#### KNOWLEDGE MOBILIZATION IN SOCIAL PRACTICES: CHALLENGES FOR A BABEL<sup>1</sup> CONSTRUCTION IN SCHOOLING SCENARIOS

### MOBILIZAÇÃO DO CONHECIMENTO EM PRÁTICAS SOCIAIS: DESAFIOS PARA A CONSTRUÇÃO DE BABEL EM CENÁRIOS DE ESCOLARIZAÇÃO

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# ABSTRACT

The relationship between school and non-school knowledge has been a subject of several researches in the educational field. Ethnomathematics, from various approaches, has brought a large contribution to this debate by focusing on knowledge in different social practices. In this article, we aim to prioritize discussions that arise from the articulation between the debate in the field of ethno and language studies. Especially with regard to the work in the field of mathematics education towards to the dialogue with the second phase of Wittgenstein's work. The question that guides this discussion is: what are the possibilities of questioning discourses and schooling practices based on a relationship between school and non-school knowledge in the field of ethnomathematics? We conclude with some reflections about the effects of this discussion in the subjects' construction: students and teachers.

Keywords: School and Non-school Knowledge; Ethnomathematics; Mathematics Curriculum; Subjectivity; Language Games.

#### RESUMO

A relação entre saberes escolares e não-escolares tem sido tema de diversas pesquisas no campo educacional. A Etnomatemática, a partir de várias vertentes, trouxe uma grande contribuição para este debate ao trazer em questão a circulação de saberes em diferentes práticas sociais. Neste artigo, pretendemos priorizar as discussões a partir da articulação entre o debate no campo Etnomatemática e os estudos provenientes da Virada Linguística. Focalizamos, especialmente, o trabalho no campo da educação matemática que vêm promovendo um diálogo com a segunda fase da obra de Wittgenstein. A pergunta que orienta a discussão é: quais são as possibilidades de questionamento sobre discursos e práticas escolares baseado na relação entre saberes escolares e não escolares no campo de Etnomatemática? Finalmente, propomos algumas reflexões sobre os efeitos desta discussão para pensar a produção de sujeitos no espaço escolar: estudante e professor.

<sup>&</sup>lt;sup>1</sup>This is a metaphor related to the biblical narrative of the construction of the Tower of Babel in which God confused the tongues of humanity in order to give an idea of language diversity (many languages) that constitutes the encounters with the knowledge of different social practices in school settings.

Palavras-chave: Saberes Escolares e Não escolares; Etnomatemática; Currículo de Matemática; Subjetividade; Jogos de Linguagem.

#### **1. Introduction**

Numerous official curriculum discourses have highlighted the need to discuss possible relationships between everyday knowledge and related pedagogical practices; especially in regards to educational practices that ensure diversity and include people with diverse special needs, and this also includes training in ethics. However, this discourse has more often than not been limited to a mere rhetorical role. Brazilian curricular documents in force today both highlight and call attention to the importance of these positions often referred to as *politically correct*; and do not point to or present political actions that allow full implementation of these changes.

In this sense, the attempts at inclusive education (Veiga-Neto, 2001) in Brazil, even though it ensures school places for children and youth with especial needs, suffers a true lack of support for how the students are being welcomed and which spaces are being reserved for them. Thus, this is a more exclusive than inclusive process. Similarly, knowledge valued by external evaluations increasingly limits the possibility of new knowledge and practices in school context. In other words, various knowledge disciplines were directed to students' learning ability, which are verified through general evaluations organized by state, federal and municipal governments such as SARESP<sup>2</sup>, ENEM<sup>3</sup>, and PROVA BRAZIL<sup>4</sup>.

Furthermore, the curriculum has encouraged a certain amount of discourses centered in skills, abilities, conceptual objectives and procedural attitudes. The latter are generally related to the ethical stances or what is considered *ethically correct* by the mainstream society. The discourses that cross the curriculum documents in Brazil are mostly based on jargon which, for many years, have been part of the claims of diverse social groups - usually excluded and silenced in school environments. However, these statements, as advocated by different groups, possess different characteristics and goals. In other words, the process of discursive appropriation included phrases and words, and became a *new look* using old drapery. Thus, as in the tale entitled *The Emperor's New Clothes*, written by Hans Christian Andersen in 1837, the *King is still naked!* In spite of the interrelation between different issues in this article, we will limit ourselves to discuss only one of those devices that have come to make up the *Emperor's New Clothes of the curriculum*.

In this article, we highlight relationships between school and everyday knowledge, especially, in relation to the implications with ongoing discourse in the field of ethnomathematics, all of which combine to play an important political role in the recovery process and the legitimacy of non-school knowledge. The debate proposed here leads to a problematization between

<sup>&</sup>lt;sup>2</sup>SARESP is an external standardized test applied annually by the State Department of Education of São Paulo since 1996. This test systematically evaluates students in basic education.

<sup>&</sup>lt;sup>3</sup>ENEM is a standardized test conducted by the Ministry of Education of Brazil since 1998. The results of this test are used to evaluate the quality of secondary education in the country. Its outcomes serve to give students' access to higher education in the Brazilian public universities system.

<sup>&</sup>lt;sup>4</sup>PROVA BRASIL is an assessment created in 2005 by the Ministry of Education that is part of the National Evaluation System of basic education.

relations of school and everyday knowledge, relating them to issues of exclusion, which permeate current school contexts. According to Santos (1996), the non-recognition of alternative knowledge, that is, that which differs from models and forms as proposed by modern science, generates a sense of social exclusion and often implies the non-legitimacy of social practices underlying such knowledge.

Ethnomathematics, as presented by D'Ambrosio (1992, 2001) is a research program focused on cultural roots of mathematical ideas that looks at the way they occur in different social groups. This author defends the idea that every social group presents a particular collection of knowledge related to the arts and techniques of explaining and understanding. Such view challenges the idea of universality attributed to mathematics.

Among a number of research activities developed in this field, a varied range of perspectives on ethnomathematics have arisen, which are, according to Conrado (2004), "associated to the notion of culture itself, to our perceptions of knowledge and how it is constructed, and to different ways of perceiving mathematics" (p. 84). From our standpoint, ethnomathematics is not related to the idea that the understanding of diverse social practices familiar to what we call mathematics can be achieved solely by means of academic mathematics. For us, the debate over such practices and knowledge must include the meanings and understandings of groups, taking into consideration how they present, validate and state the legitimacy of their knowledge and practices. By calling and including such practices as *mathematics*, as we name it, this means that we understand that procedures present in mathematics show similarities and differences when compared to the knowledge that is present in specific practices of the group.

On the other hand, when the group itself names *mathematics* as a set of practices, it is clear that this name carries a political and symbolic meaning that stands in opposition to the dominant knowledge, such as the discussion presented by Mendes (2004) in which indigenous teachers refer to *Indian Mathematics* as a way to oppose the non-indigenous Mathematics (Mendes & Monteiro, 2011). Both the political implications and epistemological grounds of ethnomathematics have been discussed in depth by D'Ambrosio (1990, 1992, 2001), Gerdes (1988), Barton (1996), Ferreira (1997), Mendes (2001, 2004), Monteiro (1998, 2004), Mendes and Monteiro (2011, 2014), Bello (2000), Domite (2000), Monteiro, Orey, & Domite (2004), Rosa and Orey (2003, 2013), among others. Many questions presented by ethnomathematics turn to its pedagogical action regarding the many implications and reflections developed in the field, and relate to both school practices and the overall mathematics curriculum.

Which model of school does this perspective imply? Such questions have generated a debate around the issues of difference and of multiculturalism, among others. Within the context of the school, the question of knowledge diversity has been discussed from standpoints of the dichotomy between academic knowledge and non-academic knowledge. This dichotomy forms the focus and the analyses of many fields, which support curriculum construction. In Psychology, for instance, it can be analyzed in terms of the learning and seeking of ways that articulate a better significance for in-school knowledge. Another perspective we intend to discuss in this paper focuses on the relations of power underlying this articulation between these different forms of knowledge.

In this sense, our aim here is to reflect on the incorporation, within the curriculum, of mathematical knowledge and practices that are excluded from the school context. The

question that arises then is: what are the possibilities of questioning discourses and schooling practices based on the relationship between school and non-school knowledge in the field of ethnomathematics?

### 2. The Difficult Relationship between School and Non-school Knowledge: from Ethnomathematics to Language Games in Social Practices

The relationship between everyday and scientific school knowledge usually centers on a dichotomy and evolutionist conception of knowledge in which scientific knowledge is considered superior. As the scientific knowledge is methodologically tested and demonstrated, it becomes an unquestionable truth that can only be revised by means of scientific theories that are supposedly more evolved. School knowledge, in turn, once it seeks foundations on the scientific knowledge, excludes everyday knowledge and, in the search for scientific authenticity, superimposes itself over everyday knowledge, thus, generating a series of problems related to the lack of meaning and interest present in practices and activities conducted in school.

The imposition of a supposedly truthful discourse based on the alleged superiority of science generates, according to Connell (2000), a process of segregation of poor, proletarian children who belong to ethnic minorities since their knowledge, values and discourse practices are silenced by the discourse that is considered legitimate by the ruling class. In this regard, it becomes clear that it is necessary to address the relations between different forms of knowledge, and this process has been occurring in many fields of education. In Psychology, for example, such debates have focused on difference and possibilities of articulation among scientific, school and everyday knowledge in the learning process.

In the perspective of Psychology, such forms of knowledge are understood either as independent – in which everyday knowledge would be a prerequisite which should be overcome by a more complex knowledge – or as dependent, thus subject to a hierarchy in which scientific knowledge is seen as a development of everyday knowledge. In either case, everyday knowledge is seen as something to be overcome.

Gómez-Grannel (2002), on the other hand, understands that some similarities between everyday and academic knowledge do exist, since both are complex and subject to change, that is, the shift from simple to complex occurs within each one of them. This author opposes the idea that the transition from everyday to scientific knowledge could be described as a transition from the simple to the more complex, in such a way that the reference for school knowledge would lie in scientific knowledge.

In the view of Garcia (2002), school not only intervenes in the selection of scientific knowledge, but also transforms this knowledge into a school knowledge, which can be taught, therefore, using everyday knowledge in an implicit fashion and scientific knowledge in explicit and formalized ways. Thus, everyday knowledge has an auxiliary role in the teaching process since it may lend a greater degree of meaning to concepts taught. Nevertheless, such propositions do not question the reasons why such scientific knowledge should be taught and learned. Why should they be so rather than others? Moreover, such proposals further strengthen the dichotomy between scientific and everyday knowledge, which are sources of exclusion of knowledge and people.

It is necessary, therefore, to shift the focus of debate from the field of Psychology, which usually supports pedagogical and curricular proposals to the social and political spheres. Such redirection leads us to discussions on the relations of power that can sustain an articulation network among different forms of knowledge. According to Connell (2000), the focus on power issues related to different discourses present in school may lead to the discussion of mass education, curricular policy and the nature of teacher's work (p. 22).

Once the focus is shifted to power issues, and more specifically to the field of mathematics, it is clear that this form of school knowledge presents itself as solid and unquestionable. There is a naturalization of contents, including the order and shape of this knowledge, which renders an organizational rigidity to it, and makes seem absurd to question the order of the curriculum contents or the truthfulness of the fact that 2 + 2 = 4. If, in other fields, there seems to be a small possibility of considering other interpretation of phenomena, of a plurality of thinking, in mathematics this sounds as if it is sheer heresy. Reflecting on the rigidity on which the school system is based, and which, in turn, reinforces resistance to thinking in an alternative way, Candau (2001) argues that:

(...) all rigidity which usually shells the organization and dynamics of school pedagogy, as well as the monocultural character of school culture need to be questioned. One should emphasize dynamics, flexibility, diversity, the different readings of the same phenomenon, the diverse ways of expression, the debate and construction of a plural critical perspective" (p. 14).

It is in this sphere of plurality that we intend to discuss, by assuming that mathematical knowledge is socially constructed, culturally mediated and historically situated. Mathematical knowledge is a way to express concepts involving time, space, measures, counting, among others. Its legitimacy and validation have been imposed since the dawn of Greek civilization, which gave it a degree of universality that is difficult to dispute.

The construction of the mathematical *empire*, as of any other knowledge, is the product of negotiation and power relations imposed by ruling classes which excluded practices and procedures present in everyday situations, and when it was necessary to absorb everyday procedures and wisdom. They were then clothed by a discourse of universality, which gave them a status of absolute truth.

Therefore, it should be noted that when official discourses address the need to link school and everyday knowledge, they are factually based and could facilitate comprehension, and be meaningful, thus ensuring the learning of concepts. This view comes from different ideas in cognitive psychology, which promote the learning of concepts in an essentialist perspective, i.e., the learning of a concept involves getting the essence of the concept in order to identify it, represent it and use it in different situations and contexts. The acquisition of this concept essence enables its use in different possibilities of variation since its essence is not corrupted.

In this sense, discourses that value the approximations between school and non-school knowledge have a principle that functions as an approximation and facilitates learning. When this occurs, there can be assistance and even a time minimization of different learning stages. In opposite direction of this cognitive learning perspective, it is necessary to focus and be concerned with how to ensure a faster, easy, and effective learning. We are also concerned about what kind of content should be taught and learned in schools? Is it possible to control

what one learns? In this sense, in the field of mathematics education, different research studies have shown that some new learning perspectives can be labeled as ethnomathematics.

Centered on a political approach committed to minority and/or socially excluded groups, ethnomathematics is one of the first movements within mathematics that dares to state that there is not a single mathematics. Moreover, the discussion has brought a strong social and cultural commitment, recognizing that many forms of mathematics have been produced from the needs and activities of different social and cultural groups and contexts.

In the educational field, the discourses that emerged from this new field of study have produced several resonances. For some, these different forms of mathematics could be used - similar to a cognitive perspective - as a form of previous knowledge, which, when explored and *translated* into a version of school mathematics, could be more significant for learners. In another perspective, research in ethnomathematics has generated discourses advocating cultural knowledge with the aim to avoid the *contamination* of those with legitimate knowledge at school. However, this intended knowledge may or may not be considered as mathematics because it is stated by the researcher who does not usually belong to a studied socio-cultural group.

Other approaches in this educational field, in our view, marked by a broader political commitment, are those that recognize differences between knowledge and practices produced by different social and cultural groups and problematize the power relations that establish a position or another position. However, for the recognition of differences, the ability to put in evidence the questioning process of prioritization set among knowledge remains the translation.

The legitimacy and validity of everyday, scientific and school knowledge are all based on distinct criteria. In the scientific sphere, validation rests on specific methodological procedures validated in each area of knowledge by those who act in it. In the context of the school, veracity and legitimacy, though based on scientific models, it is usually limited to the discourse of the teacher or by textbooks due to their being the soul means of transmission.

In everyday life, validation and legitimacy strategies rest on other dimensions, whose criteria of truth, according to Lyotard (1989), lie in the applicability and validity of actions based on transmission processes that allow subjects to become producers and disseminators of valued knowledge, even though it may occur partially inside the group. The everyday knowledge that is usually excluded and rendered non-legitimate in school contexts may indicate paths for the construction of *deviational tactics* and *everyday cleverness*, by using the rules imposed by the authorities (Certeau, 1994).

Oliveira (2000) observes that Michel de Certeau, by pointing out a process of building *tactics* and *cleverness*, wants to create evidence in regards to the processes by means of which the *practioneers of everyday* life escape and use in an unauthorized way (subversive) the rules and products imposed by dominant groups. Marginalized groups, generally composed of citizens excluded from schools, produce and disseminate different forms of knowledge that should be included in the curricula aimed at the solid construction of a more inclusive and tolerant society, able to organize itself in difference rather than in a social pseudo-homogeneous society.

That is, despite all differences, many of the proposals coming from the ethnomathematics movement are based on the practice and belief of a possible knowledge translation since the recognition of each other's math is always marked by what we (researchers) know and we call mathematics. It is from the set of knowledge we call mathematics that we analyze practices and knowledge of others, classifying this knowledge as mathematics of the subjects or group A, B or C.

Therefore, it is worth noting that when this paper aims to problematize the relationship between school and non-school knowledge in the field of ethnomathematics, the focus will be a discussion originated by several researchers, some working in the field of ethnomathematics and other fields that make up mathematics education, taking as reference the work of Wittgenstein, using the ideas of this author about language games.

# **3.** Problematizations on the school curriculum: Local mobilization emerging knowledge of different social practices

To continue this discussion, it is important to note that, as present in the much of the discourse in official documents, of the media, of students' and parents' speech, in general, traditional teaching of mathematics is meaningless to them. In addition, one way to mitigate this lack of meaning is to connect this knowledge to daily practices. Thus, it is necessary to bring everyday situations to school contexts and to facilitate learning as if it were really possible to bring the everyday activities to the school environment. For example, it would be proposed that if a carpenter needs to cut wood for a cabinet and uses a certain unit of measure, then in school the student could remake this activity into a school problem using this unit of measurement. This activity and this unit of measurement is something already known by the carpenter community.

However, when professionals go to school, they go in search of new horizons and new information. Nevertheless, cutting the wood in joinery versus the school is an activity meant completely differently. Thus, conducted and performed in school context, it is a very different way from that proposed in the everyday sense. Both school and joinery institutions have different values and expectations for the application for cutting wood. Thus, it is necessary to create more attention to discussing these forms and approximations between math and the daily life of a student.

We wish to draw attention to this because many people tend to understand ethnomathematics as a methodology that is able to *carry* everyday knowledge to the school context in a *natural* fashion. We do not share this understanding. First, because we understand that it is not possible to bring everyday knowledge into the school context. From our point of view, when students play a real-world situation in the school context, this situation becomes a school situation. Therefore, the meaning of this situation becomes relevant because of its own language and environment. Finally, the conditions and meaning in which this activity occurs also changes. They are often so different that we cannot understand them as everyday, but at most, as their own activities or applications in daily school life using everyday as a way to represent a specific knowledge. Therefore, for us, ethnomathematics is not presented as a methodology, even when inserted in the school context.

Thus, education is shown as something instructive that is not exclusive to official institutions; it is present in various institutions such as family, church, school, factories, trade, media, etc. They occur in areas called situated institutional practices of cultural mobilization in

communities of practice. Hence, it is necessary to avoid the dichotomies of knowledge that produce, reproduce, and only replace the use of the expressed production and reproduction of knowledge, which is the *culture mobilization* (Miguel, 2007). In this regard, culture can be:

(...) understood here, in line with Thompson, every intentional act of production of meaning, that is, every intentional act of symbolic mobilization objects of any kind, in an institutional context, by institutional subjects, this is, subjects which act and interact always conditioned for dynamic different sets of rules for certain human legitimate social communities, but not for all. I observe, then, that my semiotic concept of culture does not see it as a repository of whatever it is, but as semiotic activity of every human being (Miguel, 2007, p. 18).

Thus, we can understand how cultural mobilization expressions enables us to understand the dynamic assignments of meanings and values that are present in activities developed within different cultural practices. This understanding leads us to discard essentialist proposals and forms of representational knowledge leads us to believe that if a thing is constituted by the essence of a person, it is able to understand this essence and carry over and use this thing for several independent activities of cultural familiarity that was proposed by this use.

In this sense, we understand the school institution as a promoter of its own activities. For example, the organization of time and space within the school institution are the very shares of this cultural practice, which we will call the educated practice. Note that educated practice is not something present only inside the school building, but as a cultural practice present in our own actions: for example, when cooking and using units of measurement, these procedures can be used in school practices.

Traditional school practices have been assigned the role of passing on knowledge and social values, and are organized by various disciplines that make up the curriculum. Besides, it is precisely these curriculum documents focusing on cognitive perspectives that defend the approaches of everyday math through methodological actions centered on interdisciplinary or project perspectives, among others. Despite the different contributions that these actions can bring to school field education, they still do not contemplate the idea of fluidity or cultural mobilization referred to the proposal by Miguel (2007), as previously cited.

There are differences between these two ways of thinking as a place of cultural mobilization or as (re) production of knowledge. The second maintains the fragmented structure of disciplining and expecting methodological approaches and indicate the interactions or approaches to situations recognized by the school as daily.

Alternatively, the idea of mobilization leads us to think about possibilities in relation to using the school environment as a flow space helping us to exchange directions in a way that the curriculum is organized to include a variety of cultural practices and not only by a sequence of disciplines. This perspective is based on many authors, but in particular, it is influenced by the movement named linguistic turn from which knowledge becomes understood from another perspective (Miguel & Villela, 2008).

In this regard, from which knowledge come to be understood in a different perspective, influenced, especially by Wittgenstein, the researchers Miguel, Vilela, Lanner, (2010) argue that the meanings attributed to knowledge are resulting from meanings produced by subjects that use and share this knowledge in activities engaged in their various and diverse practices.

Thinking about actual practices as processes that enable this mobilization and transmission changes the way we think about knowledge and learning. At first, it is noteworthy that the knowledge within these practices are not disciplinary, in other words, its existence depends on the possibilities of establishing relations. That is why we bring this discussion to the work done by Jean Lave (2002), for example, when she examines shopping practices in a supermarket. According to this researcher, shopping at the supermarket is not a simple activity of picking up products, adding the values and paying. Lave (2002) points out that when shopping, many variables collide to become part of the process. In her research, she points out that to buy certain food one needs consider the dietary patterns of his/her home, the dining style you want to make (formal or otherwise), the quantity, and finally, the criteria that school environments disregard. As a result, when we organize an exercise about shopping in a supermarket to discuss in class, we are working with their own situations, to integrate the everyday into school life.

In the same direction, Miguel (2008) discusses the sense of distance between two points in the practice of surveying, in the practice of acupuncture and school mathematics. The three distinct practices elaborate explanations about the meaning of distance between two points so that they cannot be transferred from one place to another. In the same sense, we can think of cartographic practices. When requesting that a group of health workers in a rural settlement indicate the way they make visits to 60 families every week, they indicated their path taking as reference not the distance, but the time and the vehicle that they would use to make their path (Monteiro & Lima, 2009).

Similarly, another woman interviewed in the study, and who was a student of  $EJA^5$ , drew the path from school to her home. The reference point of her drawing was a model home she idealized, not necessarily her home, and this way was not the best route outlined in the map. Otherwise, for the taxi driver, for example, the reference point is the street names as he points as reference on the place where he should turn (Monteiro, 1998). Finally, the organization of *maps* or sketches - have standardized rules and boundaries, but are not generalized, or essential, that is, it is not possible to acquire a knowledge in its essence and transfer to any situation because it does not always exist.

Domite (2000) presents the procedures used by street kids in São Paulo to divide candies they sell at traffic lights by: gender – girls keep a greater share because they are more responsible; by age – the younger ones receive quotas proportional to their selling possibilities. Such procedures are, among many others that include units of measure, calculation of areas and perimeters, silenced and excluded from the classroom environment.

Many other examples may be pointed out when we observe the culture of different indigenous nations. For instance, Ferreira (1993) discussed the issue of meanings attributed to situations of increase and decrease in the capitalist model, in which school mathematics relates increment to buying, finding, borrowing and even stealing, that is, to having more, and conversely, relates selling, giving and lending to having less. The author analyzed the situations of *giving* and *receiving* associated to the operatory concepts of *more* and *less* in the context of the Xingu Indigenous Park, teaching Kaiabi, Suiá and Yudja (Juruna) ethnic

<sup>&</sup>lt;sup>5</sup>In the Brazilian context, EJA is the acronym for Educação de Jovens e Adultos (Youth and Adult Education) for an educational segment addressed to young and adult students who did not have access to school or did not conclude their studies during their regular schooling time.

groups, in presenting the students the following problem: "Last night I caught 10 fish. I gave 3 (three) to my brothers. How many fishes do I have now?"

The answer given by his student Yuda was 13. The explanation given was justified in the following way, according to the student: "I kept 13 fish because when I give something to my brother he pays me back in double. So 3 plus 3 equals 6 (what his brother would pay him in return); 10 plus 6 equals 16, less 3 equals 13 (total number of fish less 3 that were given to his brother)" (Ferreira, 1993, p. 39). Although the problem presented a typical school problem, the student used a strategy when choosing the mathematical operations that connected to meanings given in the community to the situation of *giving*, related in our context to the idea of *less*, in the student's context meant *more*.

In various real situations, there is a variety of ways to make use of such binds, in what Wittgenstein calls family resemblance. Family resemblance is a term that Wittgenstein explained using the metaphor of the family, i.e., a person has his father's eyes, his mother's nose, uncle height, but she/he is neither the father nor the mother or uncle. She/he just has family resemblances.

Another resource used to connect school to non-school knowledge is building a non-school environment, for example - a supermarket in which children shop and spend the cash, use toy money, etc. Without any criticism or disqualification of the use of these strategies in schools, what interests us here is to point out that we are again conducting a school practice.

It is not possible to bring non-school situations to the school environment because they will never represent the same situation. For example, in his book entitled *The Order of Things: An Archaeology of the Human Sciences*, Focault analyzed Diego Velázquez's painting *Las Meninas* and discussed the impossibility of representing this painting in relation to the way the painter outlined it on the frame. This issue is also presented in another book written by Focault entitled *This is not a pipe* in which the notion of representation is questioned from the René Magritte's painting entitled *Ceci n'est pas une pipe*. The observer of the painting might think, at the same time, that the image is and is not a pipe. Thus, it is still possible to refer to another idea according to the context in which it is analyzed. In the context of these two analysis, Foucault deconstructs platonic relationship of representation in which words correspond to things (objects) in its absence by denying an essentialist perspective of knowledge.

Understanding that knowledge emerges from mobilizations produced within different practices leads us to question what other possibilities in school practices allow us to build different forms of knowledge especially if curricular structures can be more flexible and committed to the values and principles of individuals who participate in this process. In other words, how could a school not restrict, in a unique manner, people who participate in its activities such as students and teachers? Would that be possible?

From our perspective, we think about the possibility of a school in which students and teachers are analyzed according to their uniqueness and not as pre-designed models of students and teachers. This is consistent with the perspective of the subjects in which the *beings* do not need anything to compare to or something to be compared with, and even more importantly, regarding what they are not. From this context, the ontological movement does not exist from not *being*. What exists is the expression and dynamics of the *being* itself. The human being is expressed by events. Thus, the human being is the difference. The *being* is

never something (the entity) and has, however, a reality that subsists, as how to be a part of its essential *being*, as univocal and determined, as one and difference (Deleuze, 1988).

From an ethnomathematical perspective, the possibility of incorporating the plurality of mathematical practices and knowledge in schools requires a reformulation of these institutions, and in this sense, we agree with Candau (2001), who argues that education in our society is achieved by different institutions, spheres and social practices, observing that:

One of the current challenges is to widen, recognize and favor distinct loci, educational ecosystems, different spheres of knowledge and information production, creation and recognition of identities and cultural and social practices. Be they presential or virtual. Be education systematic or non-systematic. Where many languages are addressed and many subjects interact, either in a planned way or more spontaneously (p. 13).

# **4.** The challenges and effects of mobilization of knowledge in the production of subjects: students and teachers

Finally, we understand that knowledge is meaning in their context of use, and therefore we reverse our questioning, that is, the question is not how to relate school with no school knowledge, but how school practices may allow senses and knowledge mobilized in other practices can find space to emerge. This is not to bring different knowledge, but to understand why some of them are silenced and others are desired or rather, what the rules and power relations that condition and allow or not the presence of other ways to make sense of and understand certain things inside the school context are.

The challenge, therefore, is not methodological - not that this is not relevant - but the challenge is to understand school institutions and knowledge (school or not) from another perspective and therefore think that the institution is a place that fosters practices and allows the mobilization of different knowledge in which it will produce new subjects: students and teachers. Challenges to educational practices, when analyzed from the perspective of social practices, directs our thoughts to other issues. Perhaps the main one is the understanding that when senses, meanings, and knowledge are deployed within different social practices, the subject of this knowledge is no longer a mere cognitive subject that can become subject of subjectivity.

After all, what does it means to be this subject? Foucault, after many writings, assumes that his focus was always the subject and, for him, the subject is constituted by the place that it occupies. In that sense, what is the place for teachers and students in schools? How to occupy these places? Of course, we do not want to say that it takes the place of a student or a teacher or: what does it mean to be unique? Specifically, what does it mean for some possibilities and impossibilities to be in this specific historical moment?

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