

# CARTOGRAPHIC LANGUAGE AND THE MULTI-EDUCATION CURRICULUM

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## 1. Introduction.

The diversity of socio-cultural realities in Rio de Janeiro's municipal schools was the starting point for the Basic Curricular Multi-education Nucleus. The axis of this is conceived where the educational principles of environment, work, culture and language articulate through the conceptual principles of identity, time, space and transformation. The Multi-education Curriculum was collectively developed by teams with members from different sectors of the Municipal Education Secretary. Multi-education has been put into practice at 1,029 municipal schools since the beginning of the 1997 school year. In this context, education has the mission of offering students access to knowledge that is organized into blocks. Content is made up of concepts, which in turn relate to other concepts. The relations among these concepts can be determined by means of mental operations. Each school can and must create its own pedagogical project to develop a communal reality.

With knowledge of local conditions, it is necessary to determine students' needs, difficulties and desire. In order to do so effectively, work must be done with curriculum content to make learning relevant. The conceptual nuclei and educational principles recommended by the Multiple Education Curriculum (MEC) should be able to adapt to and articulate these student realities. In order to connect education to the social reality of the student, we developed a pedagogical method that employs a cartographic activity. This was done in a school community within the municipal education network. The choice of cartographic language to indicate, alert and read the space is supported in studies conducted by Lacoste (1988). This study places value on the reading of space and its representation as necessary instruments for the formation of an autonomous, conscious and critical human being. Cartographic language thus provides a strategic instrument to think and become a citizen. To quote Multi-education (1997), "[t]he introduction of our students to the exercise of the citizenship supposes the understanding of their individualities in relation to the social groups to which they belong, or with which they must interact."

## Creating new ways to work

The Multi-educational Curriculum gives the teacher an opportunity to build new pedagogical practices which make the student construction of knowledge possible.

The aims of the Multi-educational Curriculum are explained in Table 1:

	<b>Environment Work Culture Language</b>	<b>Work</b>	<b>Culture</b>	<b>Language</b>
<b>Identity</b>	To identify oneself as the member of a social group, of a community, of a region, understanding the relations established in the physical, cultural and social environment.	To understand work as a fundamental activity of human beings, understanding the productive activity as a part of identity.	To acknowledge the existence of different cultural groups with manifestations of their own, identifying oneself as a member of a certain social, cultural and ethnic group.	To realize the influences of multiple languages and adopting them in a critical way in the formation of the individual and cultural identity: gestures, oral, written, visual, plastic, musical, television, computer, etc.

<b>Space</b>	To analyse the different ways of occupying physical space, discussing questions concerning quality of life and the best way to occupy this space by society, for it to be more just and more human.	To identify the alterations that occur in physical and social space through productive activities, considering that different production modes create new forms of space occupation and a new quality of life.	To acknowledge that human groups have distinctive traits, in different places, although all of them bring the sense of the universal which provokes mutual responsibility.	To understand the mediating role of media, making it possible to globalize the relations and approximate subjects situated in different spaces.
<b>Time</b>	To analyse the historical transformations in the physical, social and cultural environment, understanding that human interventions modify both the environment and its people.	To understand the production modes and the work relations between men, in different historical times, and the consequences for the present and future.	To live critically with cultural plurality, being able to question the imposition of cultural patterns and to understand the possibility of dynamic conviviality, acknowledging the cultural diversity of the Brazil.	To establish an interaction with the languages of his time, analyzing critically the power of the communication technologies, and becoming a meaning producer, and not only a meaning receiver.
<b>Transformation</b>	To understand the interdependence of beings, developing action oriented toward the transformation of the physical, cultural and social environment, in such a way that guarantees better life conditions for everyone.	To incorporate ethical principles which promote fundamental changes, creating a new relationship, integrating work/ production/ pleasure/ quality of life and favouring a critical reading and a transforming action on the relationship among work/ exploration/ consumerism.	To acknowledge that people create symbols, live and learn inside their social group, and in relation to other groups, and that within this cultural activity they construct and transform their own identity, the sense of time, space, work, ethics, etc.	To understand the role of languages as transforming mediation instruments of humans, whether independently, or with others and the world, and that these transforming languages can be used to foster a better understanding among social groups, cities, states and countries, for peace and a honorable and constructive life.

*Table 1: The basic nucleus of the multi-education curriculum*

## Methodology

This proposal intends to make students understand the concept of space by using cartographic language to construct the notion of territoriality. This notion implies corresponding ideas of location, orientation and natural data representation, which contribute to the understanding of space as a whole (Rangel and Targino, 1997). In the same way, "every map offers only its own perspective on the world, however objective it may appear or claim to be, a perspective that implies a particular assertion of reality" (King, 1996).

As a result, cartographic language can and must be introduced at nursery school and kindergarten, not just at the Grade 5 level, and should be done by the Geography teacher. Several contemporary languages make the expression of new ideas and information possible. Through these languages, elements and concepts of Cartography have been transmitted to children in schools.

Questionnaires asked students to respond to the same questions posed by Anderson in 1996:

- What is a map?
- How do you feel about maps?
- What do you hate most about maps?
- What information does this map show?

The same questions were also asked of elementary school teachers. The results indicated that both students and teachers have difficulties when reading maps. Further training, workshops and presentations were needed and we invested in these. We also used TV programs to demonstrate successful experiences in several schools within our teaching network. These are now a part of teacher training and show a way of utilising cartographic language. In addition, children's map contest also demonstrated that the map functions as a means of communication. The Rio Atlas CD-ROM was also used (Figure 1). It provided information and current data about the city. The establishment of an intra-net network also showed the importance of knowing how to read maps. This system allowed schools to maintain an updated and accessible databank for students. Knowing how to read maps contributes to a greater understanding of cultural, social and historical issue. These media are available for schools to develop pedagogical projects that use cartographic language and concepts. This not only helps to build cartographic knowledge, but also illustrates new ways to promote other languages, and multiple forms of teaching and learning.



Figure 1: Rio Atlas CD-ROM.

## Conclusion

Using the concepts of the Multi-education Curriculum, and with creative and dynamic pedagogical activities, we can offer students an active learning process that encourages knowledge of space. Cartographic language provides a direct and effective means of doing so. The value of those pedagogical method is reinforced when students can read and conceptualize neighbouring space as a way to identify environmental problems within their communities. This, in turn, helps students to develop into critical, conscious and responsible citizens.

## References:

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