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TRAVELLING WITH PHILEAS FOGG – JULES VERNE'S LITERATURE AS A PEDAGOGICAL RESOURCE IN TEACHING GEOGRAPHY

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Abstract: Having the reading of the book Around the World in 80 Days, by Jules Verne, as the initial motivation, a project for teaching Geography in the 7th year of elementary school II was thought of, allowing students to “travel” with the main character - Phileas Fogg - in his story of adventure, overcoming and scientific knowledge of planet Earth. And so, through the events experienced in the characters’ daily lives, the readers/travelers when connecting with the great trip, its planning, their inquiries about the problems faced, were able to make connections and analogies with the content of Geography proposed for the series, making the teaching meaningful and pleasurable. The theoretical - methodological assumptions that served as the basis for the work are present in David Ausubel, Lev Vygotsky, Piaget and Henri Wallon.

Keywords: Teaching Geography - Jules Verne- Around the World in 80 Days - Geography and juvenile Literature.

“It is because the grain is spread that the seed ends up finding fertile ground.” Jules Verne

supersonic trains, planes, satellites, GPS, telephony... The mission seems inconceivable, however, Phileas Fogg, accompanied by his loyal helper –Jean Passepartout, will start this adventure and take advantage of all possible and impossible resources to triumph. He will succeed despite the hunt of detective Fix, the London police, who mistakenly will take him for a thief on the run, and will chase him across the globe.

In the project designed for teaching Geography in the 7th year of Elementary School II, entitled “Project: Voyage through the Geography – Traveling with Phileas Fogg”, students became participants in this global itinerary and accompanied the character Phileas Fogg on his extraordinary pilgrimage. It was carried out with one (1) class of the 7th year of Elementary School II, in the 2nd quarter of the school year, in the city of Belo Horizonte – Minas Gerais.

The basis of the project is grounded on the theory of Meaningful Learning Assimilation and Retention by David Ausubel (1980), which considers that: “Learning by meaningful reception mainly involves the acquisition of new meanings from the learning material presented. It requires for a meaningful learning mechanism to present material potentially meaningful to the learner. In turn, the last condition presupposes (1) that the learning material itself can be related in a non-arbitrary (plausible, sensitive and non-random) and non-literal way with any approach”

INTRODUCTION

The story created by the writer Jules Verne – Around the World in 80 Days – begins when, during a meeting at a gentlemen’s club (Reform Club), in the city of London, a typical member of the English aristocracy named Phileas Fogg, bets with his peers that he is qualified to go around the world in just 80 days; the year is 1872. We are talking about an industrial society of the 19th century without the technological means we have today such as modern and

priate and relevant cognitive structure (which has 'logical' meaning) and (2) that the learner's particular cognitive structure contains relevant anchored ideas, with which the new material can be related. (Ausubel, 1980, p. 1)

Therefore, the dialogue between these imminent or possible new concepts and determinant knowledge and/or experiences, already existing within the student's intellectual organization, together, will give rise to the embryo of a meaningful, true learning. And since each person has a particular cognitive structure, this acquisition will also be unique.

Learning does not happen because of the material used, according to Ausubel, the learning material has the role of being "potentially significant". We say, adding to this reasoning, that it is a "subterfuge", in the best sense, created to whet curiosity, promote creativity and allow students to make analogies between the various components that exist in the teaching-learning process.

For us, the guiding thread of cognitive learning is affection linked to playfulness, especially in this age group (11 to 12 years old), and affection develops, as we know, together with intelligence. The recognition of affectivity in educational development leads to the emergence, in the interpersonal relationships of the group, of cooperation and reciprocity; living in a group, and especially working in a group, is a basic learning experience.

The teaching material must be drawn up within a pedagogical process, using an appropriate methodology and according to clear objectives. The pre-produced ma-

terial and that idealized in the educational process, in parts and/or as a whole, can be significant or not, it will depend on their interaction and assimilation by the students. In fact, even coherently significant material (in our opinion) can be understood mechanically by the student. If it's not interesting to him, it won't be relevant. If pertinent, the elements coalesce, cognitively speaking, in a timely manner, allowing generalizations, still according to Ausubel.

And when these conceptualizations take place through experiences, still according to Ausubel, we have successive stages of elaboration of hypotheses, new attempts at successes, search for answers and problem solving, with the generation of new concepts. This walk favors the acquisition of a new way of thinking, contributing to effective learning. For learning to take place in a deeper way, then, prior knowledge is necessary, the bridge between the materials produced and knowledge constructed daily by the students, as well as interest; a combination of factors. Learning takes place, among other reasons, because the student is not passive in the evolution of their learning.

Ausubel (1980) clarifies this point below:

Learning by meaningful reception is inherently an active process, as it requires at least: (1) the type of cognitive analysis needed to ascertain which aspects of the existing cognitive structure are most relevant to potentially significant new material; (2) some degree of reconciliation with existing ideas in the cognitive structure – that is, apprehen-

sion of similarities and differences and resolution of real or apparent contradictions between new and already ingrained concepts and propositions; and (3) reformulation of the learning material in terms of the idiosyncratic intellectual background and vocabulary of the learner in particular. (Ausubel, 1980, page 6)

Believing in these principles, we established the project's goals and started its execution.

Goals

We chose the book Around the World in 80 Days after a survey by teachers and a survey with students about books of expeditions and adventures they knew or would like to know about. The book chosen is in the form of a comic book, particularly due to the age of the students and their attractiveness in this area.

The use of literature as a pedagogical resource in Geography encourages reading and the use of new languages in teaching, in this case, comic books. And it makes the student realize that Geography is present in everything we do and experience, it depends on our perception. Along with reading the book, new subjects were naturally added to the collective discussion, requiring research and searches in different media, in addition to the preparation of materials related to the project (maps, records about the countries visited, letters and travel postcards sent to parents, between others).

To stimulate students' interest, the choice of Jules Verne's book was crucial, as

he knew how to take geographical knowledge for himself, allowing for other conceptions of the world that were progressing at an accelerated pace. Geography became the background for his exciting literary creations, with instigating characters – scientists, explorers of all kinds, men in search of scientific knowledge, new frontiers and spaces and challenges. Revealing how technological appropriation took place at that historical moment, rich in inventions, discoveries of new territories and the domination of most of the world by a single European power – England.

The fact that he was a cultured and enlightened man, beyond his time, also impelled him to make his warnings in his books, so that advances did not become sterile and that tradition did not become an ever-growing field of inequalities between men.

In many ways, Jules Verne was a visionary and made use of Geography so that, in the course of his stories, characters and readers were taken by the vision/imagination of landscapes, of new points of view on life and the world, in addition to the search for uniqueness, through discernment, illustration and the aggrandizement of human knowledge. He tricked the common sense of heroes, making them more human and this brought us even closer to his work, generating an enchantment.

The topics covered were varied, although the project was designed for the 7th year of elementary school II, it can be adapted to other grades, with greater depth, at the choice of the responsible teacher. Learning will take place directly and indirectly, taking into account the enthusiasm aroused in students and in the teacher, associating them as much as possible. The following are some examples of what was worked on and other

feasible suggestions, without specifying the grade and the degree of complexity required, without the danger of exhausting the alternatives, which are immense:

a) Topics covered:

- global view of the terrestrial planisphere, continents and oceans, concepts of circumnavigation, landscape, place, space, countries, borders, limits, among others;
- hemispheres, orientation, time zones and the history of the creation of this world time system;
- geographic coordinates (Greenwich meridian, latitude and longitude, International Date Line);
- scientific evolution in the period compared to current advances, means of transport, the Industrial Revolution in England and its subsequent expansion;
- the prevailing worldview at the time the book was written, the existence of the British Empire and its power portrayed in its colonies around the world, types of colonization and the consequences of colonization for today's independent countries;
- the perceptions of landscapes and inhabitants of places so far away from England, the idealization and excessive praise of English customs – considered models of civilization;
- cultural, social and economic inequalities between peoples;
- violence against women (when Phileas Fogg and Passepartout save the Indian girl - Mrs. Aouda - from death during her passage through India);

- general knowledge about the countries/colonies visited: location, language, flag, climate(s), curious customs, government systems, cuisine, sights...

b) other possibilities

- the relationship of fictional and non-fictional travel reports with Geography (literature and geography);
- the history of the geographical development thought and how it appears in the book;
- the application of the principles of Geography in everyday life, in the classroom and outside it – analogy, extension, connectedness or interaction, causality and activity;
- types of prejudice, the difficulty of dealing with differences, otherness, racism, xenophobia, ethnocentrism;
- who were the explorers of the past, who paid for their travels, who they served;
- the demystification of the hero's image in Jules Verne's books;
- the relationship between geography and art, the Portuguese language and history;
- the importance of cartography as a support for teaching Geography, the differences between cartographic knowledge in the 19th century and cartographic knowledge today...

Interacting with David Ausubel's theory, we employ the parameters also present in Lev Vygotsky's Historical-Cultural Theory and Henri Wallon and Jean Piaget's Development Theories; that are complementary. Vygotsky is based on the idea of

a subject who learns to share, forming his consciousness through contact with objects in a process permeated by the other, through social relations. Being generated by materiality, emotion, corporeality and signaled by historical, political, social and cultural circumstances.

In Vygotsky, the process of discovery and learning is an essential part of the expansion of knowledge. And everything that is part of this teaching-learning progression is learning: a discovery for those who learn, for those who show the way and for both, due to the bond created between them; elucidating further that the concatenation between learning and development occurs transversally through the zone of proximal development, which is nothing more than the distance between the possible/desired levels of development with the actual/achieved level of development.

This “link” between learning and development is a proactive space for knowledge, from that moment when a child can solve a particular problem on his own, the simplest one, to another in which he has the help of a colleague/parent/teacher, even in a more elaborate scale on which she recognizes, discerns more deeply about, and moves forward, mastering the situation for herself.

Fleeing from the notions of traditional psychology, in which occurred dismembers between affective, intellectual and our will (volitive) senses, Vygotsky stated that reasoning arises in the scope of motivation, which in turn implies the presence of emotion, of affectivity, interests, stimuli, empathy and needs. We will be able to embrace human thought, according to Vygotsky's vision, when we incorporate its volitional affective expression into its ballast. And

for him, the link between affectivity and cognition is an indivisible amalgamation.

For Würfel (apud Vigotsky - 2015 p.61), “the child can always do more and solve more difficult tasks in collaboration under the guidance of someone and with their help, do it himself”. Thus, according to the author, “the child is constantly growing, at the time when he is able to perform tasks that were difficult before and now are no longer difficult, with new difficulties arising and so on, a process explained through the zone of proximal development.” Difficulties and problems are not paralyzing in this context, they are stimulating, intensifying learning and arousing everyone's curiosity.

The teacher, therefore, in Vygotsky's view, is a mediator in the teaching-learning process, he must channel the energy and the student's contentment and his for the good of all involved, once he has the understanding that the link between the individual and the world only takes place in a link permeated by everyday interactions and language.

Henri Paul Hyacinthe Wallon proposes a “dialectical” learning, in which there are no absolute truths, but the revival of alternatives in favor of learning. It proposes, in response to the simplistic views of the time, the study of the person in its entirety: in its cognitive, affective and motor nature, with the ability to understand reality as important as the individual's affectivity or motor skills.

Wallon does not believe that the child grows up in a biological and social immutability. Development happens following ups and downs, in the midst of internal conflicts, at different stages, both with the child and with the adult. And each stage affirms

a unique conformation between one individual and another, in a development that leads to conflagration. In the early stages there is a preponderance of the biological factor, with time the social aspect assumes a predominant force.

Like Vygotsky, Wallon understands that the analysis of the socio-cultural approach is indispensable. The socio-cultural behaviors and language support the reasoning to evolve, become more refined. In the midst of society, each one more diverse than the other, we will not find linearity in the individual's development, this instability amid ruptures, setbacks and natural hostilities in the survival process forces the individual to intensify his efforts, to progress. That said, we will have basically affective moments, linked to the construction of one's own identity, up to highly cognitive moments, focused on the perception of reality.

For Wallon, cognition has specific categories that he calls functional fields (affectivity, movement, intelligence and the individual). Affection is at the heart of the structuring of the "I" and of the individual's consciousness; it is a natural step in human improvement.

In the beginning of life, when children, affectivity and intelligence are intertwined and from the moment relationships happen, they are distinguished. To stimulate intelligence we need to positively activate affectivity. And the conjunction of the two (affection and intelligence) in the midst of the social fabric in which we live conceives the character of individuals. The French psychologist seeks, therefore, to understand how the constitution of the person occurs, so much so that his theory is called Personality Development.

In Piaget, unlike Wallon, there is no clash between affectivity and intellectuality, but a harmonization between them, one contributing to the progress of the other. Past experiences are linked to future projections, however, the former provide conditions for the individual to adapt to situations and re-elaborate the new skills and concepts that will emerge in their daily lives. The individual is in continuous transmutation, as it welcomes internal and external events to its existence, which subsidizes its improvement. Knowledge for Piaget is built on this interaction.

Thus, based on the teachings of the aforementioned pedagogues and psychologists, we combine the teaching of Geography with affection, common interests (of students and teachers), the structuring of our own methodology and the production of low-cost teaching material, making the practice enjoyable and effective learning.

All cities mentioned in the trip were identified on the travel map displayed on the classroom wall. Students had an active participation in the entire project, with each class there was a collective discussion about the progress of the experience, what had been the discoveries made and what had been assimilated so far.

The sequencing was not rigid, it followed the spontaneous evolution of the teaching-learning process, being only directed by the teachers to fulfill certain essential points. To make the steps easier to understand, we describe them below.

- practice planning (methodology, teaching materials that will be used, number of classes available, subjects that must be covered in the work, fea-

sibility of being carried out with other discipline(s),);

- elaboration of the literary/geographic travel map to be placed on the living room wall;
- making books available for reading;
- beginning of the collective reading of the book "Around the World in 80 Days" by Jules Verne;
- construction of the travel bag and its customization, manufacture of stamps for the passport;
- printing of passports and files of the countries to be visited - individual;
- production by students of travel postcards and letters with their stories to the family;
- collective discussion of the work as the project progresses;
- assessment.

The Piagetian theory explains that the child, based on particularized knowledge, will absorb new understandings about their reality. Human assimilation is the insight of the whole or part of this whole, and learning to happen will demand the existence of relationships between the parts so that we can look at the world from a deeper perspective.

As intelligence takes possession of the instrument of reason, categorizing it, the will takes over the object itself, configuring it and giving it its own meaning. It is through experimentation with the concrete that the individual learns something new, he achieves this through his own skills, as he managed to create decisive assumptions that made him relate satisfactorily with the environment.

By inferring Piaget's teachings, the teacher is able to operate correctly manner with the cognitive processes and interrelate with the student, listening to their history, skills and knowledge. We must always be open to new paths, this pedagogical "north" is possible if we truly "look" at our students and recognize them.

On the other hand, David Paul Ausubel's Theory of Meaningful Learning, also supported by constructivism, exhibits different and complex concepts, investigating how to transform learning into a more expressive process, basically analyzing the means that provide knowledge in the individual and in what configurations this dialogue takes place.

According to David Ausubel (1980), if we wanted to synthesize the teaching-learning process in education in its genesis, we would say like him:

"- The single most important factor influencing learning is what the learner already knows. Find out what you know and base your teachings on it." (Ausubel, 1980, p.137).

We affirm that together with what has been exposed, what each student already knows is part of their history and the appropriation of their learning, if we manage to unite this knowledge by seeking areas of contact similar to Geography and its fields of interest and competences, we will take this charm and this sympathy for teaching-learning and, consequently, for the practice of teaching Geography.

This project was one of those attempts that gave excellent results, as photos presented parts of the developed project (Figures 1, 2, 3, 4).



Figure 1 - Passport – Traveling with Phileas Fogg.

Source: Photo by the authors.

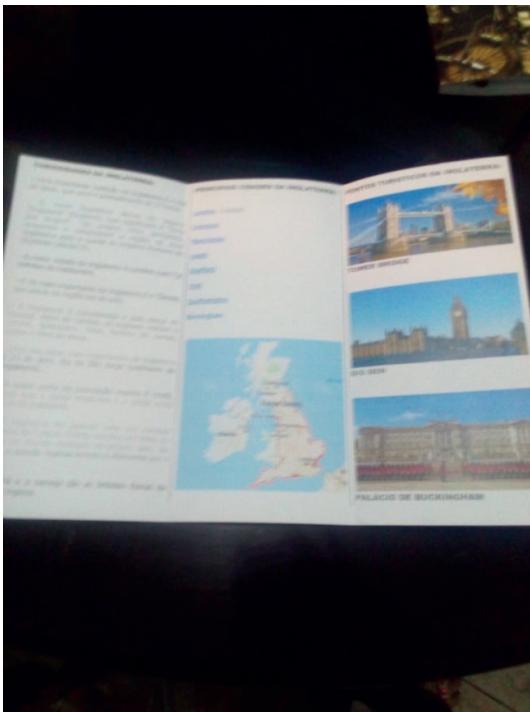


Figure 2 - Country file.

Source: Photo by authors.



Figure 3 – Example of a country binder with individual student folders.

Source: Photo by authors.



Figure 4 – Collective briefcase with Project materials.

Source: Photo by authors.

METHODOLOGY

1. Proposal for a trip with a literary character, whose history existed anchored to England at the beginning of the Industrial Revolution period. The work “Around the World in 80 days” was suggested because it encompasses this historical context, it is an adventure, going through several places that were under the English domain and focusing on geographic issues, including time zones, the influence of means of transport, among other matters;

2. Construction of a timeline of the main events that took place in England for students to have an idea of the chronology of events, from the 15th century to the 21st century, with the location of the story "Around the World in 80 days" in time and in space;
3. Reading the work in a comic book version;
4. Discussion of the various aspects of the work (the author and his life, when it was written, its historical-geographic and social scenarios);
5. Proposal for a trip following in the footsteps of the character (Phileas Fogg), leaving Brazil towards England to start the adventure;
6. Elaboration of a passport, a basic filing cabinet and a suitcase to store the geographic information that will be collected along the imaginary journey, (Figure 5);



Figure 5 - View of the collective briefcase.

Source: Photo by authors.

7. Location of the route on a current world map, with the waypoints, to give an idea of the length of the journey (distances covered, countries and places, cultural diversity);
8. Beginning of the trip, with the stamp in the passports and beginning of filling out the files with the information of each country the traveler has passed through;
9. Collective discussion of the information collected in each country so that everyone had the same information (especially from the item "curiosities")
10. Analysis of the types of transport available according to the countries the character traveled through, to give an idea of technological development available at the time and in space (1872);
11. Conversation of ways to count time during the adventure;
12. Elaboration of models of the means of transport from that time, according to the means used by the character Phileas Fogg;
13. Solving the time counting puzzle present in the book, which allowed the character at the end of the story to win the bet, and comparison with the current time zone system;

Exhibition held at the school showing the progress of the entire project,

14. Possibility of working the project with several subjects: Science, Portuguese, Arts...

For a greater contextualization of England, at the end of the works, the following were built:

- a panel of the main English personalities in chronological order, from the 15th century to the 21st century, with a greater focus on the 19th century;
- - a family tree of the English royal family from Queen Victoria to the present day;
- The materials produced and used throughout this work were organized in an exhibition, as mentioned above, with the purpose of giving an overview of the adventure experienced by the student-travelers.

FINAL CONSIDERATIONS

Of an equivalent nature, Vygotsky, Piaget, Wallon and Ausubel, each in their own way, supplanted behaviorist, behavioral and reductionist theories through phenomenology, among others, by submitting the theoretical principles of interactionism to teaching and learning. Thus, all learning elements (subject, object, objective, subjective) interact, change continuously, re-elaborating again, far beyond the action of the medium and abstraction.

The pedagogical and psychological bases of these authors served as guidance for the project, to which we added the perceptions about the work itself, the students and the daily practice of the teachers involved. We found that literature interacts perfectly with the teaching context of Geography and with the students' ability to create and with the didactic-methodological construction of the teachers.

As a tool, literature acts as a link between them. The book in question, in addition to all the topics already discussed, reveals a lot about the society of the time it was

written and about today's society, through the views we can have of its plot, which can be understood as a possibility of historiographic research.

The set of activities in the "Passport - Traveling with Phileas Fogg" carries with it the conditions for meaningful learning as explained by Ausubel; takes into account the affectivity in the teaching-learning process (Wallon) and recognizes that the student's psychological potential is influenced by the socio-cultural context in which the child is inserted (Vygotsky, Wallon).

Along with affectivity, there was a union with playfulness, and by recognizing that every human being interacts and interdepends on the other, and that they must "dialogue" in all spaces, we add another determining aspect in teaching-learning, alterity.

Undoubtedly, the differentiated experience in the classroom demonstrated that the value of the work is not only in the methodology and in the possibility of literally traveling with the character Phileas Fogg, but in the conception of how knowledge is elaborated and what are its didactic gains, which surpass literature. The process created pleasant moments and allowed questions, addressing various topics with greater depth of geographic concepts.

Finally, based on the study of literature and having as a traveling companion the main character, Phileas Fogg throughout the book, the project made us understand that cultural production, and in this case, literature, is not separated from the context of daily life and the formation of concepts and methodological principles of geography.

Practices, together with playfulness and affection, are vehicles for learning, which took place with the individual and collective elaboration of knowledge, liking know-

ledge with curiosity and the awakening of discoveries. All these factors can and should be present in the classroom and are related to our worldviews and how we view the educational process. They allow us to reflect at all times between the teacher we are and the one we want to be, in constant feedback.

The project calls us to always look for new strategies and methodologies, thus contributing to the search for improving teaching, educational practice and the desire for greater humanization within the educational process. And it stimulates the student, when he understands that learning begins in the inner will of each one and that knowledge is everywhere. It exposes the idea that playfulness, joy, cannot be used as pedagogical tools. Where is it written that learning has to be sad or boring? The teaching revolution begins in our actions and practices.

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