CONCEPT MAP AS SCHOOL GENRE: CONSIDERATIONS FOR TEACHING AND LEARNING

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Abstract. This paper aims at reflecting upon concept maps teaching and learning in school. Firstly it assumes Bakhtin's theory on language, and genres, as an attempt to help people understand the complexity of a language process such as the one involved in concept map production, and, at the same time, what it means to consider a text a specific genre. Bronckart's theory of genre is referred and paralleled to Novak and Cañas' description of concept map as a way of analyzing the genre. Then, based on Dolz e Schneuwly it situates the concept map in the context of school, assuming it a school genre, which would be the first step into being able to design a teaching sequence for the concept map. It stands as a motivation for language teachers to work together with computer science teachers and specific discipline teachers as ways of helping students develop progressively the communicative skills which production of meaning in concept map involve.

1   Introduction

The use of concept map has been growing. Proposed in the 70´s by Novak when facing difficulty in organizing and representing knowledge and more recently digitalized by Cañas through the Cmap tools, it has been being used in education as a teaching and learning tool. Research can be found which show the benefits of using the tool specially linked to meaningful learning. Research which analyze it as a text genre are scarce though, even in the linguistics field, which would help in considerations on how to teach it as a genre. We are all native speakers of one idiom or another, that does not qualify everyone to teach such idiom, does it? We can read, and that does not qualify us to be elementary school teachers teaching literacy, does it? The point is: we may be good concept map readers or producers, is that enough to be good reading and producing cmaps teachers? Usually not.

This paper discusses theoretical issues concerning concept maps from the point of view linguistics, more specifically, from the socio-interactionist approach. Assuming concept map as a genre of discourse, and furthermore, as a school genre, it aims at reinforcing teacher's awareness of the need to consider the linguistic dimension to be able to propose meaningful activities involving concept maps.

2   Concept maps as a genre

According to Bakhtin(2002), the history of society is linked to the history of language transformations which are reflected in genres. That is to say that the different historical moments and contexts are marked and determined by genres that come and genres that disappear or are transformed.

"The use of language happens in the form of utterance (oral or written), concrete and unique, which emanate from one or another sphere of human activity. A utterance reflects the specific conditions and purposes of each of such spheres, not only for its content (theme) and its verbal style, that is, for the operated selection of language resources – lexical, phrasal and grammar resources, but yet, and most, for its compositional structure" (Bahktin 1975 p. 279).

According to the author, these three elements – theme content, style and compositional construction – cast in the whole of the statement and are marked by the specificity of a sphere of communication. Each sphere elaborates its relatively stable types of statements, such types Bakhtin calls genres of discourse. The author states that no one can ignore the nature of the utterance and particularities of the genre in a linguistic study.

A concept map is a specific genre, it uses language to communicate utterances. Studies involving concept maps are linguistic studies too and should be considered as so. A concept map has a content theme, has a style and a com-

positional structure, which should be considered in the production of meaning which designing or reading it aims at.

According to Bakhtin, genres are dynamic. They are born and die or disappear – many times related to techno-logical advances or scientific evolution. Examples are the wide spread of e-mails and social networks, and the fall of telegraph. The genre concept map is recent, given its possibilities, not very much used. The Cmap tools makes a revolution possible in terms of knowledge accessing and it is making the concept map more popular. But still, being innovative, it will have to face the resistance of the movements of conservation of society.

According to Novak & Cañas
"Concept maps are graphical tools for organizing and representing knowledge. They include concepts, usually en-closed in circles or boxes of some type, and relationships between concepts indicated by a connecting line linking two concepts. Words on the line, referred to as linking words or linking phrases, specify the relationship between the two concepts. We define concept as a perceived regularity in events or objects, or records of events or objects, designated by a label. The label for most concepts is a word, although sometimes we use symbols such as + or %, and sometimes more than one word is used. Propositions are statements about some object or event in the universe, either naturally occurring or constructed. Propositions contain two or more concepts connected using linking words or phrases to form a meaningful statement. Sometimes these are called semantic units, or units of meaning." (Novak and Cañas, 2008)

Concept map is a map of concepts and their relations. Such concepts are here considered in Bahktin's perspective of the notion of word. The notion of word is central to Bakhtin's theory. Stella (2005) states that, for Bakhtin., the word is faced as a concrete element of ideological making, related to the life, to the reality.
"The speaker, giving life to a word with his intonation, dialogues directly with the values of society, expressing his points of views in relation to such values. These such values must be apprehended and confirmed or not buy the interlocutor. The spoken, expressed, stated word constitutes itself in a ideological product, result of a interaction pro-cess in live reality." (Stella 2005 p.178)

Bakhtin states that the word, as the phrase, cannot be considered isolated, for it would have meaning, but would not have sense. Meaning refers to the elements of utterance which are reiterable and identical every time they are repeated. They are abstract elements founded upon a convention and have no concrete existence. The theme is the expression of a concrete historical situation which originated the utterance. The theme of the utterance is not redu-cible to analysis. Meaning, on the other hand, according to Bakhtin, can be analyzed in a set of significances linked to the linguistic elements that compose it. Meaning is not anything in itself; it is, according to this perspective, just a potential, a possibility of sense in a concrete theme .

To Bakhtin, the lexicographical meanings of word of a language guarantee their common use and comprehension by the speakers of the language, but as they are used in active verbal communication, they will always be marked by individuality and by the context.

"One can state that a word exists to the interlocutor under three aspects: as a neutral word in a language that does not belong to anyone; as word of another, pertaining to other and which fill the echoes of other people's utterances; and, finally, as my word, for, as I use this word in a specific situation, with a discursive intention, it has already been impregnated with my expressivity. (Bakhtin, 1992, p.313)

The neutral word would be that which presents a potential meaning that makes it possible for it to be used in many different contexts, in different utterance situations. The word of another and my word are marked by expressivity , which does not belong to the word (neutral) itself: belongs to the other and to me. The distinction between my word and the word of another is complex. According to Bakhtin, "the time, the social environment, the micro-cosmos – of the family, of the friends, of the colleagues – that sees man grow and live always possesses its own utterances, which work as norm and give the tone" (1992, p 313). The tone come from scientific, literary and ideological works in which people rely making references, and quoting them.

"The tone comes from followed traditions that express themselves and preserve themselves in the involucrus of words. There are always a certain number of directions that emanate from the lights of a time, certain number of objectives to be pursued, a certain number of words of order, etc " (Bakhtin, 1992, p.313)

Bakhtin states that our discourse is full of words of another, therefore, he points out that only a mythical Adam would intend to use a word for the first time and therefore, not bring in it, the marks of the others – marks of expressivity that we assimilate, restructure, modify, leaving our own mark and making them my word.

According to this author, therefore, other voices are present in each discourse, but these voices do not work in the same way: there voices that are persuasive and voices that are authoritarian.

"The word of another presents itself not as information, rules, models ,etc. It tries to define its own basis to our ideological attitude in relation to the world and to our behavior, it appears here as authoritarian and as interiorly persuasive" (p.142).

To Bakhtin, finally, words carry their marks of social and historical life, they are not available neutral of ideology, nevertheless, the enunciator has the challenge of using them, pronouncing himself dialogically in order to answer and generate questions; adding to these same words his individuality. Concerning this aspect, Bakhtin states that "the word of a language is a half other people's word, it only becomes own when the speaker populates it with his intention, with his accent, when he dominates it with his discourse, making it familiar with his semantic and expressive orientation."(p.100). One can say that there is a code, but this code is used by many languages, at each new utterance, another language, for language must involve meaning, and sense only happens in context.

 To be an author to Bakhtin is to assume a strategic position in context of circulation and in the battle of voices. Authorship is not the same as singularity, the subject may not assume a strategic position in the dialogical current, he may not have a dialogic attitude, that would arise or answer questions, he may assume a monologic position, when, for example, he makes utterances just by using authoritarian words. Every enunciative act is fundamentally dialogic but it can be more open or more close, more authentic or more usual.

 Bakhtin states that every discourse shows monologic and dialogic movements, they act in the infinite dynamic of human evolution, he relates such movements as the centrifugal and centripetal forces. In the infinite historic-ideological chain, although evolution is constant, there are moments of more approximation of ideological currents, moments of more or silence, when there seems to be monologization. The centrifugal force subverts the tendency to monologization, it maintains the dialogical current alive. The phenomenon of the forces can be treated in the macro historical level of the evolution of human knowledge, but it can also be evidenced in the micro, at each enunciative act.

 The theory proposed by Bakhtin is vast and not simple to grasp. The intention here was not, in any way, to attempt at providing a comprehensive explanation of it, but pointing out some important ideas for the scope of this paper and arise the readers interest in Bakhtin. As for the concept map, what is to be stressed is:

- a concept map is a genre, therefore, being marked by the broad historical context in which it exists;
- concept maps have compositional structures, the production or understanding of which involve communicative abilities that need to be developed; a school, a language class, would be a good place to do that as is happens with other genres;
- a concept, considered as a word, has meaning but does not have sense if not considered in the context of a utterance;
- the concept's context is a concept map, and a concept map is a utterance which will have no sense if not considered in the micro and macro context of production;
- A concept map is made of words, own words and another's word, identifying which is which is a complex task even to the producer;
- teaching is a complex language process, teachers teach words of another, referring to theories for example, doing it they mark it with their own words, and they should ideally do that in a way of encourage students own words to have authorship - being conscious of this is fundamental for a teacher to understand the complexity of the process he has to carry through;
- in discourse, there are movements of centralization and of decentralization; they are always present together but not in the same intensity; a word, a single concept, should be taught and learned never as closed or authority;
- in a concept map, such movements will be present as well.
 Bakhtin, however, does not propose principles that can be followed to characterized a genre, that was not his

intent. Discourse analysis that relies in Bakhtin need to retrieve to textual theories that comply with Bakhtin's philosophy of language and that makes it possible for the characterization of a genre, such as Concept Map. We assume Jean Paul Bronckart's theory as adequate for that matter and will attempt at applying it to concept maps. By doing so we will present a theory of text, or genre, and then consider the concept map from that point of view.

3   The textual layers of Bronckart

Bronckart's approach sets from the theory of social interactionism, according to which "the specific properties of human conducts constitute the result of a historical process of socialization, made possible, mainly, through the emergency and development of semiotic tools" (Bronckart, 1999, p.21). He points out that socio-discursive interactionism is based in the capacity human beings have of interacting with the environment and of preserving their psychological traits in the context of collective activities. This theory posts that man can create instruments that mediate his relation with the environment and organize forms of cooperation at work, giving birth to social formations and development of linguistic forms of exchange with his congeners.

To Bronckart, text designates "every unity of production which diffuse a linguistically organized message and that tends to produce an effect of coherence in the addressee" (p.71). According to this author, the texts is articulated to the needs, to the interests and to the conditions of functioning of the social formations at the heart of which they are produced. He states that "as the social contexts are so diverse and evolutive , consequently, in the course of history, in the frame of each verbal communication, different ways of producing a text, or different text species emerged. The author assumes the terminology text genre to refer to such different species of texts.

What happens, as Bronckart points out, is that a same text can be composed by many different segments. A scientific paper for instance can be composed by a main segment of theoretical exposition and by interpolated segments of chronological accounts on the constitution of the concurring theories.   In novels this is even more evident for there are segments where the chronology of the actions are taking place and interpolations of segments that introduce the characters dialogues and commentaries of the author. Bronckart suggests that only at the level of such specific segments that one can perform a classification with linguistic criteria. The genres are of infinite number, but the segments are not, and can be at least partially identified for its specific linguistic characteristics. Such segments he calls discourses and can be designated by type of discourse.

"The situation of verbal communication of a verbal agent is, at least in part, new or particular and this singularity leads him to organize in a certain way the types of discourse that constitute his text and to use, in a more or less original way, the linguistic resources of the types. That way, although every text is elaborated with reference to the social models of the genres and the types , they are also characterized by particular modalities of applying such models, which derive from the particular representation that the agent has of the situation in which he is in" (p.76)

According to him, for singular or empirical text one must understand a concrete unity of language production, pertaining to a genre, composed by types of discourse, but which also presents the traits of the decisions made by the individual producer in function of his own particular situation.

The conceptual apparel proposed by Bronckart for the analysis of the internal organization of a text is set from the general hypothesis that every text is organized in three superimposed layers, which he defines as textual layers. The three layers are: general infrastructure of the text, textualization mechanisms and enunciatory mechanisms.

The infrastructure is the deepest level, it is constituted by the broader plan of the text, by the types of discourse and by the sequences in which they appear. The general plan refers to the organization of the thematic content, it may assume many forms, for it depends on the genre and the number of genre are unlimited. It varies specially because of the combination of different types of discourse , of the sequences and the forms of planification that appear in the text. For type of discourse Bronckart designates the linguistic forms that translate the creation of specific discursive worlds, the different segments that the text comprises, he proposes that analysis through different forms of articulation, enchainment or fusion between such discourses.

Bronckart proposes four discursive worlds based in the opposition between to narrate and to expose and between implication and autonomy. According to him, when put in the narrative order , the discursive world is situated "somewhere else", that must, however, remain as a similar world, possible of evaluation and interpretation by the

interpreter of the text. Once situated at distance and similar, such worlds may present different deviation in relation to the ordinary world. According to such deviation, the author proposes the distinction between realistic narrative and fictional narrative. In the worlds situated in the order of exposure, on the other hand, the theme content is always, by principle, interpreted according to the criteria of validity of the ordinary world which would be the case for concept maps for they are used in the order of exposure, not narrative.

Another opposition he proposes is explained through the explicitness or not of the relations that the instances of agentivity maintain with the material parameters of the language action. If a text mobilizes the parameters of the language action, this text is implicated and in order to interpret it one must appeal to the conditions of production. A text will be, on the other hand, autonomous if it presents autonomy in relation to the parameters of actions of language and its interpretation does not require appealing to conditions of production. A concept map would, according to this point of view, be situated in the autonomous world of exposure for it is intended to be self-explainable, that is, when it is produced, the intention of the author is that the reader, the interpreter, would be able to make sense of it not having to resource to the author and the context of production for understanding.

The discursive sequences, according to Bronckart designate the form of planification that take place in the interior of the general plan of the text. He assumes Adam's five proposed sequences: narrative, descriptive, argumentative, explicative and dialogical. The narrative plan presents initial situation, complication, actions, resolutions, final situation, evaluation and moral. The argumentative sequence presents a prototype of a succession of four phases: the phase of assumption, phase of presentation of argument, phase of presentation of counter arguments and phase of conclusions, or of new thesis. To the sequence of explanation he proposes also four stages: initial verification, problematization, resolution and evaluation-conclusion. The dialogical sequence has the opening phase, transitional phase and closing phase. The descriptive sequence is not organized in a linear way, but is put together in a hierarchical or vertical way. This sequence presents prototypically, anchorage stage , when the sequence's theme is presented , aspectualization stage, in which the theme title is decomposed in parts to which properties are attributed and relation stage in which described elements are assimilated to others by comparison or metaphor. Considering Novak and Cañas's description of concept map as graphical tools for organizing and representing knowledge composed through concepts and propositions involving them, designed in a structure that follows some kind of hierarchical organization, the descriptive sequence would be the one most common in a concept map.

Bronckart highlights, however, that such phases are not in any way rigid, they have regularity which can be identified and they are proposed from this regularity.

The second layer proposed by Bronckart is constituted by mechanisms of textualization. Mechanisms of textualization, according t the author, create isotopic series that help the establishment of thematic coherence. They explicit the hierarchic , logic and temporal articulations of the text. They can be grouped in three big sets: connection, nominal cohesion and verbal cohesion.

The mechanisms of connection mark the articulations of thematic progression and are performed by textual organizers. As for mechanisms of textualization in a concept map its iconic or imagistic design which use linking lines between concepts and the propositions they compose conform its most evident attempt to cohesion. The lines and the concepts they connect form the unit, the textual unity of the concept map. They are part of the design which make it visually a text of this specific genre. In essays or other form of linear narrative texts, conjunctions, adverbs and preposisitional sintagms work as linking elements.

Mechanisms of nominal cohesion introduce the themes and/or new characters and guarantee the retaking or substitution in the development of the text. In this case, such mechanisms may be personal , demonstrative, possessive, relative pronouns or nominal sintagms. Mechanisms of nominal cohesion work to organize or make clear in the text whom, or what it is referring to, or "talking" about. In a concept map we usually don't find pronouns; pronouns appear referring to other nouns previously mentioned, in a map of concepts such role is played by the linking lines; pronouns may appear as linking words, but not as a concept in itself. In an essay, for instance, about volcanos, we would find pronouns such as it, this just so not to repeat the concept volcano while trying to again and again refer to the subject of matter. In a concept map, the concept volcano can be linked to many different concepts and does not appear repeated in the map.

The mechanisms of verbal cohesion guarantee the temporal or hierarchical organization of the process – states, occurrences or actions – verbalized in the text and are performed by the verbal time, which appear with other units of temporal value. Verbs and prepositions are usually the most used elements used to form the propositions that connect concepts.

The third layer is constituted by the enunciative mechanisms which are responsible for the pragmatic coherence of the text. So they contribute to the clarifying of the enunciative positions and translate the evaluation of aspects of the thematic content.

Bronckart states that if we were to assume the notion of author as the agent of language who concretizes himself in an empirical text, it would be him who decides about the thematic content, who chooses a genre model suited to his situation of communication, who selects and organizes the types of discourses, who manages the diverse mechanisms of textualization.

"When undertaking a language action, the author mobilizes, from the vast set of knowledge from which it seats, representational subsets that refer specially to the physical and social context of his intervention, to the thematic that will be mobilized be the actions and it and to his own statute of agent (action capacities, intentions, motivations). As all human knowledge, theses representations are constructed in interactions with the actions and discourse of others, and even when they are the target to a singular organization, which results from the experiential dimension of each person, they still port the traits of this constitutive alterity. Whether they are notions, opinions, or values, the representations available in the author are always already interactive, in the sense that they integrate others' representations, in the sense that they continue to confront and deal with them" (p.321).

According to Bronckart, as it is for Bakhtin, in order to attribute responsibility of the text, it is necessary to recognize that the representations activated have social character, that is, they are a dialogical dimension. When producing a text, in this theory, the author creates discursive worlds whose coordenates and rules are different from the ones of the empirical world in which he is insered; it is from such virtual worlds and from the distances that guide them that the voices that are expressed in the text are distributed and orchestred and are responsible for the evaluations performed in it. The voices are, therefore, entities that take up the responsibility of what is being enunciated.

The voices that express themselves in a text can be grouped in three subsets: the voice of the empirical author, the social voices and the voice of the characters. The voice of the author is the voice that comes from the person who is in the origin of the textual production and intervenes to comment or evaluate what is enunciated. The social voice is the voice that come from the characters, groups or social institutions which are mentioned as external instances of evaluation of content aspects. The characters voices, finally, are the voices of the human beings implicated in the happenings or constitutive actions of the thematic content of a segment of a text. Bronckart points out, however, that such voices can be implicit, not being translated through linguistic forms, or they may be explicit through the use of pronominal forms, nominal sintagms, for example.

The understanding of the "orchestra" of voices in a text, in a concept map, is very important for a project of education that involves the critical dimension.

Neither the presentation on Bakhtin's or Bronckart's theory had here the pretension of being comprehensive. In the context of this paper, the objective was to set light at what it means to produce or read a text, specifically here, a concept map.

According to Novak, new knowledge constructed by observing events or objects through the concepts we already posses. He defines event as anything that happens or can be made to happen, and object as anything that exists and can be observed, being them natural or human constructed. A concept is a regularity in events or objects designated by some label. Such label they call "word". Concept maps, as Novak and Cañas define it, are graphical tools for organizing and representing knowledge. Concept maps, according to them, include concepts and relationships between concepts, shown through linking words or phrases, called "propositions". Concept maps should be hierarchical, more general, inclusive concepts at the top, with progressively more specific, less inclusive arranged below them. Concept and propositions form units of meaning. Concept map is language. It is a text.

4   Concept map as school genre

To produce and to understand texts, as we have pointed out, is not a simple activity of codification and decodification, but a complex process of production of meaning in face of inferential activities. A text is a proposal of meaning and it is only complete with the participation of the reader/listener. A text, therefore, is not an object, a product, but an event and its existence depends on someone producing it in a context. It is a discoursive fact, not a language system fact. It occurs in the enunciative activity not as a simple relation of signs.

Assuming language as cognitive activity or just a system of representation, one can incur in a risk of reductionism, which confines language to its exclusive condition of mental phenomenon and system of conceptual representation. Language involves cognitive activities, but it is not a phenomenon just cognitive.

A text is not defined through necessary and sufficient eminent properties, but for being situated in a socio-interactive context and for fulfilling a set of conditions which conduce cognitively to the production of meaning. The sequence of linguistic elements will be a text as it is able to offer interpretive access to an individual that has a communicative experience relevant to comprehension.

The difficulties of students in producing meaning in reading and writing and therefore the development of the communicative or language proficiencies related to it have been a great concern to language teachers. However, if the role of school education is to enable the students to use language as instrument of learning by being able to make sense of the information it presents, as well as to analyze critically such language as vehicle of values and ideologies, and to grasp its sometimes opaque intentionality, then the development of such skills is the responsibility of any teacher in school for they all teach for and through language.

In Brazil, such responsibility is made clear in the national standards for basic education (PCN, 1997,p.30) in which it is stated that is school's responsibility to make the access to the universe of text that circulate socially possible for the student, teaching their production and interpretation. This includes texts of different disciplines, with which the student is faced in school context and, even so, is not able to handle, for there is not a systematic and planned teaching project with this objective.

A number of theoretician have been dedicating themselves to the study of the school genres, among whom, Dolz e Schneuwly (1996). According to these authors, school has always worked with genres, for the communication used in learning is crystallized in genres. The authors point out that in school there is a unfolding of such   work because the genre is a mean of communication and an object of study in itself. Do to that, the genre, at school, institutes a language practice that is, in part, fictitious for it is instituted with learning purposes.

To Dolz and Shneulwy the teaching and learning of genres leads to a transformation of them for they will have to be simplified and/or to receive certain emphasis so that they can be "dominated" by the learners, besides being used in a different social place. The authors point out that the proposition of a genre in school is the result of a didactic decision which aims at learning objectives that can be of two kinds: learn to dominate the genre first to better know it or appreciate it to better know how to understand it, to better produce it inside or outside school; secondly to develop capacities that go beyond the genre and that can be transferred to other genres. This implies a transformation of the genre so that such objectives are reached or reachable with most efficiency.

A genre in school is, therefore, a genre to be learned although it will still be a genre to communicate. Ideally teachers should provide students with situations that are the closest possible to real communicative situations. To the authors, a didactic model for teaching and learning a genre should explicit the implicit knowledge of a genre, referring to the formulated knowledge, in the domain of scientific research as well as by experts in the area. It should also consider its pertinence in reference to the students' abilities, school objectives and teaching and learning purposes, and it should make the contents coherent in relation to the objectives aimed at.

A didactic model, in synthesis, has two great characteristics according to the authors: it is synthesis of a practical objective, destined to guide the teachers' interventions; and it makes evident the teaching dimensions from which different didactic sequences can be designed. The authors point out that in each of such dimensions a progression is possible.

The authors state that the more a precise definition of the teaching dimensions of a genre , the more it will facilitate the appropriation of it as instrument and will make the development of diverse language capacities associated to it possible.

Texts in schools are, therefore, every teacher's business. Texts need to be instruments and object of educational projects in school. The skills involved in the production of meaning in texts are developed through didactic projects, planned for that matter.

A concept map is a text, if it is to be proposed in school for educational means, it needs to be treated as a school genre, becoming an object of study in itself.

This may seem obvious, and simple, but, unfortunately, especially for teachers of areas other than language, it is not. Teachers sometimes take for granted the complexity of the genres they are teaching and evaluating through.

As for how to propose a genre approach in the elaboration of a didactic sequence, Bronckart(1999) suggests an activity in four stages:

(I) Elaboration of a didactic model: choosing a genre and its adaptation to what the students know, then analyze the properties of such genre, its uses its forms of realization, its variations and it context of uses.

a.   analyze the discursive activities: learn the criteria for choosing a genre in a specific situation of communication, simulate the position of a genre producer imagining the intentions on the interlocutors (receptor, etc) identify the knowledge to be mobilized to produce the genre in the situation imagined, specify the communicative structures and the conventional form that the genre presents;

b.   operate with the typical sequences: knowing how to coordinate the sequences that are needed to compose the textual based coherence, as the argumentative, narrative and expositive sequences;

c.   dominate the linguistic mechanisms, study and analyze syntatic, morphologic and lexical properties as choice of register and style, textual organization under the aspects of cohesion and coherence.

(II) identifying the acquired capacities

Testing the students, checking if they understood the capacities related to discursive actions, tipological actions and textual-linguistic actions;

(III) elaborate and conduce activities of production once the capacities have been identified in relation to the chosen genre , propose effective exercises of production, offering specific conditions and situations according to the elements analyzed in I and II;

(IV) Evaluate the acquired capacities: analyze the productions giving them appropriate feedback

The main idea is that real situations have to be created with contexts that allow reproducing in big guide lines and in detail the concrete situation of textual production including its circulation, that is, with special care to the process of relation between producers and receivers/ receptors.

According to Novak's(1984) approach, the first step is to elaborate a good focus question. Every map answers a focus question. Now, who posts the question? Make sure the question is appropriate, that it is a product of the context as Bakhtin puts it. Questions should be natural, not imposed. Postman (1978) says that teachers should not ask questions they know the answers to, students should be asking the questions. So let the question emerge from the context – the students, the class situation, the external situations they may bring to class, etc. In Bakhtin's point of view: let them be the authors of the focus question.

Once the focus question is defined, next step, according to Novak, is identifying the key-concepts which apply to the domain of the question. At this point it is fundamental that the students understand the concept of concept. The concept of the word concept has been a historical issue in episthemology studies. To Novak, a concept, is a regularity in objects or event designated by some label. This regularity changes in time, concepts have not always designated the same thing, regularities have been designated using different labels. Furthermore, a concept is a word, a word of whom? When a student pronounces a word, whose word is that? The teacher's? The theorical the teacher read and assumed? When he makes that word choice whom does he give voice to? Ideologically who speaks? When the teacher speaks, the same questions can be posed. Again, it is a complex process.

One can follow Novak and Cañas orientation on how to produce maps, guideline on teaching are fully presented in Novak's Learning how to learn(1984), but do so assuming concept map as a text and, as text, assume the complexity of the language process that undergoes when producing a map or any text for that matter.

Making a map is a complex ability that cannot be taken for granted. Teaching it too. Concept maps seem to be concern more of science teachers. That may be due to its characteristics for they seem more suitable for explaining and to describing as Novak and Cañas state "events and concepts" than to narrating actions. As they are dependable on linguistic abilities either for reading or writing them, they should be language teachers concern as well.

Communicative abilities development have been an issue in schools; specific area teachers say that the students can't write, and language teachers say that the students lack what to write about. What happens, at least in Brazil, is that teachers work separately. The language teacher may ask them to write about something that involves specific area content, and grades the papers more for the form than for the content, which they are not really proficient at. The content teachers, science, for example, ask students to write texts assuming they know the form, they grade mostly over the specific area content. Sometimes the problem may not be not knowing the content, but not knowing how to write a good text.

Concept maps are very appropriate for cooperative teaching projects involving the language teacher and the specific area teacher. And if Cmap tools is accessible, even the computer science teacher, who is many times, in Brazil, asking students to produce texts on whatever content just so they learns the digital tools, and that is what he evaluates – which is a waste in terms of everything that was involved in the process of such production.

Teachers teach or aim at enhancing meaningful learning in students. They work with concepts, all areas work with concepts. Concepts are words. Every teacher not only teaches using language, but teaches language as well. Any teacher, therefore, must have a linguistic understanding of his role as concept, or language, teacher. A language teacher is someone whose project involves teaching the communicative abilities that make performance in specific areas, or different social contexts potentially successful. But he will never be able to work with language and not with concepts, events, ideas that relate to different areas of knowledge.

References

Bakhtin, M. (2000). Estética da criação verbal (1992). 3rd ed. Trans. Maria Ermantina Galvão Gomes e Pereira. São Paulo: Martins Fontes.

(1993). Questões de literatura e estética: a teoria do romance (1975). Trans. Bernadini et al. 3rd ed. São Paulo: Unesp.

Bakhtin, M./Volochinov, V. N. (2002). Marxismo e filosofia da linguagem (1929-1930). Trans. Michel Lahud e Yara Frateschi Viera. 9th ed. São Paulo: Hucitec.

Brait, B. (2005) Bakhtin conceitos-chave. São Paulo:Contexto.

(2003) Perspectiva dialógica, atividades discursivas, atividades humanas. In: Souza-e-Silva, M.C; Faita, D. (orgs.) Linguagem e trabalho: a construção de objetos no Brasil e na França. São paulo: Cortez.

Bronckart, J. P. (1999) Atividade de linguagem, textos e discursos. Por um interacionismo sócio-discursivo. Trad. Anna Rachel Machado. São Paulo: EDUC.

Cañas, A. & Novak, J. (2008). The Theory Underlying Concept Map and How to Construct and Use Them. Florida: IHMC. <http://cmaps.ihmc.us/Publications/researchPapers/TheoryCmaps/>

Novak, J & Gowin, D.B. (1984). Learning How to Learn. Cambridge.

Novak, J. (2000). Aprender, criar e utilizar o conhecimento. Mapas conceituais como ferramentas de facilitação nas escolas e empresas. Lisboa: Plátano Universitária.

Postman, N. (1996) The end of education. New York, Vintage Books.

Postman, N., Weingartner, C. (1978) Teaching as a subversive activity (1969). 15. ed. New York, Delta.

Schneuwly, B., Dolz, J. Os Gêneros Escolares: das Práticas de Linguagem aos Objetos de Ensino, Revista Brasileira de Educação, nº 11, maio a agosto de 1999, Anped