Learning at Institution of Higher Education *versus* the Teacher's Role in Classroom

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Abstract The choice of issue has been an attempt to set on a dialogue about the desire which accompanies many teachers to correct their pedagogical routine in what specifically refers to "teaching", since teacher often takes on the exclusive duty of "making" those who have been entrusted to him during the journey of learning process to get succeed. Motivated by searching of professional success, teacher is taken by a wish to find a teaching "method", a right way to teach, to perform a dynamic, due to the belief that in that space of classroom the student should reach the maximum of learning. Thus, we wanted to bring a counterpoint between theories of learning styles, specifically the theory of experimental learning by David Kolb, who is expert in proposing methods for mapping student learning styles and propose teaching methodologies *versus* an approximation of some works of French philosopher Gilles Deleuze who in his way of thinking education has broken all those paradigms.

Keywords: *learning, learning styles, higher education*

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1. Introduction

This article is a result of a cut made in our master's dissertation where we have discussed singularities of learning styles: heterogeneity which potentiates learning. It was then we noticed there has always been a higher education teachers' concern related to "how to teach their students can actually learn". And so constant in that yearning are innumerable publications in which the most varied researches arise offering teaching methods and strategies with have promised solving possible limitations in learning process and thus stimulate learning. Specifically, the Theories of Learning Styles in last decades, through its renowned theorists, has presented several researches, with great acceptance of teachers and students of higher education, that have brought with them some inventories which can be used to map and diagnose learning styles of a student class and thus enable the teacher to develop methodologies which "adapt" to way of learning. Faced with that reality, we have opted in this article for a dialogue about learning in institution of higher education *versus* the role of teacher in classroom. To do so, we will make a counterpoint between David Kolb's Theory of Experiential Learning and learning in Gilles Deleuze.

We emphasize that when we approach the learning styles in which Kolb's Theory of Experimental Learning is included, we are discussing literature from studies on domain of organizational management that has particularly addressed questions about learning in context of applied social sciences, differently from how that has happened in educational context.

The interest in deepening knowledge about learning styles for Felder and Silverman [7] is justified by the need to know learning styles of students and teaching style of teachers, because, according to those authors, there must be compatibility among the learning styles of students, at least for the most part, and teacher's style of teaching, otherwise students may become disinterested and inattentive with the content, causing a deficit of learning, disinterest in course, obtaining negative results in tests for verifying learning and possible evasions.

Here is a first problem associated with the notion of learning as "learning styles". Following in the steps of Silvio Gallo [9], this conception seems to be still very much influenced by pedagogical theories of the twentieth century which introduced in educational processes the notion of "teaching-learning" in an indissoluble manner, understanding that the process to know learning styles of students hasn't done without calling into question, and as a model, teachers' way of teaching, bringing to pupils' relationship with knowledge, the inevitable condition of reproduction of what has been taught by teacher. In this case, when leaving the model given by teacher, students are thrown into a set of inevitable directions, stigmatized as follows: "disinterested", "inattentive", "deficit", "disapproved" and "evaded."

In that domain, authors have operationalized the approach between notions of "style" and "learning", initially driven by dichotomy between the corresponding concepts of "teach" and "learn", so that much of literature

originates from domain of educational psychology, addressing the phenomenon of learning through the concept of "teaching-learning". We know that although the constitution of that dichotomy is result of a historical process in the West which involves experiences in education and pedagogy, it has been in modernity that they gain the status of scientific discourse influenced by one of the newest modern human sciences.

Thus, Foucault, in his book "Words and Things" [8], in doing an archeology of human sciences, has shown that the constitution of those sciences was established throughout modernity by a requirement of a theoretical and practical order, because at the same time when there is a movement in domain of human's understanding that moves to specialization of knowledge (the forms by which men become subjects of modern knowledge), we have been also historically taken by modern institutions what will regulate actions of those subjects in their social spaces, where one of them is school.

It is in that place "learning" will be increasingly dependent on "teaching" because modern school is at the same time result of consolidation of national states in Europe and emergence of an educational discourse inspired by liberal ideas of citizenship, consolidated in the emblematic term "education for all". That is in the context of late nineteenth and early twentieth centuries which emerging modern sciences have begun to launch their discursive approaches for the role of school and education in society, and among sciences that have exerted a strong influence at that time for consolidation of an educational discourse are: psychology and sociology.

As sociological studies have always been related to concern with the role of education in relation to society, educational psychology has become the place of production of knowledge to understand the relationship between teacher and student and the process of development and construction of knowledge by subject. Therefore, teaching-learning has become a concept of many psychological approaches in the field of education and indispensable object of educational psychology.

This brief history has served to show that, initially, we need to understand the notion of learning will approach the notion of style bringing the sign of dichotomy "teaching-learning", driven by the sense that learning necessarily occurs in relationship with that one which teaches and for that purpose there is consequently the understanding that sign of teaching is a reproduction of sign of learning and vice versa. Therefore, the notion of "learning style" within organizations has brought that strong modern sign so the ways of understanding subjects' styles in general are ways of classifying them according to extrinsic criteria due to significance of one particular skill to detriment of others.

In this work, we have also pointed to images of "teaching" and "learning" produced by educational psychology over teaching-learning and that will be part of notion of "learning style" in production context of authors trying to introduce the theme of learning in organizations in a specific way, in studies on learning in higher education. For this reason, we will make here an appropriation of critique to notion of dogmatic thought in Gilles Deleuze, [6] comprising, on the one hand, the image of thinking as those images that are historically constituted and prevent us from thinking, from being creative to confronting ourselves to the problems.

Therefore, here the images of learning bring the meaning of modern pedagogical and psychological theories historically. Those images are establishing the necessary arrangements for establishment of very notion of "learning style".

2. The Theory of Experimental Learning by David Kolb

David Kolb's study of learning styles began in 1971, focusing on "how to learn, how to assimilate information, how to solve a problem and how to make a decision". Those questions grounded the construction of the experimental model, which aimed to know the learning process of the individual from his own experience.

The individuals chosen for Kolb's investigations were university students, believing they were dependent on continued success in a constantly changing world, and their successes would be conditioned on the ability to examine opportunities and learn from successes and failures, because experience conditions or changes events, thus generating new experiences. And in relation to such experiences, Kolb (1976) has developed a measurement instrument called the Learning Style Inventory (LSI).

After years of research in the early 1980s, David Kolb has presented his theory on experimental learning styles by stating that the effectiveness of adult learning would increase if the learning object were experienced more directly and profoundly. Thus Kolb has defined learning as "the process by which knowledge is created through the transformation of experience." [16]. For this author, more than result, learning is a holistic process of adaptation to the world, since learning requires the solution of conflicts between dialectically opposing modes of adaptation in order to build knowledge, in other words, to learn.

Kolb's theory of experiential learning is based on psychological approaches, based on three scholars of experimental and learning psychology: Piaget, Dewey and Lewin [16,14]. That theory approaches the principles of Vygotsky's learning theories. Pimentel [22] states that ("the Kolbian theory has in the cultural-historical postulate [Vygotsky and followers] a source of inspiration.")

In order to explain how learning happens through experience, Kolb [17] has created the "experimental learning cycle," which consists of four modes of learning. At the beginning of learning process, the individual must choose the form that allows him to learn comfortably, starting his experimental learning cycle. For example, when the individual decides to start his learning process by Active Experimentation (EA), he should feel what has been produced and make his own feedback. Then the cycle proceeds by creating generalizations about the experience gained and its links to reality, via Concrete Experience (CE).

According to Kolb the modes of learning are:

1) Concrete Experience Mode (CE) - characterized by learning related to practical situations, analogy to concrete moments and exchange of information with other individuals;

2) Reflective Observation Mode (RO) - which consists of learning related to observation of situations, the need to reflect the object of study from various angles and correlation of information with everyday facts;

3) Abstract Conceptualization Mode (AC) - this is the learning related to production of concepts, analysis of reality and creation of hypotheses from a logical perspective;

4) Active Experimentation Mode (AE) - refers to learning related to execution of knowledge, experimentation of knowledge obtained through reflections and problem solving with rapid decision making.

We emphasize that Kolb in developing his learning cycle has devised two distinct learning dimensions: "perception" and "processing". The dimension of perception refers to the way information is perceived and processing is the way of processing the information. Thus, it is understood that some people perceive information better through concrete experiences (touch, see, hear), while others perceive information better in an abstract way, using mental or visual concepts.

In dimension of perception we have the opposition: Concrete *versus* Abstract (CE - AC). After the information is perceived, the processing dimension is passed. In that dimension are people who process information better through active experimentation (doing something with information) and others process it better by reflective observation (thinking about things). There, the system of opposites is Action *versus* Reflection (AE - RO).

For Kolb [16,17] when two of modes of learning by individual are combined, a style of learning emerges. Those learning styles are a two-by-two matrix of learning modes, for which the author uses the following terms: *Divergent* (CE / RO), *Assimilator* (AC / RO), *Convergent* (AC / AE), and *Accommodator* (CE / AE).

Divergent learning style originates from Concrete Experience (CE) and continues the learning process through Reflexive Observation (RO). According to Kolb [17], divergent individual tends to ("move away from conventional solutions, and opt for alternative possibilities"), emphasizing his ability to analyze situations from different perspectives and to organize various relationships in one all significant. It has been called *Divergent* because it acts well in situations that ask for new ideas. It is a questioning, creative profile, producer of alternatives, identifier of problems, search for personal meanings about what is learning and has skill in dealing with people, so it interacts well with its teachers and colleagues. Its way of working includes discussions, brainstorms and team activities. Preferred professions by that are those dedicated to entertainment, services or art, according to Kolb [17], Mainemelis et al. [21] and Valente [25].

Individual with *Assimilator* style learns by Abstract Conceptualization (AC) and Reflexive Observation (RO). It commonly prioritises theory by incorporating ("learning experience into a broader framework of ideas") [17]. That style employs inductive reasoning, is characterized by the ease of creation of theoretical models and uses of pieces of information, analyzes, organizes and assimilates them as a whole. It does not care about practical use of theories. It prefers ideas instead of people. They are common profiles among teachers, writers, lawyers, librarians, mathematicians and biologists.

Valente et al. [25] states that *Convergent* individuals "are exactly the opposite of *Divergent*." They develop deductive reasoning, practical application of ideas, test information, try new things, see how they actually work, learn by doing by trial and error, and are good at solving problems and making decisions. They fully investigate the viability and usefulness of information and appreciate analyzing examples and cases. They begin their experience in Abstract Conception (AC), and through concepts they transform that through Active Experimentation (AE), preferring practical application of theories. They see group work and discussion as a waste of time, because they understand they can do the work more quickly individually. For Kolb [17] the professions demanded by this style are technologists, economists, engineers, physicians, physicists, inclining to deal with technical or practical activities, such as experimenting with simulations or laboratory tasks.

Accomodator style part of Concrete Experience (CE), and transforms it through Active Experimentation (AE), prefers intuitive activities such as group or field work, learns through own discoveries. "It is likely that its tendency is to act on its feelings instead of logically analyzing the situation" [17]. Apply information obtained in new situations to solve real problems, is willing to take risks, learning from their mistakes. According to Kolb [16], individuals of *Accommodator* style often find themselves in ranks of organizations and businesses such as bank workers, administrators, politicians, managers, public relations specialists, salesmen, etc.

2.1. Learning Styles *versus* Teaching Styles

What is the relationship between Learning styles and Teaching styles is what many researchers have been analyzing. According to them, Learning Styles Theory should directly influence ways of teaching. Including Lockhart and Schmeck [19], they have argued for the importance of knowing and relying on learning styles in order to devise more appropriate methods for each student's learning.

And according to Alonso, Gallego and Honey [1] it has been proved that academic performance is closely related to learning processes. They have listed papers which were developed to support that relationship: Cafferty [3] and Lynck [20] have analyzed academic achievement and its relation to learning styles; Pizzo [23] and Krimsky [18] have focused their research on learning styles and performance in reading learning; Gardner [11] has related learning styles, teaching strategies, methods and academic achievement.

Aiming to emphasize the role of teacher with his / her teaching style, based on diagnosis made of student's learning style, Harb et al. [13] suggests that Kolb's learning cycle is used as a strategic basis for planning teaching process. To do that, teaching cycle must follow the same phases of learning cycle, where each style of learning corresponds to a style of teaching. Corroborating this theory, Valente, Abib and Kusnik [24] have developed a relational framework showing the appropriate teacher profile in each situation, so that adequate learning outcomes can be achieved, as we will see below.

Student Learning styles	Teaching styles *vs.* Teacher's role
Divergent	Teacher should act as a motivator. Aiming at personal development of their students; building a good relationship with them and being able to develop cooperation and discussion of values and meanings. Teaching strategy requires questioning and discussion.
Assimilator	Teacher behaves like a specialist. Dedicating transmission of knowledge, exercising the role of authority in classroom, strictly following indicated didactic material. Teaching strategy is traditional predominating expository lectures.
Convergent	Educator proceeds as a technician. Pursuing productivity and competence. They are independent professionals and want their students to develop that same profile. The teaching strategy combines formal class with laboratory and extraclass activity.
Accommodator	Teacher is a kind of evaluator or reviewer, providing feedback that allows students to make discoveries on their own. Encouraging experimental learning and self-discovery. They seek to expand intellectuality in their students. Teaching strategy includes a variety of methods and techniques, according to needs.

All this supports the understanding in theory of learning styles that individuals, especially as adults, have relatively stable learning preferences. Thus, that theory provides a vocabulary accessible to students and teachers to describe behaviors in varied didactic situations, in order to encourage people to acquire awareness and motivation about their own learning.

2.2. Critisizing the Theory of Learning Styles

The Theory of Learning styles is being criticized by scientific community, mainly due to its decontextualization of teaching-learning process, emphasizing individual experience, at expense of psychodynamic, social and institutional aspects.

That theory ignores the complexity in each person when it insists on applying same methods hoping to always achieve same results. To classify people according to some categories is to reduce them only, disregarding their inherent potentialities.

Such reductionism is evidenced when the research is occupied in mapping learning styles of students with the claim of seeking strategies for exercise of teaching. That reality is presented in a clear way when, for example, David Kolb's "Learning Styles Inventory" (LSI) is used in research and, through that, classify individuals into four learning modalities: divergent, convergent, assimilator and accommodator.

In addition, many researchers consider it problematic to rely on self-referenced diagnostic tools, answered by individual analyzed, to identify the styles. And results identified, for the most part, are too simple labeling, without major implications for educational practice.

Another aggravating factor is the fact that many researches associate learning styles with results of school failure, that is, according to them when the teacher does not consider styles present in classroom and treats their students in a homogeneous way, that is, to want all learn the same things in the same way, the results obtained are not positive. That aspect for us reveals a mistaken perception in educational field by distinguishing between teaching and learning as two distinct processes, but which in our understanding, based on the philosophy of Gilles Deleuze, are part of the same process for subjects that is learn.

3. Learning According to Gilles Deleuze

Gilles Deleuze, a French philosopher of the twentieth century, who carried out his teaching and research activities at high schools (1948 to 1957) and later at universities (1957 to 1987), did not write specifically about education. However, a significant part of his production explores emerging issues in education; his works question solidified ideas about pedagogical doing and because of that, they inspire us possible trajectories.

3.1. Learning and Signs

Contrary to theories of learning styles, Deleuze ensures that no one learns anything from anyone, so it is understood that no one teaches anyone anything. He says there is no method for teaching or learning. In his work "Proust and the Signs" (1964/2003), he will describe the report of a scholar's learning in which two paths are adopted: Méséglise's and Guermantes's, both understood as learning spaces. The path of these ways consists in RECHERCHE, which is the "search for truth". [6]. "What doesn't [Proust's] hero know at the beginning of learning? He does not know that truth has no need to be said to be manifested, and we can perhaps pick that more safely without waiting for words and even without taking them into account in a thousand outward signs, even in certain invisible phenomena, analogous in the world of characters to what are, in physical nature, the atmospheric changes". [6].

Therefore, those who believe that Recherche is the easy way to go is deceived. In order for the truth to be revealed, that is, learner's successful learning will have disappointments, revelations and need to abandon their illusions. In course of that learning process, there are often advances in certain fields of signs and setbacks in other ones, where, for example, the object does not reveal the secret which learner expected, making him disappointed. That process is repeated as long as learning is not complete. At that point it is possible for the author that deception releases a slowness that comes to compromise the whole.

According to Deleuze [6] "mistake [...] presupposes in us a willingness to think, a desire, a natural love for truth." His character Proust will insist that truth is never result of prior goodwill, but product a violence over thought, since knowledge is not passive. With violent effect of a sign, thought (memory, desire, imagination, intelligence) is required to seek the meaning of sign associated with time wasted, intelligence becomes capable of interpreting the sign, that is, it finds it and extract the truths.

The unity of all worlds is due to their form of constitution of systems of signs emitted by people, objects and materials in which the discovery of truth and learning

require decipherment and interpretation, that is, learning consists in not knowing how to interpret signs. Therefore, learning, according to thats perception, is not restricted to school area, or to teaching of teacher, but it happens at any moment, in any place where there are signs that compel the thought in search for its decipherment. Thus, the plurality of worlds is in the fact that signs emitted "are not of the same type, they do not appear in the same way, they can not be deciphered in the same way, it does not maintain with its sense an identical relation", [6] in other words, Recherche is constituted by the unity and plurality of signs.

When Deleuze discusses the theory of signs, at first, he assures the etymological place of term to learn by characterizing it as an encounter with signs, since in its origin the term teach refers to the act of informing others. Therefore, it is understood that learning is to encounter such signs. Then the author will re-signify the issuance of signs as an act of teaching, and consider it in the dimension of the encounter with the signs as an act of learning, regardless of who issued it and the reason it was issued.

Therefore, the relationship with people and things will be a potential opportunity for learning, even if the learner is not aware at first. Deleuze interprets learning as a creation of something new, a unique event in thought. "You never know how a person learns; but in any way he learns, it is always through signs, wasting time, not through assimilation of objective content. Who knows how a student can suddenly become "good" in Latin, what signs (loving or even unconfessable) would serve him as learning? We never learn anything from dictionaries our teachers and our parents lend us. (...) You can never learn by doing as someone, but by doing with someone, who has no relation of similarity to what you learn". [6].

In understanding of the author with whom we agree learning is temporary. That is, learning requires sensitive experimentation of relationships, encounters, and situations in the world, so no time is lost. In that way, learning for him consists in 'learning' as an individualized action, even though there is no paradigm that glitters the truth. "The 'superior men' do not teach him anything; Bergotte or Elstir can not communicate to him any truth that prevents him from doing his own apprenticeship and passes through signs and deceptions to which he inclines." [6].

In order to avoid doubts in his theory about learning Deleuze is very emphatic in affirming that learning is doing with the other and not like the other, being only an imitator. In fact, we can not understand a learning process just by imitating, without proper understanding of why and how. He accurately exemplifies his thinking with the image of the swimming apprentice that to succeed in his learning it is not enough to imitate gestures and deeds of his instructor, but it requires a harmony with the signs of water. This tuning will happen to the extent that the learner dives into water, mixes with it and lets itself be transported, in this immersion learning will happen.

Learning is a voluntary, personal, private and non-transferable act. Learning does not cease with knowledge, it does not impede the continuity of process of differentiating oneself. Learning to learn is also and, paradoxically, learning to unlearn. That is about learning to live in a world that does not provide a pre-established closure, in a world we invent in living, dealing with the difference that strikes us.

In Difference and Repetition, Deleuze will return to sense of learning by reinforcing conceptions defined in Proust and the Signs "learning is only intermediary between non-knowing and knowing" [4], however, learning is different from knowing because learning requires "to evolve fully in understanding of problems as they exist, in apprehension and condensation of singularities, in composition of bodies and ideal events." [4].

In turn, the learner must make sense education a power to learn what can only be felt. The author emphasizes "there is no method to find treasure or to learn, but a violent training, a culture or paidea that runs entirely through individual." [4]. Reinforcing that understanding, the authors Brito and Ramos [2] assert that "teaching is not enclosed in a state of things, it can be a state of things, but in learning process there is another movement that does not involve effective understanding of teacher and its methodology."

Therefore, the need for education of senses, which may be through strangeness and problematization, as a way of learning the singularities that integrate the idea about something, that is, learning becomes a kind of journey, a transfer, a path of uncertainty and eternal mistrust, which for Kastrup [15] constitutes "we are forced to live with a certain wandering, to waste time, to explore the environment with the eyes attentive to signs and to penetrate new semiotics."

From those conceptions we understand learning as something unpredictable, difficult to be planned, controlled and measured, sometimes obscure to the learner himself, who does not always perceive himself learning. Therefore, there are no methods to learn, making it impossible to plan for learning. Learning happens in a unique way with each learner.

3.2. Learning and Rhizomatic Education

In our process of approaching the Deleuzian and Guattarian works, thinking about education under rhizomatic aspect is to break old paradigms related to structure of knowledge, such as: education as a mere reproduction of knowledge, territories, moral formation and instrumentalization, and involves us into a field of experimentation and spaces of creative variations.

In order to better understand rhizomatic education approach based on philosophical conception of Deleuze and Guattari, contrasting the widely disseminated and assimilated culture about structure of knowledge, we will have the contribution of the philosopher Sílvio Gallo [10], according to whom knowledge elaborated in history of humanity is based on the process of interpretation of reality and guided by the tireless search for truth. Those knowledge accumulated from human interpretation branched out over the years giving rise to the arborescent metaphor of knowledge, through which absorbed content is organized hierarchically forming a single, robust trunk and thus integrating the tree of knowledge.

However, contrary to that arborescent idea of production of knowledge, Deleuze and Guattari interpret differently the process of production of knowledge and justify their choices "we are tired of tree. We no longer have to believe in trees, roots or radicles, we have suffered a lot. " [5]. According to them, there is no single forming and

consolidating trunk of knowledge, which branches to truth, because the structure of knowledge is modular in form, without ramifications, but points which originate from everywhere, and lead to any points. They thus create the concept of rhizome, opposing segmented form of creating reality, as well as positivist way of building knowledge. "A rhizome does not begin or conclude, it is always in the middle, between things, inter-being, intermezzo. Tree is sonship, but rhizome is covenant, only covenant. Tree imposes verb "to be", but rhizome has as its fabric the conjunction "and ... and ... and ...". [5]

Speaking of rhizomatic education is characterize the way in which it understands knowledge: complex intertwined, entangled with options and knowledge, which does not know its origin or its destination. This modality of knowledge does not have roots, trunks, branches or founding leaves, because according to Deleuze and Guattari, brain is not rooted, so neurons are not a homogeneous and continuous tissue. Brain and the structuring of thought are multiplicity "many people have a tree planted in the head, but the brain itself is much more a herb than a tree". [5].

An interpretation attributed to rhizome is to be a method of anti-method capable of expanding possibilities of elaboration of a thought, problematizing any forms that delimit and frame a reasoning in logic of an origin reinforcing the idea of experimentation.

For Deleuze and Guattari there are some principles to be observed in rhizome, and to those they will call them approximative characteristics and use them as an attempt to convince about their rhizomatic theory:

1) *Principle of connection* - is due to the fact that in a rhizome branches of buds are born at any point and connect without distinction hierarchically different from the tree or its root that fix a point, an order. That is, a characterizing element of rhizome is the absence of a pre-established center, because rhizome has multiple inputs / access, which facilitates its access from several points. Thus, various fields of knowledge do not have a hierarchy or curricular centrality. They are simply networks of knowledge, which makes us think about the challenge of education when looking at and perceiving all advances experienced, but also the trajectory that still has to follow, not as a simple model of repetition of knowledge.

2) *Principle of heterogeneity* - any connection is possible, because rhizome is driven by heterogeneity. Knowledge is deterritorialized and infused generating new conceptual and methodological approaches.

3) *Principle of multiplicity* - Rhizome is composed of multiple dimensions and not hierarchical units. Multiplicity has no object and no subject, no beginning and no end, no affiliation or definite direction, but it has a middle, whose idea of creation shows itself as a becoming. "Multiplicities are defined by outside: by abstract line, escape line or deterritorialization according to which they change their nature in connecting to others." [5] Multiplicity as well as rhizome are not allowed to be over-coded.

Therefore, we understand that education has a similar configuration to rhizome and its principle of multiplicity, since that is product and fruit of diversity, several are constituent elements of a teaching institution: teachers, students, family, directors and external community, but even by cultivating multiplicity / difference, are able to establish precious connections.

4) *Principle of a-significant rupture* - explains that a rhizome does not admit a process of signification or hierarchy. It can be broken, torn, territorialized, organized, stratified, from it emanate escape lines capable of escaping and deflecting by various directions and sides. "There is a rupture in rhizome every time segmental lines explode in an escape line, but the escape line is part of rhizome. These lines do not stop referring to each other ". [5].

Rhizome grows from its ruptures and that escape dynamics allows it to expand in multiple ways: "always follow rhizome by rupture, lengthen, extend, alternate the line of disruption, make it vary, until producing the most abstract line and the most tortuous, with dimensions, with broken directions. (...) Conjugate deterritorialized flows ". [5].

And by closing that principle the authors challenge us to "write, make rhizome, increase its territory by deterritorialization, extend the line of escape to the point where it covers the whole plane of consistency in an abstract machine." [5]. And guidance for such would be First, walk to your first plant and watch carefully as the torrent water flows from that point. The rain must have carried the grains away. Follow the ditches that water has dug, and thus you will know the direction of flow. Then look for the plant that, in this direction, is the farthest from yours. All those that grow between these two are for you. Later, when the latter give themselves grains, you can, following the course of waters, from each of those plants, increase your territory. [5]

Thus we understand that education must go beyond mere reproduction of names, theories, laws, calculations and scientific modules. The content worked in various disciplines should be presented as problematization, that is, why things happen in one way and not another. Promoting that aspect of our reflection, Gontijo [12] suggests "instead of asking what it means something, theory or something else, you could ask what they can think and do with what was done in that class."

5) *Principle of cartography* - in Deleuzian and Guattarian conceptions rhizome is a map and not decal, always open, drawn and made of continuities capable of connecting to other maps. It has multiple entries, does not define a correct path or even valid access, which makes it possible to enter a rhizome from any of its points / locations / branches and at any time. "If the map opposes the decal is because that is entirely aimed at an experimentation anchored in real. The map does not reproduce an unconscious closed on itself, it constructs that. It contributes to connection of fields, for unlocking of bodies without organs, for their maximum opening on a plane of consistency. It is part of rhizome. The map is open, connectable in all its dimensions, demountable, reversible, susceptible of receiving modifications constantly. It can be torn, reversed, adapt to assemblies of any nature, be prepared by an individual, a group, a social formation. One can draw it on a wall, conceive it as a work of art, construct it as a political action or as a meditation. One of the most important features of rhizome is perhaps that it always has multiple entries". [5]

Those authors have already pointed out that "rhizome is antigenealogia" [5], for this reason it is not justified by any structural or generative model. Rhizome is indifferent to any idea of a genetic axis, which functions as an objective pivotal unit and is concerned with organizing successive states, as well as not fitting to any deep or overcoding structure. Both genetic axis and deep structure are considered as "principles of decal, reproducible to infinity" [5].

6) *Principle of decalcomania* - Decal refers to copy or imitation of map movement. Remember that map does not guarantee a location by allowing different modes of readings and entries. Therefore, when rhizome is decalked that act can result in a mismatch and an irregularity in projection of decal on the map. That is because decal contemplates only one possibility, that is, the danger of decal is that it reproduces itself when it believes to reproduce something else, injects redundancies and propagates them. Deleuze and Guattari criticize the arborescent metaphor by comparing the differences between map and decal. "All logic of tree is a logic of decal and reproduction. (...) It consists of decalking something that is already done, from an overcoding structure or from an axis that supports it. Tree articulates and hierarchizes decals, decals are like leaves of tree. Different is rhizome, map and not decal. Make map, not decal. (...) If map opposes decal is because it is entirely focused on an experimentation anchored in real. Map does not reproduce an unconscious closed on itself, it constructs it. It contributes to connection of fields, for unlocking of bodies without organs, for their maximum opening on a plane of consistency". [5].

We do not want here to stigmatize map as good and decal as bad, but to recognize that education as a decal runs the risk of self-reproduction, returning to the same place. And in order to avoid those risks, it is necessary that the same cause rhizomes to grow and always find other lines of escape, because we believe that even education is committed to define hierarchically the place of truth and knowledge, that is still possible: "... in the heart of a tree, in the hollow of a root or in the axil of a branch, a new rhizome may form. Or it is a microscopic element of the root tree, a radicle, which incites production of a rhizome". [5].

These deluzians and guattarians' rhizomatic principles have been appropriated by many researchers as instruments that facilitate the (re) thinking of education, methodologies adopted in classrooms and even curricula. And we consider those reflections / displacements important and necessary because they allow openings for other ways of teaching and learning.

4. Conclusion

In course of this work, we understand that education according to the Theory of Learning Styles is guided by two verbs: teaching *versus* learning, due to the existence of a somewhat ingrained culture, of which it is the role of teacher to teach and of student to learn. However, based on our studies on productions of Gilles Deleuze and his partners we understand that there is no way to learn "you never know how a person learns; but in any way that he learns, it is always through signs, wasting time, and not through assimilation of objective contents. " [6]. This takes away from us, teachers, any claim to ownership and transmission of knowledge. But when we say that it takes away the pretension we do not mean that it takes away responsibility and commitment in seeking to carry out teaching in the best way possible.

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