

Rethinking the place of students intermediated by the Geographic, Historical and Cultural School Atlas of the Federal District, Brazil

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Abstract: The Basic Education teachers in Brazil face difficulties inherent in working with the geographical categories: Landscape, territory, region and place. These difficulties are related to the training of teachers who do not understand these categories and the lack of appropriate didactic material. The absence of local thematic maps prevents the understanding of the place as a living space and as a correlation of stories in the different scenarios of the city "The study of the place as a proposal for the continuing education of teachers of Basic Education from the School Atlas" is a project that allows teachers and students of the DF to approach these categories. The project is divided into two stages. The first stage was the preparation of the Geographic, Historical and Cultural School Atlas of the Federal District (AEGHC DF), completed in 2018. The second stage will be the training course for Basic Education teachers with exercises that involve the place category as a daily space that allows the construction of identities. The purpose of this article is to investigate the use of the AEGHC DF as an important mediator in the construction of spatial categories such as place and landscape in Geography classes. The Atlas is presented as a teaching methodology and strategy in the development of cartographic skills in the development of spatial reasoning. The AEGHC DF invites students and teachers to know more about maps, visualizing spaces, creating narratives and getting to know the place where they live.

Keywords: School Atlas, Place, Basic Education, Teacher Training

1. Introduction

Teachers from Basic Education in Brazil face inherent difficulties on working with geographical categories, such as landscape, territory, region and place. That can be related to the training of teachers who do not understand those categories and lack of appropriate didactic material. The students don't understand concepts closest to them, such as landscape and place, in the absence of adequate cartographic resources that allow the reflection and full understanding of these categories. The absence of local thematic maps prevents the understanding of the place as a living space and as a correlation of stories in the different scenarios of the city. This historical context is part of the imaginary narrative of the housing space of students that may or may not be represented in the maps.

In 2018, three teachers, who work with School Cartography at the Universities of Goiás, Brasília and Secretary of the State of Education of the Federal District, started the project "The study of the place as a proposal for continuing education of teachers from Basic Education with the School Atlas." The project is divided into stages – the first was the preparation of the Geographic, Historical and Cultural School Atlas of the Federal District (AEGHC DF), concluded in 2018. Then, on the second,

the Atlas is going to serve as the basis of the training of teachers from Basic Education, in a way that can prepare to work with exercises where the place is seen as a space of the quotidian, of the close and ordinary relations that allow the construction of people's identities.

The objective of this article is to investigate the use of the AEGHC DF as an important mediator in the construction of spatial categories in Geography classes in the public schools of the Federal District, Brazil. At this moment, the analysis of the first stage of the project will be made, with the presentation of the Atlas as mediator of learning.

1.1 The Atlas as a strategy in the development of spatial reasoning

School atlases have been the object of study to numerous researches, being seen as mediators in the construction of spatial and geographic thinking, not only in Brazil, but also in other countries.

In our studies, we have analyzed the extent to which the conceptual elaboration is expected, the role of the atlas as mediators in the acquisition of geographic concepts, what scientific concepts are present in each of the atlas boards, what is the role of the teacher in the process of "learning by doing" and, finally, the

construction of school knowledge at the interface between special thinking and geographic reasoning. For this, we seek preferably in Vygotsky, and in its diffusers, the theoretical basis for the continuity of this research.

The reason why the studies are based on the ideas of Vygotsky (2000) is because this Russian psychologist sought to explain the human specificities. The way he thought the nature of the sign in knowledge, and the passage from the organic to the cultural as a principle of meaning – is what led to understand the historical-cultural perspective as the best way to look at events in education.

Vygotsky considered education not only central to cognitive development, but also that higher psychological processes are developed in children by the acquisition of symbols and education in all its forms. The main practical contribution of his research was the development of concrete solutions to educational problems. Vygotsky did not invent a new theoretical system, he thought like a man of his time – set in the context of the Russian Revolution, and with a new proposal of historical analysis, he began to think like man that was constituted. His theory comes from his own experience, and he developed an idea that started with his intuition, from a referential that he lived and to which he fully committed.

According to Vygotsky, cultural development goes through three distinct moments – development itself, development for others and development for itself, to a point that the meaning that others attribute to natural data becomes meaningful for itself. It is the moment of the cultural constitution of the individual, when, through the other, it internalizes the meaning of the world transformed by the activity. The individual becomes a cultural being, where signification is the universal mediator of this process. The mastery of signs is a necessary condition for action, for access to information and for the development of thought.

Almeida (2001, 21) considers that:

“In the historical evolution of the use of signs with a social function of registration, the map was an instrument that emerged when the man needed a spatial record outside his memory, and it allowed him to work with more information and, therefore, to manipulate a larger range of knowledge to interfere with nature and to act on an absent space [...] Thinking about space becomes, then, a way to think about its representation.”

This may be one of the reasons for including spatial representation in the school curriculum. The necessary skills to the teaching-learning process derive from it – the construction of notions and geographical concepts.

In this discussion, we pointed out that learning is only possible if there is an interaction between teacher, student and knowledge, and the school becomes a necessary support that acts as mediator of this process. From the perspective of Vygotsky and other authors of the socio-historical current, the idea of mediation is based on the Marxist theory of production, where it is postulated that human development is the result of work activity, where

men transform themselves, developing specifically human functions and abilities.

Vygotsky speaks of two types of external mediators: the instruments and the signs. The School Atlas consists of an instrument loaded with signs. Instrument because it guides to regulate actions on objects; loaded with signs, since they are the ones that guide to regulate the actions on the psyche of the people (PINO, 2001).

The School Atlas act as mediating resources in the dynamics of the teaching-learning process. In working with the atlases, students and teachers' gaze are directed not only towards the conventions and printed symbols, but also to the indices of natural and cultural phenomena that present themselves in the municipality, in a real geographical context. From the interlocution between the subjects involved in the process, a link between representation and meaning occurs.

Thinking about meaning is contradictory, since the essence of thinking is to establish relationships and meanings. Significance is not directly in the sign, but in the effect of interlocution. It is then at the moment of interlocution that the atlas assumes the role of mediator between student, teacher and the acquisition of geographical concepts.

Conceptual elaboration is considered a culturally developed way, where individuals cognitively reflect their experiences, resulting from a process of abstraction and generalization of sensory data, which is mediated by and materialized in words. The conceptual elaboration does not develop naturally, it is apprehended and objectified in the real conditions of social interaction.

Fontana (1996, 120) says that:

“The child, from his first moments of life, is immersed in a system of social significations. Adults actively seek to incorporate it into the stock of actions and meanings historically produced and accumulated. Through the mediation of the other, clothed with gestures, acts and words, the child appropriates himself and elaborates the established (and emerging) forms of practical and mental activity of his culture, in a process in which thought and language articulate dynamically”.

School plays a very important role here. Vygotsky stresses the need to establish differences between the activity centered on everyday life and the expression that binds to it, from the systematized elaboration in the school. In daily interactions, adult mediation happens spontaneously – whereas in schooling interactions, the process is different. The child is placed before the particular task of understanding the bases of the systems of scientific conceptions, which differ from the spontaneous conceptual elaborations. For Vygotsky, the scientific concepts are part of a global explanatory system, organized within a logic socially constructed and recognized as legitimate. Since in the school context the activities involving the apprehension of systematized concepts are organized in a discursive and logical-verbal way, the relation of the child to the concept is always mediated by some other concept. In the School Atlas, this mediation is made by the notions constructed from certain

proposed skills, such as observation, registration, representation, analysis, interpretation, representation and communication.

Despite the differences between everyday (spontaneous) and scientific (systematized) concepts, in the process of child development, they articulate dialectically, transforming each other.

The research that involves the use of the Geographic, Historical and Cultural School Atlas of the Federal District and the training of teachers, constitutes one of the forms found to make feasible the presentation and the use of maps in teaching, where the appropriation of the representation space brings the understanding of School Geography and its study objectives.

The regional specificities of each elaborate atlas leads both the student and the teacher to the clarity of geographical concepts that can be approached, where they are led to perceive the relationships that exist within what they observe, become aware of, and attribute meanings to it. When analyzing, the student looks for the meanings and compares the observed parts in different stages of reading. In interpreting, it seeks to link new meanings to existing ones, and thus, draw new conclusions and raise hypotheses. The communication of these conclusions can be made through the different languages used in the teaching of Geography.

1.2 Curricular demands in the study of the place

It is called “School” Atlas because it presents essential aspects related to the School Curriculum and the learning demands of the classes and years. The AEGHC DF is presented as a teaching methodology and strategy in the development of cartographic skills in spatial reasoning. The AEGHC DF meets the curricular demands such as the Basic Guidelines Law, LDB 9394/96, PCN / 98 Curricular Parameters and the current National Curricular National Base, BNCC 2017, which focus on local, regional and global scales. The Atlas presents a language appropriate to the student's schooling in a format that goes beyond the presentation of maps and texts with only location exercises. It invites the students to participate in the process of educating people about the map – visualizing spaces, creating narratives and getting to know the place where they live.

Since they meet the curricular requirements, the school atlas also acts as a support for the work of the teacher, who has, in addition to the opportunity of in-service training, the freedom to create and develop his work with students.

2. Presentation of the Atlas

The School Atlases are elaborated to meet the specific curricular demands of each place, in different scales, respecting the guidelines prescribed in the official national documents. In this way, the material is composed of three parts: 1) didactic information for teacher orientation, work with the atlas, about literacy and cartographic literacy, the use of maps in teaching and work with school atlases, and guidelines for the development of activities parallel to the atlas, through research, fieldwork,

graphic representations, mental maps, etc. ; 2) theoretical and conceptual contents, data and information related to the thematic axes: historical, environmental, social, economic and cultural, comprising specific thematic planks that bring cartographic, graphic, tabular and textual productions; 3) proposals for didactic-interactive activities that allow for the continuous construction of knowledge, so that the student is led to seek answers, research complementary information and verify the accuracy of those data presented on the board, corroborating the atlas as a didactic material in a socio constructivist perspective.

The boards can serve as support for a differentiated and updated work about the county, and the teacher can use the boards in the way that he deems most appropriate, changing eventually the order of presentation of the same, depending on the interest and progress of the class, and parallel and complementary research may be developed on the subjects discussed. For example, in the course of studying the subject of population, the teacher can work on the concepts: population, natural growth, migration, etc., based on a research done by the students, in the family, in the street or in the neighborhood in which they live.

In the work presented on the boards, the student's spontaneous observation can be resumed and systematized by the teacher. The registration of this information – which can be the classroom, the sector where it lives, the community – can be done in different ways, either by verbalization of what was observed or by the production of texts or drawings. Depending on the stage of reasoning the student is in, it is possible to get him to perceive the relationships that exist within what he observed, that is, he becomes aware of and assigns meanings to his observations. In the analysis, the student looks for meanings and makes comparisons. In interpretation, it seeks to link new meanings to existing ones – in this way he will be drawing new conclusions and raising hypotheses, and the communication of his conclusions can be made through written, spoken or graphic language.

3. Ongoing teacher education

The proposal of teacher's training is in the sense that the information about the place of living is an important element in understanding the dynamics of land use and occupation; and that knowledge about this dynamic is closely related to the formation of mentalities compatible with the needs of the construction of a new subject, that of the 21st century.

In the specific case of the Geographic, Historical and Cultural School Atlas of the Federal District, it also provides for the inexistence of a specific material to work locally, which leads to an understanding of citizenship.

Final considerations

The AEGHC DF is primarily aimed at Primary and Secondary Education, where, according to the curricular guidelines, the themes related to the study of the living space, on a local to a global scale, are addressed. A new look at the study of the place and its representation should be encouraged as the first steps towards the demystification of Cartography, breaking with the

traditional model and incorporating the idea of its formative dimension in the construction of geographical concepts.

Another important aspect is that the work with maps, with a practice based on reading and interpretation of cartographic representations, provides a safe support for teaching, as well as new teaching strategies that provoke the creativity and inventiveness of teachers, as well as the use of personal experiences as a source of learning and encouragement for student's participation. In this way, contributing to teacher training with a specific material that addresses the locality under the bias of spatial analysis is one of the referrals of our research with school atlases.

We believe that the School Atlas values the local and regional space, assists the knowledge of the place and acts as a generator of activities with Cartography. It allows a contextualized work, greater autonomy of the teacher and possibility of real learning by the students – and it will prove to be very important in the development of the geographic and spatial reasoning of the school community of the Federal District.

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