning. Cultural intelligence consists of academic intelligence (acquired in academic contexts), practical intelligence (acquired in daily contexts) and communicative intelligence. The basis of communicative intelligence is that all people are capable of speech and action (Habermas, 1981). This belief is key to the work in schools in which the whole community is encouraged to participate, regardless of their academic background:

There were around 12 or 13 mothers there and every Friday one or two accompanied the instructor we have, so it was very good because we are talking about some foreign mothers who don’t even speak [the language], so the fact that they were, I don’t know, daring enough to say yes, since the instructor already knows about the subject (…), with the monitor we just carry on and there was no conflict throughout those nine months. In fact the activities were carried out just as they were when the other mothers who had more experience were in charge of it. I’m very happy. Yes, yes, and at no point did any of the mothers say why are those mothers going who don’t know how to speak [the language], or how do they resolve conflicts, well no-one said that because the situation developed normally and any conflicts there were, were definitely resolved because I didn’t hear about them (School principal).

In the studied schools which have achieved excellent academic results, families are often involved in the school, even in the classrooms. The fact that they participate in the interactive groups (see the article by Elboj and Niemela in this special issue), promotes greater learning and social cohesion. The children’s learning is enriched because these adults contribute various kinds of knowledge to the classroom. Without their participation, the interactions are more homogeneous and less likely to help the children acquire a global vision of reality. But when the families’ knowledge is included, the students learn to incorporate different perspectives and skills that they will need in today’s society. One of the most important aspects is that they learn to work together, as one. The inclusion of this diversity of intelligences does not generate contradictory perspectives or differences among people. Instead, children learn that those who participate in the school, although they are diverse, share the same objective: to learn the maximum possible. This daily learning, of union in diversity (Freire, 1997), promotes a stronger meaning in their learning process.

It is through such practices, drawing on the idea of cultural intelligence, that people can resolve situations that they cannot solve alone simply using academic and/or practical intelligence. Communicative intelligence includes
the ability to use language to ask others for help in order to solve the situations we encounter. For example, we asked a student how students work in her class to complete a task:

«Between two [students], me and Mada, Mada helps me, I help her, Rafi helps Ramonchi, Ramonchi helps Rafi» (Lucía, age 9, female, Roma).

As Lucía explains, the students help each other—and they do so through dialogue. By using their communicative intelligence the children can more deeply understand the texts and operational problems they face in their learning process. What these girls and boys learn is that they can develop their intelligence better if they work together. They do not experience helping each other uniquely as a «moral benefit»; they realize that they acquire a greater critical understanding of the knowledge. In addition, the group is motivated to learn through solidarity instead of competition, so they are all motivated to help when one of them has more trouble understanding a concept or solving a mathematical problem. But they help each other in such a way that eventually the child can solve it alone. It would be easy for some children to provide the solution or write it down for the teacher. But this is not the way of communicative learning, as it works, for instance, in the interactive groups. In those groups, both girls and boys, as well as adults, contribute to the learning through interaction and dialogue, bearing in mind that they cannot solve the problem for the individual child.

This leads to a series of learning processes that often do not occur in traditional classrooms. The children learn how to explain problems to others in an understandable way, using their own creativity to find alternative explanations and helpful examples, and learning how to use their own ways of teaching to connect more easily with their peers. At the end of this process, all the children benefit: the one who explains benefits by consolidating his or her learning by developing all these prior strategies. On the other hand, the one who hears the explanation can understand more easily because of this dialogue between two students: through this dialogue, the difficulties that one of the students is facing feel closer to another student so he or she can be more helpful. As the quotation below shows, the process confirms the students’ confidence in their abilities and broadens their learning possibilities:

Cultural intelligence promotes a model of learning in which each student contributes with her own culture: her capabilities and own ways of doing. As a consequence, students develop more confidence in their capacities, no one is looked down on because they do things differently—and learning improves. Organising knowledge in ways different from those in school increases the possibilities of learning strategies and approaches to problems (Elboj, Puigdellívol, Soler, & Valls, 2002, p. 100).
One example of the contribution that cultural intelligence makes to classrooms is the knowledge that other people (other students, family members or other community members who participate in schools) bring to the learning process. For students, the presence of immigrant students who are fluent in more than one language boosts learning for those immigrant students who have just arrived. This is because classmates with the same language and cultural skills can translate for them, guide them, and help them to participate more in class—in ways the teachers cannot. That mechanism speeds their learning because it lets them keep up with the classroom activities. Through the use of language, a more capable student can help a classmate acquire a specific type of knowledge, based on a dialogic relationship. At a pedagogical level, this involves organising classrooms differently from what has been done traditionally, to promote this type of dialogic interaction between students and/or other adults from the educational community, not only the teachers. In the quote below, an academic coordinator stresses that groups must be heterogeneous, because she has watched how heterogeneity fosters the learning process.

I am convinced that the best way to work is in a group. (…) Completely heterogeneous… [containing students] of all types, male-female, in terms of learning level, in terms of race even if there is one [group] containing non-Roma and Roma people, [a bit of] everything, I think so yes, completely (Tania, Head of Studies).

Cultural intelligence also promotes learning and conflict resolution when people who are cultural role models are included in the classroom. When various adults from the community participate in the classroom, they can sometimes use their cultural intelligence to improve the functioning and learning in the classroom. In one of the successful schools we studied, we observed a situation in which a student, in this case one of Roma origin, tried to assault a teacher who was writing on the blackboard. This student had often assaulted the teacher, who did not know how to respond. In this situation, because there were volunteers in the school, one of them, a highly respected Roma man, could act immediately. He approached the Roma boy and told him that he could not be a Roma, because Roma people respect their elders, and he was not doing so. From that moment on, the student’s attitude changed completely. The Roma volunteer, who had no university degree, did possess cultural intelligence that included knowledge of his own culture’s customs and norms. This is what Moll would call a fund of knowledge, and Rogoff and Lave would call situated cognition; it facilitated an educational action that would have been impossible without his presence. This is an example of how people from the community can provide
knowledge that teachers do not have, and can help to solve certain issues and/or contribute new knowledge and more successful ways to learn and do things (Flecha, García, Gómez, & Latorre, 2009).

The presence of people from various ethnic or cultural backgrounds can enrich the learning process in important ways. By increasing the diversity of interactions that students experience in the school, they help children gain access to the funds of knowledge of other groups and to encounter different perspectives, lifestyles, and opinions. A local authority employee we interviewed explained that the presence of minority group mothers helped all the children become more aware, and accepting, of other cultures.

With regards to recognizing cultures, they have monitors for example of Roma origin. Magrebi mothers are participating... and whether you like the participation or not, the daily presence in the school of these minority groups helps to make someone that the children see around the school visible and real and I think that at least the interaction brings them closer to some groups who are different and have different backgrounds and at least they are able to have more knowledge about this group (Local authority employee).

As children interact with people from diverse backgrounds, that interaction promotes their intellectual development, and helps them become more tolerant and move beyond cultural and gender stereotypes. Moreover, any person from a cultural or minority background serves as an example and role model to the students, especially if they have the same background. A head teacher explained one situation:

Fatima, a Moroccan female university student, was collaborating with us for a while. She had studied in the US, and of course when she came here she was a high-level role model above all because the young Moroccan girls but also the other girls and boys had a Moroccan academic role model, who was Moroccan in origin. And then of course that played a role and meant we were dealing with a great deal of issues without explicitly dealing with them, because they experienced it and the idea was introduced that at least that person was a point to reflect on. If they said bad things about Moroccan people and said that they are all beggars, they could say, well Fatima is studying and she is at university (Head teacher, she has worked in the school for 16 years).

This egalitarian participation by adults who are not formal teachers also helps prevent gender violence—and thus to improve not only the students’ learning but also the overall peaceful coexistence in the school and the community. Various studies (Oliver, Soler, & Flecha, 2009; Valls, Puigvert, & Duque, 2008) have demonstrated that having non-academic women and women from other cultures participate in preventing gender violence is more
effective than leaving it to the «experts». Some schools have created new organisations in which women from the community help to design and implement measures to prevent gender violence. In spaces created for dialogue, teachers and family members engage in dialogue about situations that occur in the school and ways to resolve them. Often it is the knowledge carried by these mothers, sisters, cousins and other female community members that makes it possible to identify situations involving gender violence in the schools, situations that teachers often cannot see themselves.

If we can include these women’s voices in creating programmes to prevent gender violence, for example, or ensure that they have access to the school at many levels, then they can help to avoid many undesirable situations involving gender violence. This would be a way to incorporate the cultural intelligence of women from very diverse backgrounds—and often with no academic education—in the life of the school and specifically in the process of overcoming gender-based violence. This is only one of the many ways that local funds of knowledge can provide valuable insights into the experiences and culture shared by members of the local community and therefore help to address problems adequately, appropriately, and efficiently in the specific context.

**DISCUSSION**

In this article, we have shown that moving past the traditional concept of intelligence based only on intelligence quotients or academic skills will help to overcome the inequalities facing groups that are not part of the majority culture. If we widen the notion of intelligence and include other types of knowledge, for example, by understanding the cultural code of an ethnic group or their knowledge of everyday life, then we make it possible to acknowledge as equal members of society those who are not academic and who are members of various minorities. These groups have funds of knowledge and cultural intelligence that constitute a large and important source of resources that can benefit schools by involving parents and community members in the school life and learning process.

We also took a step beyond the concept of cultural intelligence by adding the concept of communicative intelligence to academic and practical knowledge. This intelligence is based on the idea that every person has the same capacity for language and action; therefore, through interaction mediated by language, we are capable of resolving situations that we could not resolve by ourselves, or only using our academic and/or practical intelligence. This concept is especially important in education. It is crucial that we change the concepts of learning that have been in force so far, to pro-
mote forms that encourage interaction. Thus schools must incorporate the academic intelligence held by students belonging to other cultures or by community members in order to optimise the resources the community has to offer so that all children will succeed academically. By purely emphasizing academic knowledge in creating our students’ learning we will miss out on the very rich resources linked to the existing diversity in our schools.

To make these changes will require mechanisms, processes, and spaces where everyone in the community can participate in their children’s learning and in that of others. Teachers must incorporate and take advantage of the cultural intelligence present in the community in order to assemble academic material that incorporates the cultural codes and experiences of these students. Since they rarely are members of the same minority groups as most of their students, teachers are unaware of these experiences and cannot include them in the learning process. Therefore the school life and the learning process must be transformed in a way that allows the wider community to participate and contribute. The presence of persons from diverse social and cultural backgrounds in the school benefits not only the students whose interactions are increased; it also provides support for the school staff and promotes parental involvement and family learning. This in turn has an immense impact on the students’ motivation and learning.

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**Mimar Ramis Salas** is associate professor in the Department of Sociological Theory, Methodology of Sciences, and Philosophy of Law of the University of Barcelona and holds a master’s degree in Social Anthropology from the University of Leuven. Her research fields are education and cultural minorities, migration, and educational policies. She is currently a member of the INCLUD-ED project’s research team.
Līga Krastiņa, M.A. in sociology, is a researcher at the Baltic Institute of Social Sciences, Latvia. She works currently on the project «INCLUD-ED. Strategies for inclusion and social cohesion in Europe from education». Her research interests include education, political participation, and ethnic relations.