NOTIONS OF VIGOTSKI PEDOLOGICAL STUDIES TO EVALUATE CHILD DEVELOPMENT

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ABSTRACT. This article is inserted in the scope of the urgent discussion on the development and evaluation process in Early Childhood Education in the light of Lev S. Vigotski's pedological studies, which only recently came to the attention of Brazilian researchers. In the Vygotskian legacy, we find general principles that deserve to be considered in a concrete analysis of child development whose general laws epistemologically encompass the history and culture in the formation of psychism. It is, therefore, a complex and dialectical relationship between laws and conceptual principles that shows the milestones of development throughout the age, permeated by critical periods and moments of more excellent stability. In this article, we build an analytical, conceptual map of this process, listing the theoretical discussion of the following concepts: a) social situation of development; b) experience (perejivanie); c) neoformations; and d) the characteristics of the complex functional system in each stage of Early Childhood Education. We conclude that this conceptual path brings us closer to a concrete assessment in Early Childhood Education, which should: 1. identify developmental processes that characterize the pedological age of the child; 2. consider its social situation of development and; 3. analyze interdependently how it subjectively experiences the synthesis of the two previous propositions in its surroundings. Outside this analytical scope, the evaluation of child development runs the risk of being restricted to observable rules of acquired behaviors, identifying desirable (or not) personality traits, or checking acceptable (or not) standards in a given social, cultural context.

Keywords: Child development; evaluation; historical-cultural perspective; early childhood education; pedological studies.

CONTRIBUIÇÕES DOS ESTUDOS PEDOLÓGICOS DE VIGOTSKI PARA AVALIAÇÃO DO DESENVOLVIMENTO INFANTIL

RESUMO. Este artigo se insere no âmbito da premente discussão sobre o processo de desenvolvimento e avaliação na educação infantil, à luz dos estudos pedológicos de Lev S. Vigotski, que só recentemente chegaram ao conhecimento de pesquisadores brasileiros. No legado vigotskiano, encontramos princípios gerais que merecem ser considerados em uma análise concreta do desenvolvimento infantil, cujas leis gerais abarcam epistemologicamente a história e a cultura na formação do psiquismo. É, portanto, uma

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2 Pedological studies of Vigotski

relação complexa e dialética entre leis e princípios conceituais que evidenciam os marcos do desenvolvimento ao longo da idade, perpassada por períodos críticos e momentos de maior estabilidade. No presente artigo, construímos um mapa conceitual analítico deste processo, elencando a discussão teórica dos seguintes conceitos: a) situação social de desenvolvimento; b) vivência (perejivanie); c) neoformações; e d) as características do sistema funcional complexo em cada etapa da educação infantil. Concluímos que este percurso conceitual nos aproxima de uma avaliação concreta na educação infantil, a qual deve: 1 identificar processos desenvolvimentais que caracterizam a idade pedológica da criança; 2. considerar a sua situação social de desenvolvimento e; 3. analisar de forma interdependente os modos como ela vivencia subjetivamente a síntese das duas proposições anteriores em seu entorno. Fora desse escopo analítico, a avaliação do desenvolvimento da criança corre o risco de ficar restrita às regras observáveis de comportamentos adquiridos, a identificação de traços desejáveis (ou não) de personalidade e/ou à checagem de padrões aceitáveis (ou não) em um dado contexto social, cultural.

Palavras-chave: Desenvolvimento infantil; avaliação; perspectiva histórico-cultural; educação infantil; estudos pedológicos.

CONTRIBUCIONES DE LOS ESTUDIOS PEDOLÓGICOS DE VIGOTSKI PARA EVALUAR EL DESARROLLO INFANTIL

RESUMEN. Este artículo se inserta en el ámbito de la urgente discusión sobre el proceso de desarrollo y evaluación en la Educación Infantil, a la luz de los estudios pedológicos de Lev S. Vigotski, que sólo recientemente llegaron a la atención de los investigadores brasileños. En el legado vigotskiano encontramos principios generales que merecen ser considerados en un análisis concreto del desarrollo infantil cuyas leyes abarcan epistemológicamente la historia y la cultura en la formación del psiquismo. Se trata, por tanto, de una relación compleja y dialéctica entre leyes y principios conceptuales que muestran los hitos del desarrollo a lo largo de la edad, permeados por períodos críticos y momentos de mayor estabilidad. En este artículo, construimos un mapa conceptual analítico de este proceso, enumerando la discusión teórica de los siguientes conceptos: a) situación social del desarrollo; b) experiencia (perejivanie); c) neoformaciones; y d) las características del sistema funcional complejo en cada etapa de la Educación Infantil. Concluimos que este camino conceptual nos acerca a una evaluación concreta en Educación Infantil, que debería: 1. identificar los procesos de desarrollo que caracterizan la edad pedológica del niño; 2. considerar su situación social de desarrollo y; 3. analizar interdependientemente las formas en que el niño experimenta subjetivamente la síntesis de las dos proposiciones anteriores. Fuera de este ámbito analítico, la evaluación del desarrollo infantil corre el riesgo de limitarse a las reglas observables de los comportamientos adquiridos, a la identificación de los rasgos de la personalidad deseables (o no) y/o a la comprobación de las normas aceptables (o no) en un contexto social y cultural determinado.

Palabras clave: Desarrollo infantil; evaluación; perspectiva histórico-cultural; educación infantil; estudios pedológicos.

Introduction

In Brazil, the problem of assessing development in early childhood education is a concrete part of the demands of the pedagogical practice of the person who teaches. The National Curricular Guidelines for Early Childhood Education (DCNEI) state that "Early Childhood Education institutions must create procedures for monitoring pedagogical work and evaluating children's development, without the objective of selection, promotion or classification" (Brasil, 2010, art. 10, emphasis added). In addition to legal determinations, we understand that child assessment is a daily necessity to guide teaching actions in line with the development processes that take place in different contexts. With this, we draw attention to, among other things, the fact that development needs to be understood in its procedural and diverse character.

A recent study (Magalhães, 2020) on the development assessment models suggested by the literature for early childhood education found authors working on the theme of development assessment within schools in different approaches focused on a) multidimensional dimensions (Rovira & Peix, 2004), b) the prevention of learning difficulties (Gass & Stampa, 2018), c) teaching and learning speaking and listening (Schwartz, 2018), d) the format of psychomotor observation protocols (Borghi & Pantano, 2010), e) evaluating the basic repertoire for literacy (Leite, 2015), f) scales that assess the child's level of involvement in the pedagogical activity (Piva & Cordeiro, 2009; Cordeiro & Benoit, 2004), among other models that focus on filling out development assessment forms (Ribeiro, 2018 and Miléo; Freitas, 2020). They are all limited to recording the presence or absence of some behaviors in children. Although intended for the education of young children, most of these instruments emphasize the literacy process as the child's entry into elementary school approaches.

Researchers have warned about the consequences of this *preparatory* approach to early childhood education, seeking to consolidate documents and proposals focused on the specificity of this moment in life (Mello, 2018). However, when we look at current assessments, we still identify the cognitivist emphasis, which focuses on a type of anticipation of skills for children's entry into elementary school.

Moving away from a merely cognitive perspective, with a behavioral or preparatory focus, some works in cultural-historical psychology (Vieira et al., 2019; Morais et al. 2019) advance the proposition of evaluating the real and proximal development of the child - emphasizing the process -, based on the contributions of Alexis Leontiev's activity theory. However, they do not emphasize the main concepts of Lev S. Vigotski's pedological studies.

Written by Vigotski between 1930 and 1933, pedological studies only recently came to the attention of Brazilian researchers. In these studies, Vigotski (2018) revisits the central concepts of his theory, expanding them in his interpretative analysis of development. Aspects related to age crises in ontogenesis and the social situation of development, for example, bring a new understanding to the author's entire work. This conceptual reinterpretation, in the light of pedological studies, can significantly contribute to the treatment that pedagogy and psychology have given to the process of evaluating young children. Therefore, we highlight as the objective of this article the construction of a conceptual map of the child development process that points to some guiding precepts regarding assessment in early childhood education.

General considerations of pedological science

Pedological science directly and immediately aims to understand child development with a comprehensive approach (Vigotski, 2018). It brings together knowledge from different areas (pedagogy, psychology, nutrition, medicine, among others) and seeks to produce analytical syntheses to understand and evaluate this process. Here, a critique of the fragmentation of development and, consequently, of assessment unfolds, as the questions that arise in understanding the child are concentrated in the set of studies and research that, accumulated and integrated, respond to their particularities, in line with the cultural specificities the child experiences.

By studying a large number of children, Vigostki identified development cycles called developmental milestones or the main (trans)formations throughout the ages. According to the author, what guarantees the change of cycle is not the chronological age but the child's pedological age: "the level of development that child actually reached and not their age according to the birth certificate" (Vigotski, 2018, p.20).

When discussing the problem of age and the criteria recommended for its delimitation, Vigotski (1994) brings important notes to understand the issue in terms of biological and social indicators, taken as an expression of the development process in its historical-cultural roots, in addition to a maturational approach. The dynamics of the transition from one age to another must be considered because there are slower and more gradual periods and more violent and critical periods. Such elements of analysis are not thus configured as markers determined a priori in fixed stages of development or behavioral traits to be identified and removed from their social reality.

Vigotski's important legacy is the presentation of general principles that must be considered when we concretely and procedurally analyze child development in different cultural-historical contexts. Even though the conditions in Brazil, for example, are different from those he studied in the Former Union of Soviet Socialist Republics in the 1930s, his ideas allow us to understand the general laws that characterize development and its contextual variations. This occurs because the general laws developed by Vigotski epistemologically encompass history and culture in the formation of psychism. Therefore, it is a complex and dialectical relationship between laws and conceptual principles that highlights the milestones of development throughout age.

Based on these assumptions, we selected fundamental concepts that can guide assessment processes at school, composing a conceptual map of the child's psychological development. They are a) social development situation, b) experience (perejivanie), c) neoformations, and d) characteristics of the complex functional system at each stage. These concepts were selected because they direct us toward a concrete assessment oriented to the social conditions of the child's production and development - as we will see below.

Brief presentation of L. S. Vigotski's main pedological concepts

For Vigotski (1996; 2018), the process of psychological development involves the systemic interconnection of higher psychological functions throughout ontogenesis. Constituted in and by history and culture, these functions are articulated in such a way that one of them assumes dominance over the others at a given moment in development, as we will discuss below.

In these terms, it is not possible to evaluate development in a static way. The complexity must be understood in procedural terms. After all, what is the dynamic configuration of the psychological functions that make up the child's consciousness? What characterizes its operation? How, throughout ontogenesis, does consciousness transform? Why does it transform? What happens to characteristics that are striking at a given point in development and seem to disappear at another?

The child does not develop solely according to their organic growth. In its midst are the possibilities of their development, which is why we cannot speak of an evolutionary and linear path in ontogenesis. Vigotski (2018) states that the environment is a source of development of specifically human superior characteristics: the child does not speak if no one speaks to them. Similarly, it occurs in other specificities of human life, such as arithmetic reasoning, artistic knowledge, and motor skills. That is why it is important to consider educational experiences at school as privileged sources of development, as formal learning processes are organized and systematized there, activities that may or may not be guided by the *potential developmental cycles* of each child, etc.

We know that learning and development happen in different spaces, such as families and communities, but the organization, planning, and intentionality of people who teach in schools are fundamental. This social environment is, therefore, central to analyzing and evaluating children's development, with due attention to the general characteristics of the complex functional system at each age.

Vigotski (1996) addresses this issue based on moments of stability and crises in ontogenesis. The author criticizes how developmental psychology in his time understood the crisis in its strictly negative element. Crises are understood in terms of critical periods of transition between a cycle that ends and gives rise to a new psychic functioning that emerges as predominant for another period of some stability.

These periods must be considered to understand the child's needs at each moment of their development. If the child's development moves towards a new configuration, the treatment given to them must also change. This is the case of the child who, at the end of early childhood (approximately between 2 and 3 years old), begins to demand the choice of their own clothes and expresses strongly against the attitude of the adult who intends to change them quickly as they did in their first year of life. As the child's desire is not always expressed through words, the adult has to be aware. With each period of stability, the environment changes and becomes more complex for the child, which brings us to the relationship between age and the way the child experiences the environment (Vigotski, 2018). The author emphasizes that "(...) we always deal with an indivisible unity of the particularities of the personality and the particularities of the situation represented in the experience" (Vigotski, 2018, p. 78, emphasis added). From a methodological perspective, when studying the role of the environment in the child's development, it is necessary to analyze the point of view of their experiences since "the personal particularities that participated in the definition of the child's relationship with a given situation" (Vigotski, 2018, p. 78). From this perspective, it is necessary to understand the relationships between changes in the social situation of development, the dynamics of ages, and the experiences that mark the concrete formation of the child's psychism, considering the emergence of the new or neoformations (Vigotski, 2018).

To understand neoformations, we draw our reader's attention to a point briefly presented above, namely the systemic functioning of complex psychological functions. Psychological functions not only change and change in isolation but also significantly alter (in) their correlations. In other words: "the development of each separate function depends

6 Pedological studies of Vigotski

on the system in which it develops" (Vigotski, 2018, p. 95), as the set of psychological functions in a functional system is structured in an interdependent and dynamic way. Systemic changes produce qualitative leaps in the development process and coincide with the passage from one age to another - understood here, as noted above, in pedological terms.

We then turn to the general laws of the child's psychological development, also called by Vigotski (2018), the general laws of the development of the child's conscious personality. Therefore, the first law presented by Vigotski (2018) is the non-regularity in the development of functions, which differ according to the demands of the interfunctional system and the social environment in which the child is inserted. At each age, different functions or neoformations stand out in consciousness and are internally specialized to different degrees, promoting different and multiple experiences, which indicate the milestones of development.

The second law of development presented by Vigotski (2018) is the interdependence of higher psychological functions. If a given function differentiates at a certain age, it begins to occupy a central place in the interfunctional system, which does not mean that it is independent of consciousness as a whole.

The alternation in the predominance of functions in each period of development gives rise, at each age, to "a specific system of interfunctional relationships that are never the same for different functions. For a given age, different functions are in different relationships with each other" (Vigotski, 2018, p. 103). It is understood, then, that as a given function is distinguished and stands out in the interfunctional system, it also gains a privileged position in development, what Vigotski (2018) called the third general law of psychological development. He states: "It can be said that, throughout previous and subsequent history, the function never undergoes such intense development as in this exact period in which it predominates" (Vigotski, 2018, p. 103).

The fourth law of development summarizes the revolutionary characteristic of the development process: the development of a given function and its interrelations leads to the restructuring of the entire functional system. The result is a new interfunctional system (Vigotski, 2018), dynamic with new possibilities for children to understand themselves, others, and the world.

Vigotski (2018) also says that it is the role of pedological science to understand what the constitutive particularities of the child are in each period and which of these particularities play a key role in a given situation. Therefore, this article sought to delve deeper into the study of each period of childhood in conjunction with their respective critical periods, highlighting possible developments in the assessment of children in early childhood education.

Pedological studies and considerations of the first year of life

Development, in all aspects, occurs in a contradictory unity between human nature and culture (Martins, 2013). This means that, even in intrauterine life, there is unity between the pregnant woman's body, the fetus, and the social environment in which the pregnant woman lives. The pregnant woman's habits, the conditions in which she lives, the access she has to the healthcare system, the possibilities for self-care, the characteristics of her work, and her understanding of pregnancy, among other factors, directly influence fetal development. Therefore, the baby brings into the world a psychophysiological organization inherited from their

parents, and their personality begins to develop at birth, during their process of contradictory unity with culture: the child's personality is the unity of their genetic inheritance with the human race, mediated by the particularities that arise throughout the development process – we refer here to differences that particularize development, such as, for example, social class, race and gender; the term comes from the dialectical understanding of phenomena in their singular-particular-universal unity, according to Oliveira (2005).

There are significant differences during the first year of life, which is why Vigotski (1996) divided this age into three moments: postnatal (or period of passivity), period of receptive interest, and period of active interest. Postnatally, the social situation of the newborn is transitional, as the baby still remains biologically dependent on the mother. According to the author, the last two months of pregnancy and the first month after birth are similar from the point of view of organic growth and the limited possibilities of understanding the baby's needs. Sleep, food, and communication are gradually regulated by the social environment, composing sensitive states or markedly emotional sensations. Sensations and emotions gain prominence in the life of the newborn. Pleasant or unpleasant affective states manifest themselves in the first days of the baby's life, in the expression on their face, the intonation of their cries, etc. (Vigotski, 1996). In principle, the interfunctional system is organized based on the fusion of sensations with affections and emotions. This means that, at this moment, the world is, for the baby, an undifferentiated state of things that attract and repel them, affect them, without many defined limits yet. For the author, there is a somewhat amorphous perception of the situation as a whole that configures a background from which, for the child, a phenomenon they perceive as a special quality stands out: "The structural law of the separation of figure and ground is, it seems, the most primitive peculiarity of psychic life, the starting point for the further development of consciousness" (Vigotski, 1996, p. 283).

From the postnatal transition, another formation emerges, the individual psychic life of the newborn, which is the period of receptive interest (Vigotski, 1996). Due to the demands of the social environment, the baby's life gradually becomes an individual existence as they realize their separation from the organism that generated them: the baby's life merges into social life. The moment of receptive interest is the first in individual existence – the most socially primitive. From the care relationship between adults and newborns, their first impressions and social reactions begin to emerge. Smiling at the human voice, according to Vigotski (1996), is an expression of the child's superior nervous activity linked to their psychic and social life.

In this way, social dynamics modify the social situation of the child's development, as well as their possibilities of communication with adults, who change their behavior towards the baby, as they are also affected by the baby's first social reactions. A fundamental characteristic of the social developmental situation in the first year of life is that the baby lacks the means of communication in the form of human language. Also, during this period, the baby depends on the adult to satisfy their vital needs, which is why Vigotski (1996) defines them as a maximally social being. The contradiction between their maximum sociability and their minimum possibilities of communication forces the baby to develop a peculiar type of communication, without words, with the adult.

In the first year of life, the adult caregiver deciphers the child's needs and introduces them to objects and the social world through language that contributes to their receptive interest: a moment in which the baby shows interest in objects and people around them but has little motor dexterity. In the phase before the development of instrumental thinking, objects are manipulated as an extension of the body (Vigotski, 1996). The greater or lesser

8 Pedological studies of Vigotski

interest in surrounding objects and the people around them will always depend on the interpersonal dynamics established between the baby and people with their social environment.

However, during active interest, towards the end of the first year, the manipulation of objects gains shape and intensity as the child has greater locomotor autonomy and can search for them. As a consequence, explains Vigotski (1996), the nervous system develops intensely, especially the perceptual and motor functions, which allow changes in the child's attitudes. Therefore, throughout the first year of life, perception becomes important. In other words, perception is the new formation that results from this period of the baby's active interest. The baby's perception and action, according to Vigotski (1996), are united by affection.

This new formation enables achievements and, consequently, entry into a new period of development, early childhood, characterized as the crisis of the first year (Vigotski, 1996). The child acquires new behaviors but not yet independently and autonomously: they speak but not in an articulate and understandable way to everyone; they walk but not with confidence and motor dexterity; they express their affections and their will, but often through shouting, crying, opposition, and protest.

The crisis of the first year is marked by what Vigotski (1996) calls children's autonomous language – resulting from the child's relationship with their social environment – as only people who live with them daily can understand and decipher the meaning of the sounds they emit. Magalhães (2018) shows that the perception-affection-action unit, resulting from the process of knowing the world in the first year, suffers a qualitative rupture due to the development of language, "as words play a fundamental role as an interposition before action" (Magalhães, 2018, p. 282). Words radically alter children's development as they begin to guide their actions concerning objects, themselves, and the people around them.

Vigotski (1996) asserts that, at the end of the first year of life, affection is distinguished by the impetuous development of affective life directed towards one's own personality. This aspect characterizes the first step in the development of children's will (volitional act), which can be expressed through words shared in interpersonal experiences.

The baby's consciousness at the beginning of the first year is absolutely undifferentiated but contains the germ of all future functions (Vigotski, 2018). Therefore, the greater and richer the relational experiences involving the child (experiences), the more complex their emerging intrapsychic functional processes are.

With the primary manipulation of objects, perception-affection-action gains immense prominence, a moment when autonomous language emerges - although this brings changes to the social situation of the child's development, they are still subordinated to the perceptual field at the end of the first year of life. From the point of view of new formations, these are aspects that need to be paid attention to evaluate development, to think about pedagogical experiences that focus on such new formations and promote development, emphasizing the meaningful use of objects and social exchanges (adult-child and child-child) characteristics of the educational space. Considering all these aspects has a qualitative impact on child development, providing important guidelines on how to evaluate children throughout the first year of life.

Pedological studies and considerations of early childhood

As we explained previously, the new formations acquired in the first year of life allow the child to enter early childhood with new possibilities for action in their social environment.

They can now move independently and, with this, can satisfy some immediate needs, such as reaching objects that attract or affect them. Furthermore, early forms of verbal language are present, even if limited to adult interpretation. This means that the social situation of the child's development has changed.

In early childhood, children are able to discover, through relationships with others, what they can do alone. Often, we have the impression that they simply repeat the movements several times randomly. But, in fact, the expansion of their instrumental (and also interpersonal) experience allows them to solve situational problems arising from their actions with objects.

This process takes place from an objective point of view – depending on the external situation experienced by the child – and from a subjective point of view – depending on the child's perceptual field. What is outside their perceptual field does not exist for the baby in early childhood, which is why the game of hiding objects does not motivate them in this cycle, just as inserting something new into their perceptual field can easily change the focus of their attention.

The perception-affection-action unit, formed as a result of the development process in the first year of life, is the functional process that stands out in this period. Vigotski (1996) states that what we will do with certain tranquility in adult life – which is to see things separately from the direct emotion they arouse in us – is impossible for children in early childhood, as perception and affection are linked, they still cannot be distinguished – what the author called *passionate perception*. This is the moment of development of the perceptual function. Through perception, the specialization of other functions occurs (Vigotski, 2018), and the development of language as a verbal sign.

Children, in early childhood, discover the object world of human life, and as adults name objects for them, they learn words, their meanings, and their senses. According to Vigotski (1996), the child's new relationships with the environment in early childhood are fundamental in ontogenesis, as experience with words allows the child to develop more complex processes of generalization and abstraction. This moment is extremely relevant and deserves attention during development assessment. Through words, through their social meaning, language and thought merge in the child's psychism (Vigotski, 2001) - a revolutionary moment in which thought becomes verbal and language intellectual. With this, perception is also being resized, becoming verbal perception.

According to Vigotski (1996, p. 365), language changes the structure of perception due to its ability to generalize. Therefore, he states that the new central formation of early childhood is linked to the mediation of language since it modifies the child's relationships with the social environment and reorganizes their consciousness. For the first time, "the most important and positive indication of man's consciousness in its later stages of development appears, that is, the semantic and systemic structure of consciousness" (Vigotski, 1996, p. 362). The child is now able to analyze what they perceive and to group and begin to categorize.

When dealing with the critical period of transition from early childhood (or preschool age) to childhood, Vigotski (1996) discusses the three-year crisis. For him, this is a moment when the child demands their emancipation. They want to choose what to do and claim to do it alone, without the help of adults.

Some common characteristics of the three-year-old crisis, observed by Vigostki (1996), are *negativity* when the child does not want to do something because the proposal came from an adult, even though they want to do what was proposed; *rebellion*, which can be understood as negativity directed towards the educational norms established for them:

stubbornness, when they demand something simply for the sake of demanding it and not because they want it intensely; *insubordination*, when they want to do everything for themselves and aspire to independence. Vigotski (1996) also highlights *voluntariness*, *jealousy*, etc., when the crisis intensifies and can even generate violent attitudes on the part of the child. The author highlights that, at the end of early childhood, children need to walk on their own as they desire autonomy and independence. This arises from the crisis in their social relationships, as what motivates them are interpersonal relationships and not the content of what they propose or the activity to do. In his words: "the crisis is the product of the restructuring of reciprocal social relations between the child's personality and the people around them" (Vigotski, 1996, p. 375).

With the perception resized by language and the crisis of demands of the young child towards their emancipation and differentiation in terms of their emerging personality, development takes on new contours from the point of view of neoformations. This demands from the adult and their pedagogical environment, attention in interaction and assessment of development capable of embracing the crisis. Regarding critical ages, Vigotski (1996) highlights two important difficulties: identifying the beginning and end of a crisis; and educating in critical periods. At critical ages, development is accompanied by more or less acute conflicts with the people around them, as the child can go through painful experiences and intimate conflicts. However, the negative characteristics of critical ages are not the most relevant, as these are considered by the author more in their creative character – in the sense of the possibilities that open up to the new – than in their destructive character.

Pedological studies and considerations of preschool age

Preschool children are perhaps the biggest victims of naturalizing interpretations of development, states Pasqualini (2013). Since role-playing is the activity most associated with this age group, it is common to think that it is too imaginative and fanciful, which is why they play social roles, pretend to be adults, or create situations for mere pleasure.

However, this logic is not coherent with cultural-historical psychology. Vigotski (2008) states that role-playing is the main activity at preschool age but is not the only one that the child performs, in addition to not always being the predominant form as the child does not live in the world of play all the time. On the contrary, they distinguish moments of play very well, even when their performances are linked to situations in their own real-life – which occurs frequently. Play is a necessity in the life of preschool children as their social developmental situation changes and their fixation on objects stops mobilizing their interest. There then arises the need to understand how adults use objects and experience social relationships in which these uses occur.

The need for emancipation and to act alone on objects is manifested in role-playing as the child realizes, through play, what Vigotski (2008) calls unrealizable tendencies: they want to do alone what they are not yet able to do given their lack of skills or lack of control over their own body. They want to do what adults do, but they are not – and cannot be – the adults, so they play at playing such a social role. Thus, role-playing "must be understood as an imaginary and illusory fulfillment of unrealizable desires" (Vigotski, 2008, p. 25).

The development of the child's entire imaginary situation, including make-believe, is linked to the emergence of a neoformation: imagination - which must be understood in its interrelationship not only with emotion (expressed tendencies and desires that are not immediately achievable) but with memory - a function that assumes prominence in preschool

age and should be a reason for special attention from educators considered in the assessment of development.

It is to memory that other psychic functions (and also imagination) are subordinated in the preschool development cycle. The specialization of memory in this development cycle is because children have already had their development profoundly redefined in symbolic terms; they already operate through a language based on mediated memory (Smolka, 2000). The meaning of words – named after the social experience – guides memories and actions. Such complexity of the child's psyche demands the development of memory, which, dialectically, allows the expansion of experience with language and other functions. If there is no memorization of the situations experienced, there is no way for language, thought, imagination (as neoformation), and affective perception to develop (and vice versa).

Perception stands out and develops maximally during early childhood; in the preschool phase, it is subordinated, in a certain way, to mediated memory as it brings memories of what was perceived and felt by the child in the social environment. It is mediated memory that allows the exchange of one subjective image for another, enabling the child to experience the imaginary situation in all its scope. Although the child plays with accessible objects, they do so by imagining, imaginatively replacing them with other objects necessary for the game, going beyond what is immediately perceptible, and freeing themselves from the sensory-perceptual field. A process of abstraction is on the scene. Therefore, Vigotski (2008, p. 36) states that "from a development point of view, the creation of an imaginary situation can be analyzed as a path to the development of abstract thinking."

When saying this, Vigotski (2008) is not referring to abstract thinking, as the child, at this stage of development, does not yet establish certain basic and concrete relationships between phenomena and objects that surround them, as they are unaware of the laws that govern objectively. However, they already group what they know as they generalize between objects and phenomena, for example, due to the similarity between their functions (cutlery), shapes (squares), colors (blue figures), and the relationships between them (trees, rain, nature, animals). Obviously, they still lack sufficient knowledge to abstract the entirety of reality through abstract and conceptual thinking.

As imagination is a neoformation, it can only emerge when mediated memory organizes the child's behavior. Even when children seem to imitate what adults do, they bring new elements to the situation and create other forms of interpretation and expression of the reality that surrounds them.

The situation imagined by the child in play, as stated by Vigotski (2008), contains social rules of behavior, and the child voluntarily submits to them. This is why, in play, children do things that, in real situations, they do not do. When playing hospital, for example, they can lie down for minutes waiting to be seen by a doctor, but in real situations, they cannot stay still for that long. This is a very important moment in the process of psychic development, as it marks the beginning of voluntariness, or voluntary conduct, in which the child submits to some rules of their own will, controlling their behavior to give coherence to the imaginary situation. As Martins (2013) points out, in addition to voluntary conduct, emotions significantly mark memories (and vice versa) since people remember situations experienced with strong emotions and feelings more frequently and clearly.

This is the dynamics of the interfunctional system that people who educate must pay attention to when evaluating the development of children in early childhood education. As the social situation of development changes, new demands arise for the child's psychism its previous functioning is exhausted, and a new configuration of consciousness emerges in a process of continuous (trans)formation (not at all rectilinear) that only stops at the end of life.

In short, the new configuration of consciousness at this moment presents a revolutionary leap in the development of the child's psychism Abstractive, imaginative, and creative processes are on the scene, marking what historically distinguishes human activity from animal activity: the human capacity to act with consciousness. In these terms, the play of preschool children brings with it enormous pedagogical potential that can and should be explored in early childhood education.

Final considerations

Lev S. Vigotski's pedological studies highlight concepts that make up general precepts for understanding and analyzing development as a complex process linked to the cultural-historical context: social situation of development, experience, neoformations, and complex functional system. Considerations of such concepts lead us to conclude that assessment in early childhood education involves 1 identifying *developmental processes* that characterize the child's pedological age, 2. considering their social developmental situation, and 3. analyzing in an interdependent way how they subjectively experience the synthesis of the two previous propositions in their surroundings. Outside this analytical scope, the assessment of child development runs the risk of being restricted to observable rules of acquired behavior, the identification of desirable (or not) personality traits, and/or the checking of acceptable (or not) patterns in a given social or cultural context.

We understand the procedural development assessment and argue that, instead of evaluating whether a child *presents* or *not* some characteristics that have already been determined, our interest is to think about these characteristics in line with the social environment in which they are inserted.

As we have shown, psychological development occurs firstly in interpsychic relationships. For this reason, Vigotski (2018) affirms the importance of the social environment as a source of development, as no neoformation will emerge spontaneously in children. The organization of consciousness is demanded by the social and educational activities that affect us, and in return, the new formations of consciousness reflect on the possibilities and limits of our actions in the world (Leontiev, 1975).

When discussing the pedological method, Vigotski (2018) comments that it is impossible to immediately observe the development process. The author points out that the assessment of development must, therefore, be based on a vigorous body of strategies that encompass, among others, comparative observations in a longitudinal method that focuses on the path the child has gone through concretely - which is a challenge to be understood not in terms of the unilateral responsibility and responsibility of teachers subjected to work in increasingly precarious conditions but in terms of an educational policy committed to transforming these conditions and providing robust training for these professionals.

Therefore, the importance of assessing development in early childhood education without abstract reductionism is reaffirmed. To this end, it is reiterated that 1. it is not possible to evaluate human development without understanding its social nature, as it is not development per se but development in a particular context that is the source of this development and needs to be equally evaluated; 2. the context and its particularities are located within the social structure that necessarily implies a dispute over values and pedagogical intentionality in educational activities aimed at transforming this social structure; 3. the defense, reiterated here, of the importance of educational activities that provide collective and solidary values in the education of children. After all, Brazil is subject to

neoliberal social relations that express dependent capitalism, marked by violent social exclusions that permeate evaluation processes.

Without considering these assumptions, we fall into abstract reasoning, which does not encompass the totality and concreteness of development and its evaluation. Understanding the theoretical abstractions of Vygotskian thought systematized in this article implies refusing stigmatizing, classificatory, and meritocratic evaluation systems. In coherence with cultural-historical psychology, we affirm there is no reason to evaluate development in early childhood education schools if it is not to guide pedagogical actions that contribute to forming, in all singularities, the human and solidary aspects we have already produced historically and collectively. In our view, Vigotski's pedological studies are not arrival but rather starting points.

References

- Borghi, T. & Pantano, T. (2010). *POT-TT Protocolo de Observação Psicomotora*: relações entre aprendizagens, psicomotricidade e as neurociências. São José dos Campos-SP: Pulso editorial.
- Gass, E. L. & Stampa, M. (2018). *Prevenção das dificuldades de aprendizagem na educação infantil*: teoria e prática com instrumento de avaliação. Rio de Janeiro: Wak.
- Leite, S.A.S. (2015). *IAR-instrumento de avaliação do repertório básico para a alfabetização:* manual de aplicação e avaliação. São Paulo: EDICON.
- Leontiev, A. N. (1975). *Actividad Conciencia Personalidad*. Ciudad de La Habana: Pueblo y Educación.
- Magalhães, G. M. (2018, julho/dezembro) Atividade-guia e neoformações psíquicas: contribuições da psicologia histórico-cultural para o ensino desenvolvente na educação infantil. *Crítica Educativa* (Sorocaba/SP), v. 4, n. 2, pp. 275-286, jul./dez.,2018.
- Magalhães, G.M. (2020) Avaliação do desenvolvimento na educação infantil: uma pesquisa teórica. Relatório de estágio de pós-doutorado. Faculdade de educação. UNICAMP.
- Martins, L. M. (2013) O desenvolvimento do psiquismo e a educação escolar. Campinas: Autores Associados.
- Mello, S. A. (2018). A transição da educação infantil para o ensino fundamental: uma teoria para orientar o pensar e o agir docentes. *Educação em análise*. V.3, N.2, P.47-71, JUL/DEZ. 2018 DOI: 10.5433/1984-7939.2018v3n2p47.
- Miléo, I. S. O., Freitas, L. G. & Oliveira, C. N. S. (2020). Reflexões sobre a práticas avaliativas em uma creche no município de Altamira PA. *Zero-a-seis*, Florianópolis, v. 22, n. 41, p. 147-174, jan./jul., 2020. Universidade Federal de Santa Catarina. ISSN 1980-4512. Acesso em 16 de maio de 2020 de http://dx.doi.org/10.5007/1980-4512.2020v22n41p147.
- Morais, C., Borges, C., Chastinet, J. B., & Solovieva, Y. (2019) *Método de avaliação e estímulo da atividade lúdica: abordagem histórico-cultural.* São Paulo: Memnon.
- Oliveira, B. A dialética do singular-particular-universal. (2005). In: Abrantes, A. A.; Silva, N.

- R.; & Martins, S. T. F. Método histórico-social na psicologia social. Rio de Janeiro: Vozes. pp. 25-51.
- Pasqualini, J.C. (2013). Periodização do desenvolvimento psíquico à luz da Escola de Vigotski: a teoria histórico-cultural do desenvolvimento infantil e suas implicações pedagógicas. In: Marsiglia, A. C. G. (Org). (2013). Infância e pedagogia histórico-crítica. Campinas: Autores Associados. pp. 71-97.
- Piva, V. & Cordeiro, M. H. (2009) Um estudo utilizando a escala LIS YC (Escala Leuven de envolvimento para crianças pequenas). Anais do IX Congresso Nacional de Educação- EDUCERE. III Encontro Sul Brasileiro de Psicopedagogia. Curitiba: PUCPR.
- Ribeiro, B. (2018, maio/agosto). Avaliação da aprendizagem na educação infantil: um estudo exploratório em 125 municípios brasileiros. Revista Linhas. Florianópolis, v. 19, n. 40, p. 218-245.
- Rovira, M. C. & Peixe, O. D. (2004) A observação e a avaliação na escola infantil. IN: Arribas, T.L. e cols. Educação Infantil: desenvolvimento, currículo e organização escolar. 5. ed. Porto Alegre: Artmed.
- Schwartz, S. (2018). Falar e escutar na sala de aula: propostas de atividades práticas. Petrópolis – RJ: Vozes.
- Smolka, A. L. B. (2000). A memória em questão: uma perspectiva histórico-cultural. Educação & Sociedade. Educ. Soc. v.21 n.71 Campinas jul. 2000. pp.166-193. ISSN 1678-4626. Acesso em 20 de fevereiro de 2020 de https://doi.org/10.1590/S0101-73302000000200008.
- Vieira, A. P. A.; Leal, Z. F. R. G.; Solovieva, Y. (2019) A avaliação do desenvolvimento a partir da psicologia histórico-cultural: enfrentando a patologização. In: Facci, M. G. D.; Leonardo, N. S. T.; Souza, M. P. R. (orgs.). Avaliação psicológica e escolarização : contribuições da psicologia histórico-cultral. Teresina, PI: EDUFPI
- Vigotski, L. (2001) S. A construção do pensamento e da linguagem. São Paulo: Martins Fontes.
- Vigotski, L. S. (2008, junho) A brincadeira e o seu papel no desenvolvimento psíguico da criança. Revista Virtual de Gestão de Iniciativas Sociais. Tradução de Zoia Prestes. ISSN: 1808-6535. pp. 23-36.
- Vigotski, L. S. (2018) Sete aulas de L. S. Vigotski sobre os fundamentos da pedologia. Trad. e org. Zoia Prestes e Elizabeth Tunes. Rio de Janeiro: E-papers, 2018.
- Vigotski, L. S. (1996) Obras escogidas: psicología infantil. Tomo IV. Trad. Lydia Kuper. Madrid: Visor.

Received: January 26, 2021 Approved: September 06, 2021