

*PROMOTING VALUES IN A PRESCHOOL SETTING: AN ANALYSIS OF A COOKING
LESSON*

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Abstract

The purpose of this research is to establish how children, at the age of five years, understand three important concepts: CLEAN/NON-CLEAN, EDIBLE/NON-EDIBLE and DUTIES/RIGHTS as these are encoded in a cooking course. I studied a preschool classroom of 28 students and its teacher in several cooking classes to see the children's actions in an educational context learning. The study utilized the combination of three theoretical bases—the Dynamic Systems Theory, the theory of zones in development (Valsiner, 1997, 2004, 2007) and the Theory of Oppositional Meaning Construction (Josephs, Valsiner and Sorgan, 1999). The data were derived from the actions observed in children and the teacher at the transition points in the course of the cooking lesson. This thesis is an attempt to answer the question about how the education within the preschool settings functions in guiding human cognitive development.

Key words: early childhood education; preschool;; sustainable dynamic system, ZFM-ZPA-ZPD, A<>non-A.



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Introduction

Development can be understood as a dynamic system, characterized by the interaction of multiple qualitative components that will permit the emergence of new organizational forms, including cognitive and social ones (Lewis, 2000; Molenaar & Valsiner 2008; Thelen & Smith, 1994; Valsiner 2004, 2007, 2009; van Geert, 1998, van Geert & van Dijk, 2002, Rodriguez, 2009, 2011). Little boys and girls can not develop emotionally, cognitively, communicatively or socially just by themselves, but are always embedded in a social context.

Back in the 1920s, Lev Vygotsky emphasized that, human development involves two components-- biological development (human evolution) and the cultural development—that are transformed by the society, over the time (Langford, 2005). Biologically, because since a person born, tend to go forward to find out new ways to develop strategies to resolved task by themselves; while culturally are the abilities that are develop by themselves with the help of others.

As a matter of fact, development comes up to be the result between the interaction of multiple systems, such as personal, family, school and cultural (Rodriguez, Giraldo, Obando, Romero, Mojica, Rodriguez, 2011), because humans beings gain new forms by absorbing the structure and patterning of its physical or social environment through interactions within in any environment.

Conceptually, development is assumed as flexible process that changes over the time, focus on the emergence of novelty (Valsiner, 2004, 2007, 2009) , and which is given by a social interaction with other humans beings, due that development is a natural process of conditional changes, that is based on social changes and methods which help the person adapt him/her in an specific environment specially during the first years of life. An infant usually reacts to what is

around immediately-- while an adult can wait before trying to reach a goal, to allow time for thought (Langford, 2005).

So as a matter of fact, during early childhood, school plays an important place in child's development, because the first years of school are fundamentally important for their later learning (Thomas, 2006). In educational contexts, that cognitive potential of children are turned into activity practices that further guide cognitive processes (Whortman, 2001).

Here, individual development and early childhood education are intricately linked-- by a dynamic system (Smith & Thelen.2003) of the movement of experienced life events between the internal (intra-psychological. subjective world) and external (participation in social activities in the process of progressive adapting) domains of one's information that infants can get, during this process. However, this process involves a social interaction which fully includes the person (Valsiner, 2007).

Children need the combination of intellectual skills, motivational qualities, and socio-emotional skills to succeed in school (Boyd, Barnett, Bodrova, Leong and Gomby, 2005) so, the first years in a children life, are fundamentally important to the human development, especially during the pre-school stage, because during this period of time, children develop cognitive, physically, socially the skills that are important in wider social life. During this stage the developing child starts to understand the meaning of being with other children of their same age, control their own feelings and behaviors, and get along with their peers and teachers. Children, also start to establish auto-control's behavior and self-regulation in specific and demanding contexts. Self-regulation is a deep, internal mechanism that underlies the aware and thoughtful behaviors of other children (Boyd, Barnett, Bodrova, Leong and Gomby, 2005).

What is Development?

During the first years of life, early development is fundamentally important, because is during this time where children are able to develop new strategies, abilities and skills that become fundamental to survive. For this reason, since the beginning, children are able to get develop: physically, cognitive, linguistic, socially and emotionally, and morally and ethically.

At first, a child's brain development occurs mostly during the first few years of life though the activities that occur by synapses, dendrites, and important nerve fiber bundles. (Miller.2010) The dense branching and outreach of dendrites fibers links billions of individual neurons, and this circuitry makes the development of sensory, perceptual, emotional, regulatory, motor and cognitive functions possible. However, the external experiences have a strong influence on the brains development. Our understanding of brain development is a crucial knowledge base for examining other aspects of development throughout the school-age years (Maholmes,2001).

Secondly, physical development involves a child's progress in the gross of fine motor domains as well as the sensory and the perceptual abilities. Difference in gross motor development is due to the combination of biologic and environmental factors, including maturation, motivation, experience, and adult support (Maholmes, 2001). Mahomes (2001) defines good motor development if it involves a good manual agility and ability to perform tasks involving precise control of hand muscles, careful perceptual judgment involving eye-hand coordination, and refined movement requiring steadiness and patience.

On the side of mental representations, memory processing, and the ability to make meaning out of one's surroundings is a reflection of cognitive development. During the pre-school years, the child is unable to reason or think in formal logical terms, the concept of time remains elusive, and is unable consider on multiple viewpoints. During school, children are able to appreciate the

perspectives of others, the existence of other and are more aware about the others children's feelings. According to Maholmes (2001) children become to be speakers on their native language as soon as they are immersing in their own culture. A child's vocabulary increases from about a total of 50 words at approximately 2 years of age to learning an average of 50 words per month by the time the child is five years old. This production continues by the time the child is in the first grade.

Children make meaning of the world in order to interact with others. Thus, relationships with caregivers and other meaningful adults, such as teachers, are an essential part of promoting positive social development. Socialization is all about learning how to be together with the family and society (BETC, pg 11).

BETC explains through its book, "Understanding the Children Development" that the most important socialization takes place within the family, in the first years of a child's life. This helps children to learn how to interact with others, what is acceptable and what is not. However, Maholmes (2001) said that through social interactions, children use to learn about social tasks and expectations that they have surround their family and closest persons. During the preschool years, identification with parents is a primary means of defining the self (Maholmes, 2001). Also, during preschool, teachers teach to children: How to interact with adults who are not family, how to interact with friends and other, the 'rules' of society, what is acceptable and what is not outside the home (BETC, Pg 11).

Thanks to the first relation of the child with his or her family became very important to develop their own beliefs, feelings and goals that they build during their first years of life.

The development of pro-social behaviors is often associated with cognitive, social, and psychological development. Children's ethical development is externally driven and based upon

their desire to be loved and to have the approval of their parents. Children internalized the standards set by their parents and later, their teachers (Maholmes, 2001).BETC assure that Children observe other children and adults behavior, and observe that is something is right or wrong and what are the consequences that facts carries on. (pg 14).However, there were two important theorists--Jean Piaget, and Lev Vygotsky-- who were interested on study child's development and it importance in children's life.

Piaget on development

One of the most important theorists in Child's Developments is the theorist Jean Piaget. His first studies were base on development in mollusks until he finished school. (Riddel, 1999) Then, he started to be interested on human's knowledge. After that, Piaget was the pioneer in child development researchers. Piaget combined his background in biology with his interest to understand, how logically and knowledge develop in children and how it was related with the cognitive development. He applied several concepts from biology and used them to explain how knowledge develops (Cook & Cook, 2005).

At the beginning of his studies, he realized that children were *active* in their thinking, not passive. He found out that even young children use to do admirable efforts to understand about how the world works (Riddel, 1999). Besides, he interpreted these attempts as children's efforts to cognitively adapt to the situations they were in, to understand and succeed in their situations. Then, Piaget began to see that children are thinking showed *regularity and consistency*, even though it was often incorrect (Cook & Cook, 2005).

Piaget's theory is often described as a constructivist view. According to constructivists, people interpret their environments and experiences in light of the knowledge and experiences they already have. To Piaget, the essential piece for cognition is the *scheme*. A scheme is an

organized pattern of action (such as an infant reaching to grasp an object), or in thought—a *schemata* (such as a high school student thinking about how to solve a problem). As children interact with the environment, personal schemes become modified, combined, and reorganized to more complex cognitive structures (Cook & Cook, 2005).

Cognitive structures organize existing knowledge, and also serve as filters for all new experiences (Cook & Cook, 2005). According to this, human being interpret new experiences in light existing cognitive structures, because not two or more people ever have exactly the same experiences, no two cognitive structures ever are exactly the same.

According to Piaget, the human beings pass through four stages of cognitive development stages, which describe the period of time where the person is, in a determinant age.

Sensorimotor thought → Birth to 2 years

Preoperational thought → 2 to 7 years

Concrete operational thought → 7 to 12 years

Formal Operational thought → 12 years and up.

We will explain each one according the cognitive activity

Table 1.

Piaget’s development Stages

Stage	Description
Sensorimotor thought	During this stage, infants know the world through their psychical sensations, such as what they see, smell, taste, touch, and hear, and their physical or motor actions on it

such as sucking, reaching, and grasping).

They do not have internal mental representations of the objects and events that exist outside their own body.

Preoperational thought

This stage characterized itself because during this stage the children start to use mental representations as a beginning of logic (intuitive thought) which is based only on personal experience. According to Piaget, language development is based on children's mental representational ability. This ability gives children a way to communicate about the objects in the environment, even when the objects are not actually present. (Cook & cook. 2005).

Another important development, during the preoperational stage, is the emergence of intuitive thought, or interpretation based on personal experience. Children reason according to what things "seem like," according to their personal experience with the objects and events involved. Beside,

during this stage, Piaget noticed that children use to be egocentrism which means that children, are enable to take another person's perspective, because in this stage children use to think that they are the center of the universe.

Another characteristic of this stage is the animism periods, which is very characteristic during the first year of life. Animism is when children have the idea that inanimate objects have conscious life and feelings, different than Artificialism which is when children have the notion that natural events or objects are under the control of people or of superhuman agents. And the last and most important famous examples of preoperational thought come from children's answers to Piaget's conservation problems. Piaget used the term conservation to refer to the concept that certain basic properties of an object (e.g., volume, mass, and weight) remain the

same even if its physical appearance changes. Centration is the children thinking. Centration is the tendency to focus on only one aspect of a situation at a time instead of taking several aspects into consideration.

Another important aspect is that children focus on the static endpoints of the transformation (how things look before and after) rather than considering what happened in the transformation itself. And finally, children at this stage lack a grasp of reversibility. That is, they do not imagine what would happen if they reversed the transformation.

Concrete operational thought

Children are focus on the *dynamic transformation* in the problem (realizing that the true answer lies in the pouring).And, most the most important one, is that children at this age they demonstrate the *reversibility* of true mental *operations* (just pour it back, and it's the same). In this third stage children's cognitive structures

are operational thought.

This development allows them to think about the world using objective rules of logic, freeing them from the misconceptions of intuitive thought. Most children are capable of using logical thought structures that are increasingly objective and reversible, and they can solve problems that involve class inclusion and transitivity. However, there is still one limitation. In this stage, children still have mental representations based on physical materials, contexts, and situations.

Formal Operational thought

During the stage, the adolescent also learns to think logically about such abstract concepts as truth, justice, fairness, and morality. Such concepts are at the heart of many important social, political, and ethical issues faced the world over. During this stage adolescents develop the ability to reason flexibly about them and understand their relativity.

The previous Table mention it the 4 stage that Piaget stated to describe the children's Development process.

A healthy child's development is marked not only by development of the brain and nervous system or physical maturation but also by development in linguistic, cognitive, social, relational, psychological, emotional, and moral and ethical domain.

Vygotsky's view on child development

First Vygotsky's studies were based on children's development bases. He was interested about know, how young children acquire cognitive structures from their culture and from their social interactions, primarily by listening to the language they hear around them. When children are learning new ideas or complicated tasks, they often rely on the support of private speech. As children master a concept, they need private speech less and less. Eventually they internalize it completely as silent, inner speech. To Vygotsky internalization might be understood as a private speech is midway between the social interactions with the person self in a private way. By the time that children learn new concepts, they internalize all the strategies and abilities that she or he has being learning during his or her learning process. This internalization Vygotsky called it "Mediation" which can take place in structured settings, such education places or informal everyday activities, explain through the Proximal Development Zone (Cook & cook. 2005). Holzmann describes, the Proximal Development Zone as the emergence and continuously changing "distance" between being and becoming. That's means that the ZPD represents a set of possibilities for teacher development influenced by their knowledge and beliefs on the students (Goos, 2010).

Development and the Zone Theory

Child development can be seen through the relation between the environment—physical and cultural-- and the child's actions. These actions are guided by the assistance of an adult, tutor or parent (Galligan, 2008). According to Valsiner, there are three important aspects of the human development: A) Relations in context of everyday actions (Interpersonal), B) Relation between actions and reflection on actions in the process (interpersonal); and C) The experiences transfer to the general life-course development (Galligan, 2008). According to Valsiner, development is a change in the organizational system that maintains the present state, and that disappears when it turn into a new one. According to his theory, the human's being develops himself through his own experiences and circumstances that happen over certain time. According to this, Valsiner constructed a canalization process where explain the development process through three zones the concepts of Zones (Galligan, 2008):

1. Zone of proximal Development (ZPD. from Vigotsky)
2. Zone of Free Movement (ZFM. from Lewin)
3. Zone of promoted Action (ZPA).

Valsiner's theoretical framework includes three Zones: the Zone of Proximal Development (ZPD) from Vygotsky, the Zone of Free Movement (ZFM), originating from Lewin (in Galligan 2008), and the Zone of Promoted Action (ZPA). According to Valsiner these three zones constitute an interdependent system between the constraints put on the environment of the learner and the actions being promoted for the learner. Both the constraints and the promotions are usually imposed by others (Galligan, 2008). Valsiner's three zones constitute an interdependent system among the constraints put on the environment of the learner and the actions being promoted for the learner. That is why Valsiner explained that child development is conceptualized between his relationships with cultural and physical environment, where the

child's action, in the environment, are guided by other and modified them over the time (Galligan, 2008).

The Zone of Free Movement.

The Zone of Free Movement represents (ZFM) a cognitive relation between the person and the environment seen in terms of limit freedom of actions and thoughts. This environment is characterized by two features-- it is socially constructed by others (teachers, parents, family, society etc) and it has a cultural meaning system that the person is bringing to the environment. (Galligan, 2008). The ZFM represents the freedom that a human being to accessed and interacts with the environment (Goos, 2010).

Besides, this process characterize itself because the information from outside became internalized inside. Valsiner -- since 1987 – has emphasized that the ZFM is a social construct that is created through mutual cultural interactions between the child and the adult (Hussain, Monaghan & Threlfal, 2011 & Galligan, 2008). ZFM follows specific cultural norms and values about permissible future actions that might occur. The ZFM plays a key role in structuring current and future actions of the child in a known setting which is dynamic, not fixed, and can be reconstructed according to the circumstances (Hussain, Monaghan & Threlfal, 2011).

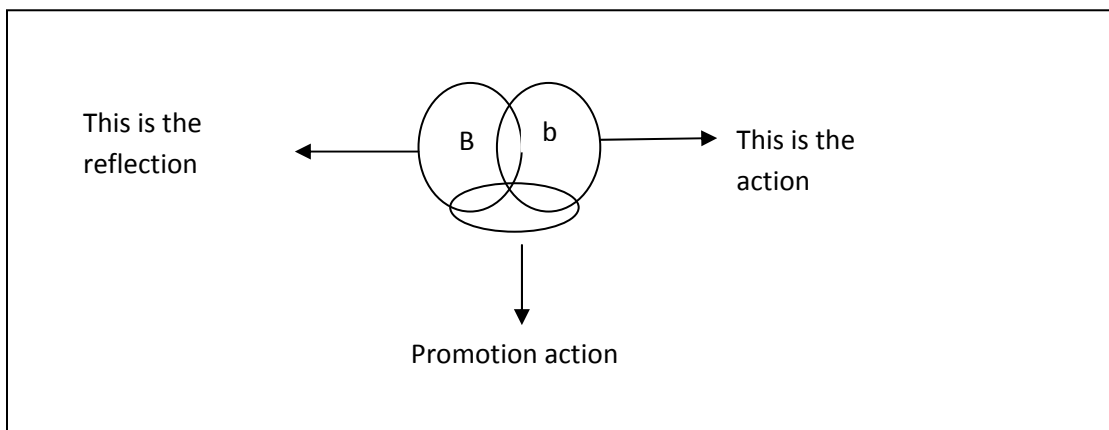
The Zone of Promoted Action

While ZFM is the process that exists during the learning action, but the Zone of Promoted Action (ZPA) refers the efforts of a teacher to promote a particular skill or approaches, for example: Go to school classes (Galligan.2008). The ZPA refers to a set of activities, objects, or areas where the child's actions are promoted (Abdul, Monaghan, & Threlfall, 2011, Goos, 2010).

So, in the case of learning, a preschool teacher must promote actions that are believed to be coherence with the cultural information (ZFM).

Goos (2010), explained that the ZPA comprises activities, objects, or areas in the environment in respect of individual's actions are promoted. For learning to be possible, the ZPA must engage with the individual's possibilities for development (ZPD) and promote actions that are believed to be feasible within a given ZFM. According to this idea, the ZPA is not binding, which means that are not oblige to assist to classes if he or she doesn't wanted to, or if he or she doesn't want to participate actively during the classes. However according to Galligan (2008) Valsiner suggests that for those students who belief that they already have the skill, they may not participate during classes. Nevertheless, the ZPA can restructure the ZFM: through encouraging the child to go beyond existing boundaries of the ZFM. These two zones interacts each other by which canalization of children's development (Hussain, Monaghan & Threlfal.2011). In few words, through this zone, teaching approaches might be promoted by pre-service teacher education programs, professional development activities and in-formal interaction with colleagues at school (Goos, 2010).

Figure 1. Model of and action, reflection and promoting of action, explained it by Galligan.



The Zone of Proximal Development.

The zone of proximal development is a Vygotskian concept, that explains development as a space between the child's level of independent performance and the child's level of maximally assisted performance (Bodrova & Leong, 1998). According to Vygotsky, the Zone of Proximal Development refers to the difference between a learner's problem-solving by a single person and a problem-solving under an adult supervision (Galligan, 2008).

Vygotsky saw human development as a cultural activity that people engage in together, rather than as the external manifestation of an individualized, internal process. An important point to remember about the ZPD is that it is dynamic—the top and bottom boundaries change as the child internalizes more and more mental functions. (Bunce, G. in press).

When a child interacts with an adult, solving a problem, usually the adult is who helps the child to work through the solution, sometimes needing to offer a great deal of assistance at first. But, the child gradually will learn how to solve a similar problem. Vygotsky said that challenging tasks promote cognitive development, as long as the task is not beyond of the top boundary of the child's ZPD (Cook & Cook, 2005). In the words of Michael Cole.

"In 1934 (translated in 1978) Vygotsky coined the term "zone of proximal development" to describe this shifting control within activities. He first applied the idea in the context of instruction and testing. He said that the zone of proximal development is the difference between a child's "actual development as determined by independent problem solving" and the higher level of "potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86)." (Cole, 1985)

The ZPD represents a set of possibilities, important during the learning process that will impact in future actions. The ZPD represents a mapping of a time extended kind. It consists of the options for each ZFM and ZPA, and the negotiation that comes to the light from de negotiation process which help to the emergence of the development. In this model Valsiner examined semiotic mediation as being more complex than simply reflection on action (Galligan, 2008).

The dynamic systems theory

According to Smith & Thelen (2003), development can be understood as a multiple, mutual, and continuous interaction between all levels of developing system, from the molecular to the cultural context, and as a shell processes knowing only over the time. The Dynamic Systems Theory is a recent theoretical approach to the study the development process (Thelen & Smith, , 1994, 2005, Valsiner 2004, 2006, 2007).

A dynamic system is understood as a complex structure composed by very many individual elements set in a complex environment that is generated by the relationship between the organic components and the opportunities of the environment. This self-organization means that no single element has causal priority (Smith & Thelen.2003) The value of dynamic systems is that it provides theoretical principles thought conceptualization, operationalization, and formalization interrelations of time, substance, and process (Thelen & Smith.2005).

Besides another assumption of the dynamics system approach is that the behavior changes occur over different timescales, because people learn and get skills by the time that it has been practicing for a while. Developmental changes can take hours, days and months of practice (Smith & Thelen.2003). Development takes place over a period of time. In so how, I am looking for understand how those different timescales interact.

Brofenbrenner and Morris, defined environment as an event or condition that happen outside of an organism and that is presumed to influence, or be influenced by the person's development (Card, Little & Bovaird, 2007). So, taking this concept together with the dynamic system we can understand the it become a little bit complex, because For example, Smith and Thelen (2003) argued that, not even the environment is which influence in the development, but is the genetic part too. So, as a matter of fact development is viewed as innate struts given by the mother's nature and reinforced by the environment.

“Systems theories of biological organization, explains the formation of new forms by processes of self organization. By self-organization we mean that pattern and order emerge from the interactions of the components of a complex system without explicit instructions,” (Smith & Thelen.2003, p. 259).

Semiotic Mediation

So, as we know, development is understood as a structural transformation of time extended phenomena of open systems that occurs upon the exchange with the environment (Josephs & Valsiner, 2007).This exchange might be occur from the interaction between the social and personal worlds. The study and analysis between these interactions is what we call mediations actions (Daniels, in press) however, this mediation is not possible with about someone who mediate and something with which intermediate. To this mediation is what we call semiotic (Hasan, 2001). Semiotic mediation is what development does in a specific environment.

However Valsiner (2001) adds that, semiotic mediation guarantees both flexibility and inflexibility of the human psychological system through the process of abstracting generalization and contextualizing specification, that operate through the semiotic regulation So, in other words

semiotic mediation will be understood as the mediation of something by someone to somebody else

To Hasan (2001), there exist two manifestations of semiotic mediation-- the Visible and the Invisible. The Visible is deliberate and relatively more clearly focused on some specific concept or problem. According to Daniels (in press), to Hassan visible semiotic mediation mediates a specific category of reasoning, a certain range of concepts, and related the physical phenomena of the world where classified and categorized in an specific way For example, in this research, we are going to see how the school teacher explained to her students what things her students must to do. There is something that we could see during the observation process. All participants-- the teacher and the students-- are aware about what was going on, language is one interact way to say this process.

Whereas, the invisible manifestation, participants don't 'see' what is being mediated; what they 'see' is some process of everyday living. For example: a teacher, who asks to her students about clean the strawberries, taking off the leaves before starting to eat, followed by the children doing that-- *without asking why*. This is because they understand that this instruction is needed if they want to eat the strawberries. In other words, invisible mediation is concerned with the ways in which unself-conscious everyday discourse mediates mental dispositions, tendencies to respond to situations in certain ways (Daniels, in press).

The Process of Meaning Constructions.

“The process of construction and reconstruction of meanings is at the core of any analysis of the self and its development” (Josephs, Valsiner and Sorgan, 1999, p 257).

All through their lives, people move around certain sort of culture's practices, customs and routines that are places in each different context which are created by the same group of people.

According to Josephs, Valsiner and Surgan (1999) this has two functions: The first one is to represent something that is well known through the analyses of signs, and second that it is orientated toward the future. This sign prepares the person for new encounters with the world that might happen. Josephs, Valsiner and Surgan (1999) add that this construction of signs, comes to be part of the predication process, that proceeds as an inseparable part of the conscious

For example-- language is a primary tool, used by people that constituted themselves and others in terms of which attributes, activities, and participating in social practice can be regulated (Ekert & McConnell, 1995). The way that people use to express their self to others, how do they feel and what kind of practices people use to do in their same group. To Ekert and McConnell (1995) the continual modification of common ways of speaking provides a criterion to identify the different meanings that each group has, which allows the orientation of the community and its participants, and different it from other communities.

Constructing interpersonal subjectivity about the world

In Vygotsky's theory interpersonal interactions, with more skilled peers teach, or the cognitive structures created by the larger culture. He argues that Psychological functions cannot emerge from natural, innate, because it is only the first part from biological evolution - biologically and socially (Langford, 2005). Vygotsky's justification of the dynamic function of signs begins from the fact that this is required by the social nature of development. The construction of signs, is the action of pre-adaptation. Is the process that proceeds as an inseparable part of the consciousness, where acts create a significant meanings than, later will be the person's expectations in the future (Josephs, Valsiner & Surgan, 1999)

Human beings create their private worlds of feelings and thoughts through immersion in the semiosphere created through situated activity context. Everyday activities as basic to the human development and through them, human development new ways of strategies to develop new skills and abilities to moving forward (Hasan, 2001). Mediation is the process of introducing concepts, knowledge, skills, and strategies to the child. (Cook & Cook, 2005). When we say biological development we means that development take place before the emergence of the first modern humans, but in the child biological development comes together with the social development (Langford,2005).

Valsiner (2007) based his theory about internalization process, according the intersection of personology and socio-cultural (semiotic) psychology (Valsiner, 1998). He started to explained it, from the intuition interpersonal existence, which means, that all —all psychological phenomena process occurs inside (intra-psychological, subjective world) to outside (perceivable external world).

Accordin to the previous explanation, human being required an internal and external process to create a personal subjectivity (Valsiner, 2007, 2008). Internal-- because it consists of the information that is taking from outside going to inside (Internalization) and external because everything that is inside goes to outside (Externalization). What is internal for the person in one's mind becomes constructively transformed into the external in the context of social action, and the external becomes internal through a process of constructive externalization (Valsiner 2008). The dynamic system is the whole information's process in the development.

The complex interactional positioning speakers accomplish in the classroom discussion Furthermore-- a school has an internal and external background: external because it has to deal with the society, beliefs circulating in the social world, values promoted in it etc. and internal,

because any school as a collective organization creates its own religious, values, norms and beliefs and rules. Inside the school, a classroom is the place where discussion takes place between teachers and students and which face with the cognitive challenge of understanding an alien cultural practice (Worthman,2001). This dynamic process includes perception that a person make of him or herself (inside) in relation to the outside world (outside).

According to Marsico and Iannaccone (in press) the internalization process, is the definition of the self. School therefore contributes to the formation of the student's Self in a way as to fit with the cultural requirements such a affiliation, cooperation and individual cognitive values. Daniels (in press) emphasizes that this cultural context carries with some cultural tools that come out from the creation of, new meanings based on their own experiences and feelings. Preschool is understood as early childhood education for six years old children. The central aspect in the preschool approach is to help children to get into a social world in a practical way. In term of dynamic system, the infants can have direct contacts with artifacts and tools that the child will have direct interaction with, such as didactic material, classroom symbolic object and things that are potential to the child's development. Thus we can understand development as a way of any biological, psychological or social system that will be regulated by its own transforming. To this optimal level of difficulty lies within what Vygotsky called the child's zone of proximal development (Cook & Cook. 2005). That is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Chaiklin, 2003).

Social Representations

According to Valsiner (2003) the process of social representations, is a process which objective is to guiding a person towards the future, through the help of semiotic mediators. This theory was originally developed by Serge Moscovici in 1961 based on his study of the diffusion of the scientific concept of psychoanalysis among the French public in the 1960s. In this research, Moscovici used a combination of questionnaires, interviews and content analysis of the French press and complex sampling procedures with different subgroups of French society in order to capture a comprehensive overview of diverse bodies of opinion (Voelklein & Howart. 2005). From this point of view, Moscovici conclude that social representation process, starts from the diversity of individuals, attitudes and phenomena in all their peculiarity and unpredictability (Valsiner, 2003).

Moscovici, was interested about the relationship between the socio-cultural intersubjectivity and the psychological organization of knowledge and so emphasizes that is need it to move towards to a representations. A representation is not a mere reflection or reproduction of some external reality (Voelklein & Howart. 2005). In simple words, Moscovici captured the back and forth movement between representing and experiencing (Valsiner, 2003), because representing is needed for experiencing, while experiencing guides new forms of representing. One depends to the other one. Social representations allow the direction of life's events of each person. According to this research, personal representations comes from personal interpretation comes from cultural interpretation, that are show since the human being born. Each person, makes their own personal interpretations about the meaning of the external world, or the environment where they live, because, once is recognized, these representations, comes together with the influence of the human behavior and social interaction, creating one social representation concept. "Social representations are therefore not only a product of human agents

acting upon their society but are equally prescriptive and coercive in nature.” (Voelklein & Howart, 2005). This mean the social representation are create by the same society and it can be changing any time or modify them.

The schooling paradox: what we see is oriented to what should become

When we talk about society, we are including the identity and cohesion that society and its understanding how the world works through the knowledge that institutions brings up to the society through schools education. School education helps people make sense of the changes as well as development through permanent learning. The creation, acquisition, communication and wise use of knowledge are of particular important (Mulford, 2003).

Schools must describe as “child development centers” because so much of what a child must master is dependent upon developmental readiness. Schools’ objective is to promote child development. The opportunities to assist and improve children’s development rest largely in the hands of the teachers and parents and other supporting adults (Maholmes, 2001).

School is known as a place where children have the chance to be part of a group where mastery of children’s cognitive skills and social abilities is promoted (Pellegrini, Blatchford, Kato & Baines, 2003). A school must have goals and strategies for promoting children’s learning and development through programs, activities, and strategies a school provides during the course of a year, strategies are intended to address, and guidance supported by partnerships, target a particular developmental pathway in order that promote students’ learning (Maholmes, 2001).

School is a place that brings various educational experiences into focus on the process that a child has to make to learn through repeated exposures to relevant topics within recurrent lessons and direct experiences that bringing during class activities. Yet, the school activities are focusing

on the future of the child—it is interesting is not to know how the child is in a particular age—but how the child could work towards the next level of development-- that a child is going to get and that is supported by education practices.

So, from that point of view, school has huge responsibility in the development of the child. Development in school takes time—no ontogenetic change follows directly from a single episode of an educational practice. Development during the school time is viewed as a sequence of stages that will appear in the course of ontogenetic time.

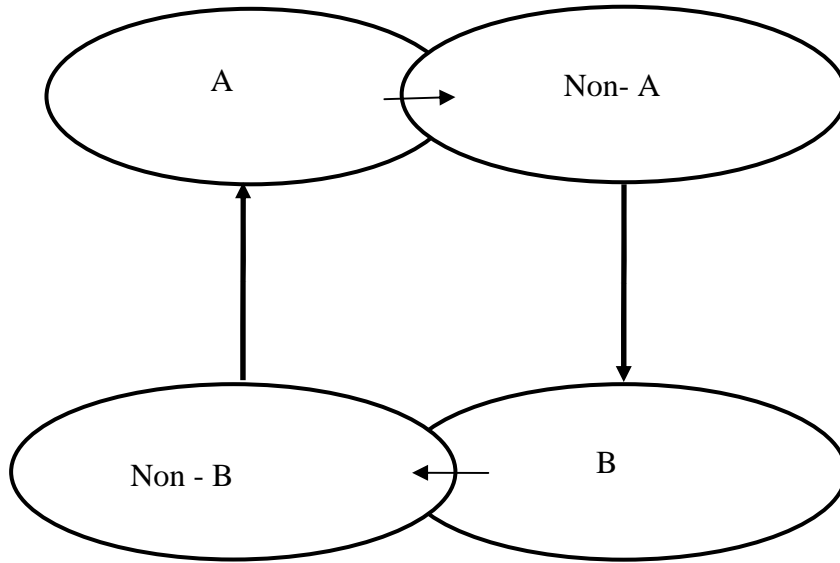
In their educational efforts, teachers are not interested to work on children's current state of development-- because instead of that the school must to look at the child as someone who is about to move forward to become skilled at the next level of development. (Valsiner, 2008). Schools looks to educate children at age X towards becoming a child of age X+1. As children attend school they become exposed to social experiences outside of the home. That's means that a school has to work with the notions of becoming (Valsiner, 2008). So, in other words, school is a place where children are dealing with events that are meant to get them to develop their skills, but are also some other places that are considered fundamental for child development that are non necessary a school. For instance, the church is a non-school setting where a child develops spirituals skills. So-- a child has the chance to develop beliefs and thoughts—all under social guidance, but with one's own initiative. In contrast, while in a hospital the child has the chance to know about illness and health—all defined by the external world. Development takes place as a result of integrating all these varied experiences. Each of these non-school contexts guides child development in some way. The school is one of the places where the child is immersed in the whole of educational context (Marsico & Iannaccone, in press.)

But the question remains- - how would the child understand the information that is given by the school during the first year of schooling? Actually, we are interested to study the emergence of new knowledge in the context of a cooking class. Through this study we can notice how a child can get any sort of information from outside (teacher lessons) and internalize them as new knowledge. So, once the child get starts to understand how internalized new information, a child will find a different meanings upon the world mean, and on base on that we are working on this chapter, about for the school is working on in favor to the future of children (Rights and Duties) and how children's work in favor of this. Family support service partnerships can play an important role teaching to their child how to develop and model these important skills for their children.

Theory of A <> Non-A

Our ordinary thinking is clear—when an object is white it can be black and vice versa. However, the opposite of white is not necessarily black—it is non-white. This means that if something is not white, we have to considerer that it does not mean that it has to be black—it can be any other color except white. To explain this, Josephs, Valsiner and Surgan (1999) looked at it through a theory that explains that not always things might be non-be at the same time, and it will be a different perspective but not necessarily will mean the opposite one. This theory explains that it something is A, will give rise to a Non- A, but it doesn't mean that it will be the simple opposition (WHITE→ BLACK). Rather, the meaning construction proceeds like this WHITE→ non-WHITE→ BLACK (or any other color).

Figure 2: The general scheme of meaning making through A<>non-A united oppositions



Analytic concepts in the present project

The present paper, will show the manner of bring this concept to the context of a preschool cooking class. I will bring into focus three concepts—given as linked oppositions-- that regulate a singular activity during a preschool class, an also we are going to look at the meaning that it can mean for 5 year old children. These three concepts are:

EDIBLE<>NON- EDIBLE;

CLEAN<>NON-CLEAN,

DUTY<> NON- DUTY.

The EDIBLE <> NON-EDIBLE opposition.

When we think about food, we think about all those king of delicious dishes that we use to eat, probably when we are hungry, or when we just want to get something to calm down our necessity of feed with food our body. Maslow suggested that the first and most basic need people have is the need for survival. The human body requires food, water, and shelter. People must

have food to eat, water to drink, and a place to live. Eating is one of the most important needs for the humans to survive. Probably is one of the most important because without food nobody would survive.

All organisms need to look at the environment from the primary filter—“Is THIS OBJECT for me EDIBLE or NON-EDIBLE?” Furthermore, some of the edible objects become designated as FOOD, while others remain as NON-FOOD. For example, flower. An edible flower is just what the name mean. In the world exist thousands of flowers than that can be eaten. In general, flowers are added for visual effect rather than for flavor. The flowers discussed here range from mildly flavored to healthiness (Smeenk, Leiner & Brainard. 2008) For example, consider *Hierbabuena*. *Hierbabuena*, know it as “*mint*” for the English speakers. It is actually a plant with a flavor that is very delightful, and in some cases it brings a feeling of refreshment. It smells and tastes like mint, and is used in culinary dishes, adding to soups, vegetables, stews and snails. This plant also has healing function-- it is good for improving digestion, against diarrhea, inflammation of the liver, gas, dizziness, to expel parasites from the intestines. Besides it is used as a flavor added into candies as a gum. Also we can find it in some perfumes and cosmetics too. However, some people use this plant as additive into their food, even that it is still being a plant. The flavor of the flowers are minty, but with different implications depending on the variety. Mint flowers and leaves are great in Middle Eastern dishes.

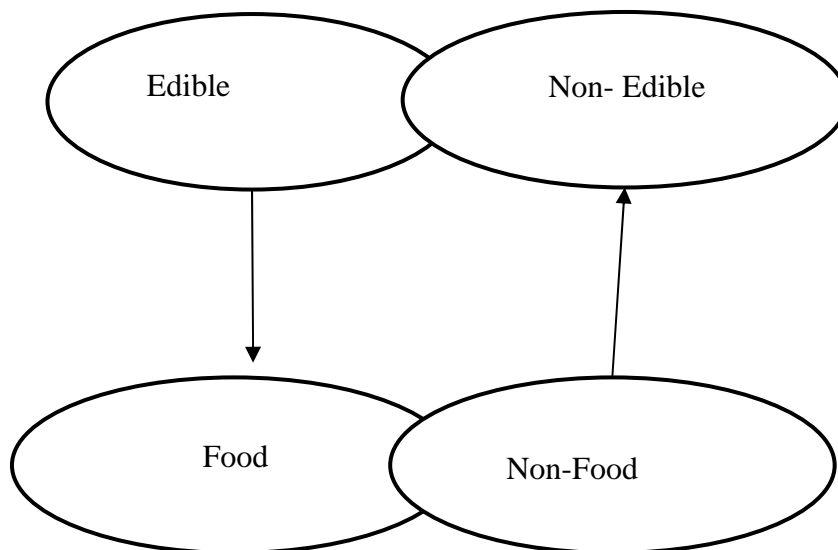
Although,. Flowers have traditionally been used in many types of cooking from European and Asian to Middle Eastern. They were very popular in Victorian England (Smeenk, Leiner & Brainard. 2008). According to resent research, not all flowers are edible, but if we look through, we will notices that human being use to eat flowers, such as fresh salads. Fresh salads are made from edible flowers, new and imaginative uses for the colored petals are being proposed Some

are poisonous, such as sweet pea, lupine, foxglove, nicotinic, larkspur, lily-of-the-valley and many more (Smeenk, Leiner & Brainard. 2008). So we could think that flowers are not edible setting, but actually flower are edible, even that some people use to eat it, but others not

Another example comes from Santander, Colombia. Santander is a city located at the north of Colombia. One of their aims customs is that Santander's people use to fry ants and eat them as a snack. Santander people have been eating ants for hundreds of years, and it has been becoming one of the most popular snacks in Colombia. Yet, people outside Colombia look at ants as insects and for that reason, people consider the as a not edible food. However, here in Colombia people use to eat them roasted ants is not only considered food (and is edible), because it also has value of special delicacy. We could say that this sort of snack come more culturally than anything else.

Figure 3.

Transformation of substances within EDIBLE<> non-EDIBLE and FOOD <> non-FOOD opposition



Analyzes about the mains concepts, worked them in this research. Edible <> Non edible, and Food <> Non food.

The cultural concept “FOOD” emerges from the opposition NON-EDIBLE <> EDIBLE where the notion “FOOD” grows out the field of all EDIBLE substances. Once established, the cultural distinction “this is food” (from non-food) becomes established. In the early importation of potatoes from the Americas to Europe the Europeans thought that the top plant of potato—rather than the roots—are edible, and found that disgusting. Only after gaining the knowledge that of all potato plant it is the root that is FOOD (while the whole plant might be EDIBLE—in contrast to non-edible) that could be eaten.

A good example, is the mandioca root-- well known as “Yuca”. It is a shrub that can get 1 to 3 m. high, which has roots fleshy, edible, 30 to 40 cm. long. Is a substitute of potatoes or bread. Mandioca in its raw form is a poisonous root that becomes edible only after it is processed.

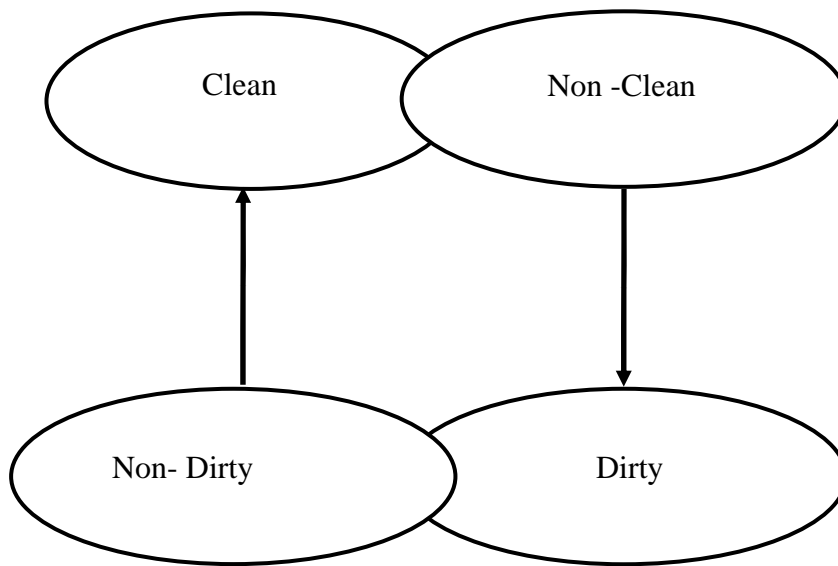
People create symbolic transformations EDIBLE→ NON-EDIBLE at an instant. So that will mean that just because a piece of food has falls down onto the floor, it doesn't mean that it won't be food. Is still food, but it must be call, to this phenomenon, non-food. Besides, the way to understands that a piece of food that is standing on the floor would be still eatable or not, that's depends of the inference that a person makes about if this piece of food is or is not still food. So, what would that be non-eatable? Edibility, at this point, will be everything that are still food, but in another way of being. For instance, blood serum—in our body—is very important for our organism to survive in case that we can get nothing that looks like solid. Yet if encountered outside-- is it food? Can it go into the body-- but not through mouth? So; we can consider it food (if delivered in hospital via IV)—but getting it into our digestive system is not acceptable. Blood

as food is for many non- edible. Non-edible means – “I cannot eat THIS” yet “it is FOOD for somebody” (Valsiner, personal communication 2011).

The CLEAN <> NON-CLEAN opposition.

The dynamics of the opposites moving through one another can be illustrated well here with CLEAN <>DIRTY contrast:

Figure 4: Clean, Non-clean <> Dirty, Non-dirty Model



Analyzes about the mains concepts, worked them in this research. Clean <> Non clean, and Dirty <> Non Dirty

The field of the concept (A) that is its opposite (non-A) gives rise to the elaborated opposite (B). Thus, the whole field of NON-CLEAN (non-A) may be turned into DIRTY (B), the development of which (non-B) may lead us back to CLEAN (A). As we said before to this aspect we should study the concepts about, clean and non-clean. We could see that a “clean space” would be a place without any kind or dirtiness or tip on an specific area. When we say that something is clean, we use to get the idea that is 100% without germs, but by the time we still

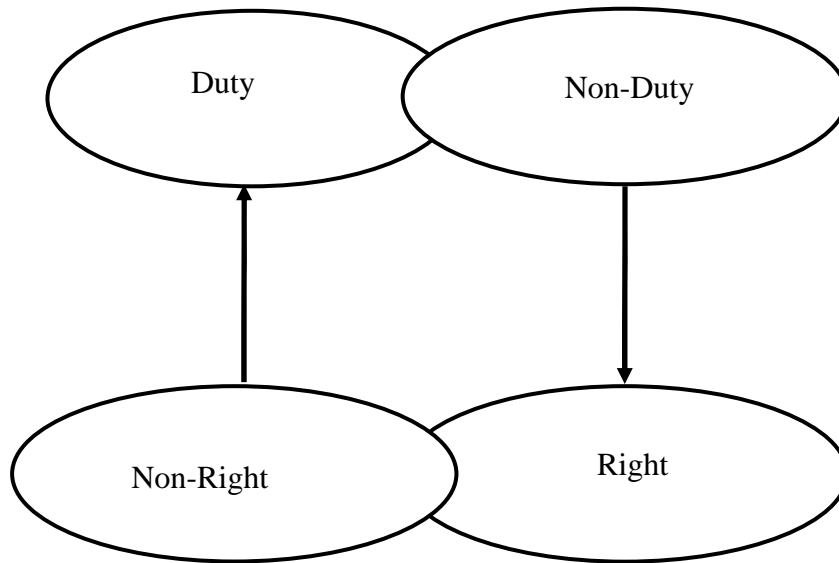
keep seen any kind of dirtiness on this areas no tip or any kind or dirtiness and however we use to and we probably are going to thing that is still clean, but we don't realized that in now 80% clean? So, that probably incompletely clean-- but cannot be called dirty also, so probably the better way to describe it as a non- clean space. So, in that way, we are saying that not because not dirty we can make not be that is 100% clean, it can also bee an non-clean place, because even that it could seems like if it were, it would be probably not. (Valsiner, 2011. Personal Communication.).

The DUTY <> NON -DUTY opposition

As we mentioned it before, the field of the concept (A) that is its opposite (non-A) gives rise to the elaborated opposite (B). Thus, the whole field of NON-DUTY (non-A) may be turned into RIGHT (B), the development of which NON-RIGHT (non-B) may lead us back to DUTY (A). As we said before to this aspect we should study the concepts about, duty and non-duty. We could see that a "duty" would be Universal conception about something that as a human being we are able to do for other human benign and at the same time we are able to require our personal duties, as human beings, too. That would be over the whole word. When we refer a "Duty" that would be a demands placed by others on the persons who owe them, and that rights and duties are normative and can be socially constructed and justified in many different ways, particularly by those who enjoy greater power.(Moghaddam, Novoa & Warren, in press) However, there are also rights, and non-rights, which conceive some direct actions or duties as a rights, which means that is some kind of privileges that as a human being we are able to have with the purpose to get a worthy life. So, but what would that mean non-rights? If we notice, a right is basically a law establishes on a national document where proclaim to carry out them, but at the same time even that no everybody knows about them, they know that, in a common sense, the already exist. So, a

non-right would that be something that probably is no establish a politic law or in any other politic document, but, are conceive as something that everybody must to have too. For example is a Right that parents should bring education to their children once they have the proper age to go in, but is also a duty of the child to respond and go to the school to learn and be we with other students, but can be considerate a non- duty be at the school and not being in the right class and instead of that, be at the park playing on the ground during the class time and not attend to any class. Take a look at this: is the child being at the school send him by his parents (Right of any parents to send their parents to school) but the child is not attending his classes during the school time (Non- duty) which mean that this child is not attending classes to learn (Duty) and at the same he is no receiving and kind off class by the child's teacher (Non-right). This example can show as, that is something is not conceive a non-right, doesn't mean that it can be a not- right, because probably it is, but is not seen as something that is (A), that it can be other thing (Non-A) But doesn't mean that it have to be an specific one (B) because it can be any other thing (Non-B).

Figure 5. *Duty <>Non-Duty in relation with Rights <> Non-rights*



Analyzes about the mains concepts, worked them in this research. Duty<> Non Duty, and Rights <> Non- rights.

Design, Participants, and Description of the research site

One of the purposes of this research is to analyze about the school practice in a public school in Colombia how it helps into the child development. The study this aspects I of promoting values from a short term longitudinal analysis for a long of 8 sessions in a class, called Agro-industry. The Colombian government now requires educational institutions nearby, encourage agricultural work through educational programs aims to promote, evaluate, support, develop and promote skills and abilities in the agriculture fiel (Boucher & Muchnik, 1995). One of this the love of the land, animals and nature

According to the sample, in this research we counted with the participation 28 Colombian children of 5 year old each, who were studied in the preschool level and it preschool teacher.

Through video recordings, I could observed and analyzes how this sort of activities can contribute to the early development.

Besides, methodologically, the proposal was to study about how promoting values happens in educational contexts in Colombia, from a short term longitudinal analysis is extremely relevant, because it enables the phenomenon of development to be understood by approaching it with a profound study of the process. This leads to the following questions: how school works values in favor of the children's development? What kind of activities are emphasized in the preschool? What are the perceptions that a child get as soon as the teacher place an order about any setting that could be immerse into any classroom activities?

To do this, I must to pointed out that my interest was to determine what sort of activities a school can use to promote values in classes which bring to the student settings about how they must to be personated by the time that a child might work with food. This sort of interaction is necessary so that children can learn and refine social and personal skills. After that we will proceed to compare between the setting or the order that is given by the teacher to be ready to cook, and the other one is the concept that the child do inside of her or himself about what the settings have to do get ready to cook. As a consequence, this analysis allows us to get information about the child conceptualization, over a specific time frame (Sato & Valsiner, 2010), which is particularly useful since it permits us to follow in detail some of the moments of the emergence of cognitive skills, the scenarios in which this is present, and also some of players who take part in the child's process. This, then, implies the recognition of the singularity of each of the children based on their actions and the ways they give meaning to the world.

Situation and instruments

As we have mentioned, this study has focus on study about the different sort of concepts that guide the children’s meaningful enactment of their task-- the oppositions CLEAN<> non-CLEAN, EDIBLE <> non-EDIBLE and DUTY<>non-DUTY. We look at the unfolding of activities guided by threes three mutuality’s inside a classroom, while a class in being teaching. Besides, we were going to look at those conditions and inferences that the child makes to understand that if he or she wants to be part of the group and take part in activities that involve cooking- she or he has to prove that they can do what the teacher asks them, and at the same time show that they have understood the rules that are part of this activity which might carry over to any other activity which involves food.

Table 2.

Different tasks embedded in the classroom interaction in the case of a cooking class

Name of the normative task	Characteristics and method of accomplishing the task within the cooking situation
Wear the right uniform to cook	Once the activity is ready to start, the teacher asks the children to get out their uniforms and put them on and be ready before the class starts. For this activity they have to wear a coat, a mouth mask, and a cook’s hat. Here we are going to analyze what sort or duties the children have to know about duties and non-duties
Have the fingernails short and clean.	Before starting the class, the children have to be ready to make food. For this purpose, they need to know that they have to get their fingernails clean and

short, because they are going to prepare food. They have to get them clean in order to not get the food dirty and full of germs. Here we are going to analyze what sort of perception the child would have about their finger nails as clean <> non-clean and how they think of them as “dirty”.

Take off the leafs and clean the strawberries.	One of the activities that have been register was the one where a group of four children has to take off the leaves from strawberries and then put them into a plastic bowl. In this activity we are going to analyze what would be the meaning of cleanliness to those children who have been chosen to prepare the food, and what the understanding about the clean and non-clean opposition is. For instance-- if any of those children let one of the strawberries fall down-- would the child consider it still edible? Does it remain food or becomes non- food?
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Table 1. Characteristics and methods of application of the cooking situation.

Results

In this set of ideas, school environment is considers, as one of the most important which develop the human development. Through this research we could figure out about the role that the teacher and the school play into the child development.

According to Marsico and Iannaccone (in press) through the school, children have their first contact with the social world. As Valsiner (2008) has emphasized, schools involves a feed-forward process to guide the person into a particular environment which is regulated by one's own transforming state.

In this preschool class, I couldn't observe the interaction that exist between the 5 year old student, the teacher and culture. Here, we could notice how children socialized with the teacher and how the teacher construed a cultural environment for the children. This cultural environment was constructing by specific cultural norms and values about future actions. As we previous mentioned it Valsiner in 1987 explained that the ZFM is created through mutual cultural interactions between the child and the adult (Galligan, 2008). The ZFM plays a key role in structuring current and future actions of the child in a known setting which is dynamic, not fixed, and can be reconstructed according to the circumstances (Hussain, Monaghan & Threlfal, 2011). We focused our attention on how children perceived their roles in working with fruits, conceptualization about what is edible and non edible and what is considerate food and non food. So, in the case of learning, a preschool teacher must promote actions that are believed to be coherence with the cultural information. During the cooking class, children have the chance to be in direct contact with food, tasting them their flavor, their form, their taste, etc. Here, children have access to previous concepts seeing in class. During the cooking class, the teacher brings to her pupils knowledge about fruits, states, flavors, colors, forms, and more. This class, allowed to the preschool children to have a direct access to real objects and familiar situations lived in their personal lives, each child has a different attitude to the situation, or the child might experienced the situation in a completely different way (van der Veer & Valsiner. 1994) because

The second zone-- the ZPA-- refers to the effort that a teacher does in favor to promote to develop a new functional skill. In this preschool cooking class, the teacher looked for develop knew skill surround food and elementary kitchens concepts. However this environment has to be control by an adult guide, which in this case will be the teacher's supervision, who controls the dynamic and the focus of the class. In this cooking class, the teacher is who placed the orders about how to cook, brining at the same time material to the learning process. Nevertheless, this class must to be follow by a curriculum and assessment requirements to perform these activities in a classroom, with the participation of 5 years old children. Here we could observed the child learning's process, once their preschool teacher though them how to cook and then how they try to do the same by them self. , this process can be possible it out the teacher supervision- Zone of Proximal Development-, where the children development's are immerse into the environment. Through his activity we could observed about the teacher development into the cooking class, and how it influenced on the children's' beliefs about food <> non edible, clean<> non clean and duties<> Non duties.

EDIBLE<> NON-EDIBLE opposition.

Taking out the strawberries leafs and cleaning them all up

In this preschool class, we start observing how children conceived the notion of edible and non edible based on a cooking class

The first part of the activity consisted on clean fruit, strawberries, so the teacher started saying: [Spanish, and original Version].- "*Bueno niños, primero que todo, debemos quitarle las hojitas a las fresas para poderlas poner en el mismo recipiente donde tenemos el resto de las frutas. Los niños que están en frente conmigo me van a ayudar a quitarles las hojitas a las fresas y a ponerlas dentro del recipiente*". Dijo la profesora.

[English version] “Ok Children, first of all, we have to take off all the strawberries’ leafs, because we might to put them together with the rest of the fruits. The children that are at the front with me, are going to help me taking off all the strawberries’ leaf to put them into the bowl” Said the teacher.

The whole group looked at the children who were at the front, cleaning up the strawberries and taking out their leaf, However, while one of the children were cleaning the strawberry, let it drop to the floor, but instead of let it there or put it into the garbage, he picked it up and put it together with the others strawberries. Once we were being aware about this process, we started to study about edible and non edible food.

At the age of five years, children mostly know about what must to be call as food, and not food, but sometimes, even an adult knows about what about Non-food is. If we take a look a strawberry that is landing on the floor, and it seems being there for a while, probably, the most common act would be dump it to the garbage because it is contaminated, will be already ruin, but is still food, but probably is non food. So, base on this inference, we could say that once the child picked up the strawberry, that was landing on the floor, was because the child understood that it haven’t being there no more than one or two seconds later. So, the child internalized that it wasn’t enough of time to considered it ruined, non food, and he decided to pick it up and put it with the rest of the strawberries

Duncker (1938) explained, that may be the education is not the responsible of this sort of judgments, because judgments are often not highly reliable as an indicator of real attitude. For example, he proved that children try to imitated others people attitudes. So, in this point, we might say that probably the child’s attitude is earn form an adult attitude. However, we can also infer that if a child look at strawberry on the floor, the child probably would look at it and if the

fruit doesn't show anything sort of dirtiness, the child could be considerate edible (Food) But if instead, the strawberry present dirtiness on, the child probably would infer that this strawberry is now and non- edible (food). But what if the strawberry has been on the floor for more than one or two seconds?

Pictures 1 and 2.

Children cleaning strawberries of their leaves



The previous pictures were taking during the cooking class in a public school in Colombia. In the previous picture, is possible to see the moment when the teacher asked to her student about clean the strawberries up by themselves.

The CLEAN <> NON-CLEAN opposition in a cooking class.

Preparatory hygiene and performance to start cooking. Through this activity we are able to look at the conceptualization that a child infers about cleanliness and non-clean settings. In this part of the activity, we can observe that the preschool teacher asked to her students about how they have to have their hands and fingers nails before start to cook. Immediately, children's show their finger nails to the teacher assuming that they got them absolutely cleans.

Let's start with the internalization and externalization process. At the beginning of the class, the teacher starts her class asking to their students, about the way that they have to have fingernails and hands before start to cook:

[Spanish Version] *"-Niños, ¿cómo debemos tener las manitas antes de preparar algo de comer?"*

- Pregunta la profesora.

-Limpias. - Dice un Niño

- ¿y que más? ¿Cómo tienen que estar las unas?- preguntó la profesora.

- Corticas- Respondio una niña.

- Muy bien, yo quiero ver si los niños que van a cocinar las tienen corticas" Después de esto la profesora se dispone a mirar las unas de cada una de los niños que iba a cocinar.

[English translation] *"Children. How we must to have the hands before to cook? - Asks the teacher.*

-Clean- answered a boy.

-What else? How we should have the nails? - The teacher asked again.

-Shorter-Responded one girl.

- Very good. I want to take a look at the nails of the child who are ready to start to cook"

After that the teachers starts to look at the children's nails and the children that were ready to start to cook.]

Once we looked at this moment, we detected of the work of the process of internalization and externalization. Once the children listened up their teachers orders they showed up their hands and fingers nails assuming that they were completely clean. In this part of the class, the children

listened up their teacher order's and then understood what the order that the teacher was saying. Here we could see that once the teacher placed the order, the children, immediately showed her their fingernails and their hands proving us they internalized the order that the teacher had given to them and externalize the order because they showed the their fingernails and hands clean.

Besides, if we looked at Valsiner's theory (2008) – the unity of {A \leftrightarrow Non-A}- we can notice that because children themselves didn't see their fingernails long and dirty, they assumed that because the teacher's order was if they have their fingers nails and their hand clean, but not if they have them dirty, children conceived that their hand and fingers nails are non clean, but not dirty. According to this behavior, we can say that the fingernails were non-clean, because they had not cleaned them or either to the manicurist to get their fingers 100% clean. So here we can considerate that their fingernails are not "dirty" but are non-clean, because even that if we take a look and see that children really have their finger nails cut and their hands clean, they are not 100% clean by the time that they started to cook.

Pictures 3 and 4.

Hands and fingernails tested—before they begin to cook



The previous pictures were taking during the cooking class in a public school in Colombia. In the previous picture, is possible to see the moment when the teacher asked to her student about how they must to have their finger nail and their hand before start to cook.

The DUTY<> NON –DUTY opposition in a Cooking class.

Uniforms

The class started when the teacher asked the children to get ready for the class-- to dress up in white coats and caps

[Spanish Version] “Buena niñas ¿saben que día es hoy? Saquen sus uniformes porque vamos a dar inicio a la clase de agroindustria. Dice la profesora a sus estudiantes del preescolar.”

[English version.] Ok girls and boys ¿ Do you know what day is today? Everybody just take out your uniforms we are ready to start the class of agro industry”

All children know that they should bring their uniforms to school.

The children by taking out their uniforms and putting them on

[Spanish Version]“- Debemos ponernos el uniforme ahora mismo?- Pregunta uno de los estudiantes a su profesora.

-Si así. Ahora mismo debemos vestirnos.” Respondió la profesora

[English version] “Should we dress right now? - Asks a boy.

-Yes, right now we are going to dress up. - says the teacher to all students.”

So, in this activity, children must to understand that to be part of the activity, they must to wear the right uniform. They cannot be into the class room without it, at the moment that they are going to cook. But we could notice that as soon as the teacher says that is time to the cooking class, the immediately go to find out the coat that they brings form their houses. They internalize and understand some important aspects: In the first place the understand that is Thursday and is the day when day are going to cook and the have to bring their coat to class, and the second, that they cannot work without of the right materials. Here we could perceive that most of them have

internalized the order-- because most of them brought the uniforms with them, and as they heard the order, they immediately knew what they must do and they externalize it wearing it their respective coat.

What's more, here we must mention that wearing of a uniform is more than a political custom the purposes of which are:

- a) Dress all the student under the same school policy,
- b) Have an identity into the society and
- c) Symbolic - homogeneity and equality of everyone in the same build-ing.

All students are the same and have the same conditions than other, they all are educated by the same institutions with the same politics customs. So, as a matter of fact, the uniform is a symbol that allows the students fell part of a group with the rights and duties than anyone else in the school.

However in this activity the students must wear not just the school uniform but the special cooking uniform (white coat) as a part of condition to cook. On of this class 'rules is that to cook children must wear the right uniform, but in the case that any of the students don bring it to class, the student cannot cook with the rest of the students. So, wear a uniform to be part of a class become a right and don't wear it into the school is not right. Is a rule and everybody must to wear it to attend to class. How we might say that is a student's duty wearing the uniform while inside the school building, but is a non-duty wearing it when the student is outside the school building. Nevertheless, the preschool children, children must to bring a white coat to be part of the cooking class and those who don't bring it to class, cannot participated during this activity but the children can be in the class if the student is wearing the school uniform because is a right.

In this study, we observed a child who didn't bring the white coat to class could not be a part of the activity to cook, but he could still be in the class, watching what the other children were doing, but he cannot be directly involved with the activity of cooking. So, in that matter we can say that in this kind of situation we can say that there is a non-right, because the child is in the classroom, in the class, with his or her classmates, with his or her teacher, learning about how to cook, but without participating in the activity, because she or he is wearing his or her school uniform (Right), but is not part of the cooking activity (non-Right) because he or she didn't bring his or her white coat to cooking class (non-Duty) but he or she can be in the class because she or he went to school wearing his or her school uniform (Duty) as he or she must to do as a politic that the school required.

Pictures 5 and 6

Children know that they required wearing a white coat to cook—if they don't bring it, they can be at the class yet not be given cooking roles.



The previous pictures were taking during the cooking class in a public school in Colombia. In the previous picture, is possible to see the moment when the children wear their cooking's uniforms, but only three of them weren't wearing the uniform cooking's, which means that they could observed the class without being immerse

Discussion

Through this research, we saw that schooling context is one of the most important contexts where the children have their first connection with the external world. Besides, through this research, was possible to observe how children make their own mental representation and how they make their own conclusion based on their own previous experiences

As I mentioned it before, education is an important system which help to the internalization and externalization process through the learning process. Children can express their feelings and their thoughts according to their own knowledge (Valsiner, 2006).

Thanks to the education system, children can learn new concepts, and new forms. As each student progresses in learning, he or she will intellectually mature enough to solve problems independently (Choice, 2010). This learning process was possible to be observed through the theory zone: the ZPA, ZFM and ZPD, during the cooking class. However, as Valsiner said that the ZPD is the emerges of the ZFM and ZPA. ZPD is not predictable, can be inside, outside or in the middle of ZFM and ZPA. This model explained how this three zones works in a preschool class to see how the development occur in five year old children and we could compare how this three Zones contributed to the human development. Viewing from a dynamic perspective, I understood that the processes in everyday activities in 5 years old children's, this process helps to create a developmental change.

Through a preschool cooking class, development, in five years old children, can be very helpful during the child's growing process. During this class we analyzed how preschool children understand the external world, the cooking class the cooking concepts, and how they

internalized it, this knowledge, starting from the point that this process comes together with some cooking previous knowledge about food, clean and duties, and their respective oppositions.

So, according to the purpose of this research, this process - internalize and externalize- is visible in five year old children, but to see this, we also needed to explore on the three, previous mentioned, important opposition such as edible, non edible; clean, non clean and duties, non duties.

In the edible, non edible part, we could see how the child can internalize that a piece of food that has been landing on the floor for one or two seconds is still being food, and we could notice this because the child, as soon as the child picked it up, and put it together with the rest of the strawberries. So, there was the internalization and the externalization process that we were talking about.

In the second opposition- clean, non clean- we could see that teacher place the order to show up their fingers nails and their hands clean, immediately, children show her their hands and their finger assuming that they were clean. So, when children listened up the teacher order and they immediately assumed that their hands were already clean, even that they haven washed them before, they internalized that they were already clean, as the teacher request. Secondly, once children assumed that their hands were already clean, they show up to their teacher, like saying that they were ready to start to cook.

Finally, the last opposition – duties, non duties- show us that rules and norms are very clear into the five years old children, because even that some of the children didn't bring their cooking uniforms to the class, they knew that could be seeing the cooking class, without participate in. Through the set of observation, we could notice that at this age children get the norm from

outside, and interiorize it as a rule to be part of the activity. So, here is when the child who don't bring the cooking uniform to class, cannot cook with the rest of the students.

So, the idea of this research was to at the way five year old children understand the concept clean and non- clean; edible and non-edible and duties, non duties, and who are their our Judgment related with those concepts. Duncker (1938) looked at food related actions in human development-- during the early childhood there is a superficial idea about what would that be the right action and what would that be learn from adults attitude in from a similar situation like that. So, we took a look this sort of judgments into the school context. Daniels (in press) supports this ideas based on Bernstein, who argues in 1990 that the mediation between IT IS and IT IS NOT occurs during social practices. This mediation links action, including mental action, and the cultural, institutional, and historical context in which such action occurs. This is so because the meditational means, or cultural tools, are inherently situated culturally, institutionally, and historically.

As we previous pointed out, any education context helps to bring to the child new ways to understand how works the outside world, through classes and activities that are bring by the school to children. However, are many other places that bring this knowledge to the child that are not necessarily based in school. Human development in the context of education the children link the knowledge at school with that obtained outside school.

Through this study, I wanted to know about the processes of value promotion that a child involved in a preschool class. the "Colombian of tomorrow where innovations begin" is research aimed at the search for ways of understanding the phenomena of development, in this research know how children internalize the information that is bring from the outside and who they externalize this new information. Development implicates recognizing the emergence of new

forms, because through the social world is where we can notice what a child has internalized from the outside world, due to child is conceptualized in the context among culturally and physically structured environment, where the child's actions are constructed from other human beings - parents, siblings, peers, teachers etc and that will be modified by them over time. (Galligan, 2008)

One of the most amazing processes of human beings is the development processes. The development process characterized itself for being a complex process that combine different aspects such as family, school, culture, religion, etc However, within the field of children, few studies has focus on the process of this cognitive process, in 5 years old children. This project seeks to invite to the research community, to continue researching on cognitive process during the early childhood, to study in more detail, and in addition, find out more about academic programs proposed by the government for the integral development of children.

REFERENCES

- Abdul, M; Monaghan, J & Threlfall, J. (2011). Extending Valsiner's zone theory to theorise student-teacher development. Smith, C. (Ed.) Proceedings of the British Society for Research into Learning Mathematics 31(1). <http://www.bsrlm.org.uk/IPs/ip31-1/BSRLM-IP-31-1-01.pdf>
- BECT. Understanding Children's Developing. [on line]
<http://www.pearsonschoolsandfecolleges.co.uk/FEAndVocational/Childcare/BTEC/BTECFirstChildrensCareLearningandDevelop/Samples/SampleMaterial/UCD%20Unit%201.pdf>
- Bodrova, E & Leong, D (1998). Scaffolding Emergent Writing in the Zone of Proximal Development. *International Journal of Early Reading and Writing*, 3, 2,[On Line]
<http://www.mcrel.org/pdf/literacy/scaffolding.pdf>
- Boucher, F & Muchnik,J. (1995). Agroindustria Rural, Recursos Técnicos y Alimentación. Coedición CIID/CIRAD/IICA. 503p.
- Boyd, J., Barnett, W. S., Bodrova, E., Leong, D. J., & Gomby, D. (2005). Promoting children's social and emotional development through preschool. New Brunswick, NJ: NIERR. [On Line] <http://nieer.org/resources/policyreports/report7.pdf>.. Taken in July 5 of 2011.
- Bunce, G (in press). *Educational Implication of vygotsk's Zone of Proximal Development On Collaborative work in the Classroom*. Developing Expertise in teaching.. [On Line]. <http://www.guybunce.co.uk/writings/academic/vygotsky-and-the-classroom.pdf>.
Consulted in July 4, 2011.
- Card , N. A. , Little , T. D. , & Bovaird , J. A. (2007). Modeling ecological and contextual effects in longitudinal studies of human development . In T. D. Little , J. A.

- Bovaird , & N. A. Card (Eds.), Modeling contextual effects in longitudinal studies (pp. 1 – 11). Mahwah, NJ : Lawrence Erlbaum
- Chaiklin, S (2003) *The zone of proximal development in Vygotsky's analysis of learning and instruction*. To appear in: Kozulin, A., Gindis, B., Ageyev, V., Miller, S. (2003). Vygotsky's educational theory and practice in cultural context. Cambridge: Cambridge University Press. [On Line]
http://people.ucsc.edu/~gwells/Files/Courses_Folder/documents/chaiklin.zpd.pdf. Taken in July 5 of 2011.
- Choice, E (2010). Vygotsky's Zone of Proximal Development Theory. M.S. Ed. An evaluation. [On line] http://www.savingamericasyouth-itstime.com/Vygotsky_-_An_Evaluation.pdf. Taking in June 18 of 2011.
- Cook, J & Cook, G. (2005). *Child Development. Principles & Perspectives*. Sample Chapter. Pearson. [On Line]
http://www.ablongman.com/cooktour/Cook_0205314112_chapter5.pdf. Taken in July 5 of 2011.
- Cole, M. (1985). The Zone of proximal development: Where culture and cognition. In J. Wertsch (Ed.), *Culture Communication and Cognition. Vygotskian Perspectives*. Chicago: University of Chicago Press.
- Daniels, H. (in press). *The Interface between the Sociology of Practice and the Analysis of Talk in the Study of Change in Educational Settings*. [On Line].
http://www.savingamericasyouth-itstime.com/Vygotsky_-_An_Evaluation.pdf.
- Duncker, K. (1938). Experimental modification of children's food preferences through social suggestion. *Journal of Abnormal and Social Psychology*, 33,489-507.

Eckert, P & McConnell, S. (1995). *Constructing meaning, constructing selves: Snapshots of language, gender and class from Belten Hig*. Gender articulated: Arrangements of language and the socially constructed self. London and New York: Routledge. 469-507. [on line] <http://www.stanford.edu/~eckert/PDF/ConstructingMeaning.pdf>. taken in July 7 of 2011.

Galligan, L (2008). *Using Valsiner*. In: 31st Annual Conference of the Mathematics Education Research Group of Australasia (MERGA31), 28 June - 1 July 2008, Brisbane, Australia.

Goos, M (2010). *A Sociocultural Framework for Understanding Technology Integration in Secondary School Mathematics*. <http://www.pna.es/Numeros2/pdf/Goos2010A.pdf>

Hassan, R (2001). *Semiotic mediation and mental development in pluralistic societies: some implications for tomorrow's schooling*.

<http://lchc.ucsd.edu/mca/Paper/JuneJuly05/HasanSemMediation.pdf>. Taken in June 25 of 2011.

Holzman, L () *Vygostsky's Zone of Proximal Development: The Human Activity Zone*. East Side Institute for Short Term Psychotherapy. [On Line]

http://www.eastsideinstitute.org/Vygotsky_assets/Vygotskys%20Zone%20of%20Proximal%20Development.pdf

Hussain, M; Monaghan, J & Threlfall, J. (2011) *Extending Valsiner's zone theory to theorise student-teacher development*. In C. Smith, (Ed.). Proceedings of the British Society for Research into Learning Mathematics 31(1). [En linea]. <http://www.bsrlm.org.uk/IPs/ip31-1/BSRLM-IP-31-1-01.pdf>. Taken on June 1 of 2011.

Josephs, I. E, Valsiner, J & Sugar, S. E (1999). The process of meaning construction. In J.

Bandstadter and R.M Lerner (Eds.), *Actions & self development* (pp 257-282). Thousand Oaks, Ca.: Sage.

Josephs, I. E & Valsiner, J (2007). Development Science Meets Culture: Cultural

Developmental Psychology in the Making. *European Journal of Developmental Science*, No 1, Vol 1, 47-64.

Langford, P. (2005). *Vygotsky's Developmental and Educational Psychology*. Hove :

Psychology Press.. [On Line]

<http://www.classjump.com/sideeg/documents/Vygotsky%20Educational%20Psychology.pdf>. Consulted in June 29, 2011.

Lewis, M. (2000). The promise of dynamic systems approaches for an integrated account of human development. *Child Development*, 71(1), 36-43.

Maholmes, V (2001). *Understanding Child Development as a Basis for Evaluating*

Partnerships. Publication Series No 3. [On line]

<http://www.temple.edu/lss/pdf/publications/pubs2001-3.pdf>. Taken on July 4 of 2011.

Marsico, G & Iannaccone, A. (in press). The Work of Schooling. In J Valsiner (Ed), *The Oxford*

Handbook of Culture and Psychology. New York: Oxford. University Press.

Miller, S (2010). *Social-Cognitive Development in Early Childhood*. Encyclopedia of Early

Childhood Development. [On line] [http://www.child-](http://www.child-encyclopedia.com/documents/MillerANGxp.pdf)

[encyclopedia.com/documents/MillerANGxp.pdf](http://www.child-encyclopedia.com/documents/MillerANGxp.pdf). Took On June 20 of 2011.

Moghaddam,F; Novoa, C & Warren, Z (in press). In J Valsiner (Ed), *The Oxford Handbook of*

Culture and Psychology. New York: Oxford. University Press.

- Molenaar, P. C. M., & Valsiner, J. (2008). How generalization works through the single case: A simple idiographic process analysis of an individual psychotherapy case. *International Journal of Idiographic Science, 1*, 1-13. [www.valsiner.com]. Reprinted in S. Salvatore, J. Valsiner, S. Strout-Yagodzinsky and J. Clegg (Eds.), *YIS: Yearbook of Idiographic Science 2008*. Vol. 1 (pp. 23-38). Rome: Fireira Publishing.
- Mulford, B. (2003). *School leaders: changing roles and impact on teacher and school effectiveness*. A paper commissioned by the Education and Training Policy Division, OECD, for the Activity Attracting, Developing and Retaining Effective Teacher. [On line] <http://www.oecd.org/dataoecd/61/61/2635399.pdf> Too on July 3 of 2011.
- Pellegrini, A; Blatchford, P; Kato;K & Baines,E. (2003). A Short-term Longitudinal Study of Children's Playground Games in Primary School: Implications for Adjustment to School and Social Adjustment in the USA and the UK. [In Line] <http://www.cehd.umn.edu/edpsych/hdl/docs/gamesUKUSSocDev.pdf>.
- Riddel, E (1999). *Lev Vygotsky's Social Development Theory*. [http://members.iinet.net.au/~aamcarthur/4 Mar 2008 files/Vygotskys Social Development Theory.pdf](http://members.iinet.net.au/~aamcarthur/4_Mar_2008_files/Vygotskys_Social_Development_Theory.pdf)
- Rodríguez, L. (2009) *Emergencia de la generalización inductiva en infantes*. [Inductive generalization's emergence in infants] (Unpublished doctoral dissertation) Universidad del Valle, Cali, Colombia.
- Rodriguez, L. (2011) *Speaking of One's Life: What can we learn from transcultural studies?* Integrative Psychological and Behavioral Science, 45 (1) Taking in June 4 of 2011.
- Rodríguez,L; Giraldo,J; Obando,D; Romero, D; Mojica, A & Rodriguez, J. (2011 in press) *Cognitive Planning and Everyday Practices: A case study*.

- Sato, T, & Valsiner, J. (2010). Time in life and life in time: Between experiencing and accounting. *Ritsumeikan Journal of Human Sciences*, 20, 1, 79-92
- Smeenk, J; Leiner, R & Brainard, K (2008). A “*Starter Kit*” of Edible Flowers for the Garden and Table. Cooperative Extension Service. University of Alaska Fairbanks. [On line] <http://www.uaf.edu/ces/publications-db/catalog/anr/HGA-00137.pdf>. Taking in July 1 of 2011
- Smith, L & Thelen , E (2003) *Development as a dynamic system*. TRENDS in Cognitive Sciences Vol.7 No.8 Department of Psychology, Program in Cognitive Science, Indiana. [On Line] Taking in June 30 of 2011. From <http://psychology.stanford.edu/~jlm/pdfs/SmithThelen03TiCSDevAsDynamSys.pdf>. Department of Psychology, Program in Cognitive Science, Indiana University, 1101 East 10th Street, Bloomington, IN 47405, US. TRENDS in Cognitive Sciences Vol.7 No.8 [On line] <http://www.indiana.edu/~cogdev/labwork/dynamicsystem.pdf>. Taking in July 3 of 2011
- Thelen, E., & Smith, L. B. (1994). *A dynamical system approach to development of cognition and action*. Cambridge, MA: MIT Press/Bradford Books.
- Thelen, E & Smith, L (2005). *Dynamic Systems Theories*. Chapter 6. Pp. 258- 308. [On line] <http://www.indiana.edu/~cogdev/labwork/handbook.pdf>. Taking in June 15 of 2011.
- Thomas, E, M. (2006). *Readiness to Learn at School Among Five-year-old Children in Canada*. Children and Youth Research Paper Series Catalogue no. 89-599-MIE — No. 004. Ministry of Industry. [On line] <http://www.statcan.gc.ca/pub/89-599-m/89-599-m2006004-eng.pdf> Taking in June 29 of 2011.

Valsiner, J. (1997). *Culture and the development of children's actions: A theory of human development* (2nd ed.). New York: Wiley.

Valsiner, J. (1998). *The guided mind: A sociogenetic approach to personality*. Cambridge, MA: Harvard University Press

Valsiner, J. (2001) *Process structure of semiotic mediation in human development. Human Development*, 44, 84-97.

Valsiner, J. (2003). Beyond social Representations: A theory of Enablement. *Papers on Social Rrepresentations*, 12, padres 7.1-7.16. [On line]

http://www.psych.lse.ac.uk/psr/PSR2003/12_07Val.pdf. Taken on 7 of July of 2011.

Valsiner, J. (2004). El desarrollo de las teorías del desarrollo: la “Hollywoodización” de la ciencia y su impacto. *Infancia y Aprendizaje*, 2004, 27 (2) (p. 1-14)

Valsiner, J. (2006). The semiotic construction of solitude: Processes of internalization and externalization. *Sign Systems Studies* 34.1,

Valsiner, J (2007). Constructing the internal Infinity: Dialogic Structure Of The Internalization/ Externalization Process- A Commentary On Susswein, Bibok, and Carpendale's “Reconceptualizing Internalization”. *International Journal for Dialogical Science*, 2, 1, 207-221.

[http://ijds.lemoyne.edu/journal/2_1/pdf/IJDS.2.1.13.Valsiner.pdf downloaded on May 23 of 2011.

Valsiner, J. (2008). Ornamented Worlds and Textures of Feeling: The Power of Abundance. *Critical Social Studies. No. 1*. [On line]

<http://ojs.statsbiblioteket.dk/index.php/outlines/article/viewFile/1967/1757>. Taken in July 7 of 2011.

- Valsiner, J. (2009). Posfacio: *Sí, la mente es no lineal –y– ¿Qué sigue? [Yes, the mind is nonlinear -and- ¿What next?]*. In R. Puche-Navarro (Comp.) *¿Es la mente no lineal? [¿Is the mind non lineal?]* (p.142-145). Cali: Artes Graficas del Valle Editores.
- Van der Veer, R & Valsiner, J. (1994) *The Vygotsky Reader*. Oxford: Blackwell.
- van Geert, P. (1998) *A dynamic systems model of basic developmental mechanisms: Piaget, Vygotsky and beyond*. *Psychological Review*, 105 (4), 634–677.
- van Geert, P., & van Dijk, M. (2002) *Focus on variability: New tools to study intra-individual variability in developmental data*. *Infant Behavior & Development*, 25, 340-374.
- Voelklein, C & Howard, C (2005). *A review of controversies about social representations theory: a British debate*. *Culture and psychology*, 11 (4). pp. 431-454. [On line] [http://eprints.lse.ac.uk/2439/1/Review_of_controversies_\(LSERO\).pdf](http://eprints.lse.ac.uk/2439/1/Review_of_controversies_(LSERO).pdf) Taken on July 7 of 2011.
- Worthman, S. (2001) *Interactionally Situated Cognition: A Classroom Example*. GDE Publications. Graduate School of Education. University of Pennsylvania. Postprint version. Published in *Cognitive Science*, Volume 25, Issue 1, January 2001, pages 37-66. Publisher URL: http://dx.doi.org/10.1207/s15516709cog2501_3