PEDAGOGICAL PRACTICES AND PRODUCTION OF SUBJECTIVITIES: ATTENTION AND NEW TECHNOLOGIES

Cristina Maria Toledo Massadar Morel[1]
Escola Politécnica de Saúde Joaquim Venâncio/Fiocruz, Brasil.
Luiz Antonio Saléh Amado
Faculdade de Educação da Baixada Fluminense/UERJ e Programa de Políticas Públicas e Formação Humana/UERJ, Brasil.

ABSTRACT. This paper aims to discuss the way as pedagogical practices have been configured due the impact of changes provoked by current information and media approaches. We analyzed, as an illustration, two educational experiences: class inversée and video-class, as proposed by Salman Khan. The educational approaches that are presented as innovative were understood as an expression of a tangled network involving: school institution, contemporary world and subjectivity production processes. To deal specifically with the attention schemes we based on writings from cognitive psychology area, and on papers from communication and education fields. Considering school as a social institution, shaped by changes on going, and at the same time as an actor in this process, we identify as relevant analyze pedagogical experiences that present themselves as innovative, taking into account the possible risk of standardize subjectivity and its creative potential desirable.
Keywords: Subjectivity; attention; information technology.

PRÁTICAS PEDAGÓGICAS E PRODUÇÃO DE SUBJETIVIDADES: A ATENÇÃO E AS NOVAS TECNOLOGIAS

RESUMO. Este artigo discute como as práticas pedagógicas vêm se configurando sob o impacto das transformações suscitadas pelos meios de comunicação e informação atuais. A título de ilustração, recorre-se à análise de duas experiências educacionais: a *classe inversée* e a *videoaula*, proposta por Salman Khan. As propostas pedagógicas que se apresentam como inovadoras são compreendidas como expressão de uma intrincada rede que envolve a instituição escolar, o mundo contemporâneo e os processos de produção de subjetividades. Apoiados em trabalhos da área da psicologia cognitiva, e também nos campos da comunicação e da educação, aborda-se, especificamente, a questão dos regimes de atenção. Ao compreender-se a escola como instituição social, forjada pelas transformações atuais, mas também atuante nesse processo, identifica-se a importância de se colocar em análise as experiências pedagógicas que se apresentam como inovadoras, levando-se em conta o possível risco de padronização da subjetividade, como também seu desejável potencial criativo.
Palavras-chave: Subjetividade; atenção; tecnologia da informação.

PRÁCTICAS PEDAGÓGICAS Y PRODUCCIÓN DE SUBJETIVIDADES: ATENCIÓN Y NUEVAS TECNOLOGÍAS

RESUMEN. Este artículo describe cómo las prácticas pedagógicas se han desarrollado bajo el impacto de los cambios planteados por los medios de comunicación e información actuales. Como forma de ilustración, se recurre al análisis de dos experiencias educativas: la classe inversée y la videoaula propuesta por Salman Khan. Las propuestas pedagógicas

---

[1] *E-mail*: crismm02@gmail.com

que se presentan como innovadoras son entendidas como expresión de una intrincada red que implica la institución escolar, el mundo contemporáneo y los procesos de producción de subjetividades. Apoyados en trabajos del área de la psicología cognitiva, y también en el campo de la comunicación y de la educación, se discute específicamente la cuestión de los regímenes de atención. Cuando comprendemos la escuela, como una institución social, forjada por las transformaciones actuales, pero también activa en este proceso, se identifica la importancia de analizar las experiencias pedagógicas que se presentan como innovadores, teniendo en cuenta el posible riesgo de la estandarización de la subjetividad, así como su potencial creativo deseable.

Palabras-clave: Subjetividad; atención; tecnología de la información.

Many aspects of our ordinary lives, such as work, school, leisure, consumption, have been intensively affected by our current socioeconomic organization. To use Harvey's (1994) expression, it could be said that contemporary society is constituted from the intensification of a new comprehension cycle of time-space. This cycle, which has been established in the 60s, has configured a new organization of production, of work, and of consumption that generate speeding processes in different areas of our life.

The fast pace at which new information is produced and consumed has created challenges to those involved in educational practices. At the same time schools, being the social institution they are, are forged by current transformations, they are also an operating part in this process. Various conceptions of school organization, of teacher-student relationship, and of learning are built.

Thus, based on previous works by Virgínia Kastrup, Beatriz Sancovschi, and Yves Citton, in the area of cognitive psychology, and also on the works of Paula Sibilia, in the field of communication and education, we approach the matters of the attention regimens raised by current means of communication and information, which are at odds with the traditional educational standards of attention regimens, centered in the notion of pedagogic relation in which disciplined students watched the teacher's expositions.

For example, we have drawn on the analysis of two educational experiences: that of *classe inversée*, developed in France, and that of video-class, proposed by Salman Kahn. The material presented here about these experiences gathers scientific journals, blogs on education matters, websites, radio transmissions, magazines, and newspapers. This material is particularly important because each of them, in they particular way, puts forth discourses whose effect is to produce truth about this topic.

Pedagogic proposals that are considered to be innovative present us the challenge to avoid the simple-minded reasoning that understands the new as something necessarily better than the old. Thus, revisiting the relationship between new pedagogic practices and the production of subjectivities, we aim at analyzing these proposals as an expression of a intricate network that evolves in educational institutions, the contemporary world, and ways of subjectification.

Contemporary subjectivities

Guattari (1992), in the beginning of 1990, identified the importance of transformations that herald with technological innovations, especially with respect to the production of subjectivities. Everything would depend, according to him, on how new technology would be managed with the invention of other universes of reference. With no intention to reinforce reactive attitudes against new technology, but betting on the loopholes in formation, he would affirm that:

> Technological developments together with social experimentation in these new domains are perhaps capable of leading us out of the current period of oppression and into a post-media era characterised by the reappropriation and resingularisation of the use of media. (p. 5)

Departing from the principle that subjectivity is not in itself immutable, but that it is socially produced, and that it relies on the configuration in which it is set, which subjects are being produced in contemporaneity?

Mancebo (2003) identifies different levels of these transformations: the diversity and rapidness of "products, manners, production techniques, and also ideas, values, ideologies, practices, social relations,

as well as fluidity of practices" (p. 80) generate feelings of insecurity, due to the extreme challenge of copping with new demands. The excessive exposition to images and information makes new ideas readily disposable. A subjective dynamic is established, in which it is expected immediate satisfaction from the consumption of information, values, and relations.

Mancebo (2003) alerts that, given the challenges in contemporaneity, instead of assuming a pessimist attitude, or a finding it overwhelming, it is necessary to slow down, that is, stop to reflect upon the possibilities and limitations of current circumstances, identifying their creative potential, the patterns they reinforce, and the dullness of subjectivity. Up to which point do they generate potential new encounters, new configurations, or, on the contrary, do they paralyze, produce feelings of inadequacy and solitude?

With respect to education, frequently the characteristics of contemporary world are evoked to justify the adaptation of the school and its processes to new social demands. However, the current economy of information, in which the production, circulation and consumption are highly elevated, seems not to be taken into account when the forms assumed by the students' subjectivities are under analysis. And example of this current preoccupation has to do with the Attention Deficit Disorder (ADD), which is characterized by the difficulty to develop long-term projects, low performance in tasks, and lack of attention, and, in some cases, is associated with hyperactivity (ADD/H). Such behavior, described by some as some sort of epidemic and common in young children and people, has drawn the attention of most educators. But, with respect to its causes, it is usually attributed to the students' limitations. As a consequence, there are inappropriate proposals in medicalization of behaviors and in conduct, however hardly ever are there analyses of the transformations contemporary society has undergone and their effects about the experience of students and their relationship to learning and studying.

Thus, framed in this context just mentioned, it is of our interest to describe the ways in which educational practices have been configured, considering, above all, that the possibility of accelerated consumption of a great volume of information does not mean that learning is taking place. In order for leaning to happen, it is necessary there to be enough time for one to experience new situations so they can settle down. In the current frenetic rhythm, the tendency is there to be more contact with information than effective construction of knowledge and experience fruition.

How has school been dealing with this challenge? What arranges, permanencies, adaptations, and resignifcations have been taking place?

Sibilia (2012) compares these different forms of school functioning with new practices of access to information from technologic advances. Sibilia makes an analysis of the school, which should deal with "two different regimens – including the contradictories, or even incompatibles – such as the disciplinary pedagogic gadget, and the connection of digital networks" (p. 190). The politics of digital inclusion that aim at guaranteeing every student's access to computers are not in them selves enough to supply for the challenge of enabling the construction of other paths to the production of knowledge.

With the abundance of technological artifacts that can be used individually, there is the intensification of the private reception, and, there is an apparent decrease in the necessity of the presence of a teacher, of collective spaces to ensure the production of knowledge. These new artifacts enable the connection with various people, in different places, and they also allow for one to multitask, modifying the conception of a more focused activity. However the fact that one can multitask in the quietness of a private space does not mean that there is no privacy anymore, or that there is not a more introspective stance, of looking at oneself, or that there is no more position of a better elaboration of knowledge. There is, on the contrary, a stimulus to the exposition of feelings, personal information, and dispersion (Sibilia, 2012). An important matter when we discuss the school and subjectivity in contemporaneity is, then, the comprehension between learning and attention.

Learning and attention

The current logic to associate learning problems to lack of attention does not allow us to realize that the accelerated flow of information, that compels us to consume it compulsively, reinforces the production

of certain forms of subjectivity that are not characterized by the lack of focus, rather by the excess of focalization. According to Kastrup (2008), seeing from this angle, dispersion becomes a problem because

> A dispersed attention eager for new things respond automatically to external information that proliferate and that summon an ever focused attention, and at the same time fleeting. Information is rapidly consumed in a pointless search, because everything is rapidly discarded. (p.172)

Following this reasoning, we need to put under analysis the relationship between learning and attention. In general, the concerning matter is to retrieve the ability of reaming attentive. The author says that attention is considered as an auxiliary to learning and her analysis is narrowed to those modalities of attention destined to capture and search for information. Consequently, the poor performance of this function can lead to the conclusion that there is a deficit of attention and an ability of low concentration (Kastrup, 2008).

The reduction of attention to the act of paying attention denotes the understanding that the processes of concentration and of focalization are identical, which, according to Kastrup, is not true, since it is possible for one to focalize without being concentrated – common to the hegemonic cognitive regimen in contemporary subjectivity, that of recognition – as was as concentration without focus – indispensible in the process of invention.

Kastrup (2007) makes reference to two regimens, or politics of cognition, that is, the two forms of understanding the act of knowing: the politics of recognition, and the politics of intervention. In the first case, there is a correspondence between knowledge and a pre existing reality. Cognition would be, then, a mere "re-cognition" of a given world. On the other hand, in the second perspective, the politics of invention, cognition would be a continuous process of invention of worlds, and, concomitantly, of invention of the self, which would allow for other cognitive experiences, without being confined to the recognition of the pre existent. Thus, the politics of cognition can be configured as: learning in order to simply acquire a specific knowledge, that is, to acquire information to solve a problem, or to invent problems, "keep learning and reinventing oneself and the world" (p. 223).

If we understand that attention cannot be restricted to the pre-requisite condition in order for learning to take place, some perspectives in the educational field open up, placing us before the need to reposition ourselves with respect to attention and learning. Kastrup (2008) provides us with clues when she questions whether or not attention would be a wholesome and homogenous process, presenting variations in the investment of the self upon the objects and tasks, and if it would be possible to describe the state of lack of attention and a state of cognitive functioning in which attention would be absent.

According to the author, in turning to the problem of the relation between attention and learning, we should expand our conception of the former, which was once attached to actions of paying attention to performed tasks and to look for information. What is more, it is necessary to alter this relation, replacing it by the learning of attention itself, considered to be fundamental to the development of other forms of cognition. In this sense, Kastrup (2008) further says:

> Paying attention is only one of other acts of a more complex process, which includes modulations of cognition and of the intentionality of consciousness. From the viewpoint of invention, it is clear that an important part of this process takes place outside the focus, including pre-egoic, opaque, and of non-recognition experiences not centered in the subject. From this viewpoint, learning of attention involves the necessary concentration to the consistency of such experiences (p. 14).

It is further necessary to bring into discussion an important question raised by Citton (2014). In his studies about the Ecology of attention, the author points out the influence of our perception about the attention of the other with whom we are interacting on our own attention. This type of shared attention, or more specifically, co-attention, can be characterized by the sense of sharing a co-presence sensitive to affective variations of the subjects in question. It is not difficult to see the importance of this discussion in teaching situations. Be it in children's education, be it at college level, the classroom is a situation of presential co-attention, and, according to the author, depending on the way in which we structure pedagogic practices, we can wither favor or inhibit the interaction.

In order to suggest the effects produced by the variation of pedagogic practices between the two poles – Magisterial and Interactive – Citton (2014) evokes two systems of communication proposed by Vilém Flusser: the radio system, and the network system. In his work entitled *La Civilisation des médias*, Flusser (citted by Citton, 2014) describes the radio system as being that in which there is a central speaker connected unidirectionally to a myriad of peripheral listeners; the network system, in turn, presents a multiplicity of participants connected to one another, which allows all to be speakers and listeners, in a dialogic process of communication.

Classrooms whose practice is centered on the Magisterial pole, characteristic of traditional teaching, is structured according to the radio system, characterized by one central speaker (the teacher) unidirectionally connected to the listeners (the students). In this type of class, the professor has the goal of spreading pre-existing information, which was in storage, with minimal waste, and the student will be evaluated when he can reproduce the information. On the other pole, the Interactive, the classroom can be structured according to the network system, connecting participants in a biunique fashion. In a dialogic relation, where all can be speakers and listeners, the goal is to synthesize partial information, seeking to increase the level of information, not just transmitting it (Citton, 2014). Such pedagogic practices illustrate the importance of the reciprocity principle present in attention phenomena.

Based on Citton's (2014) analysis and transporting the discussion about the exchange of information from the way the teacher-student relationship is configured to the production of knowledge, we consider it to be possible to construe different ways of organizing pedagogic practices in order to favor the emergence of other cognitions. In this sense, we agree with Kastrup (2008, p.173) when she says that it is important to point ways to be followed though practices committed to reactivating other attentions what, being part of a more complex functioning, constitute ways of resistance against the excess of focalization that smothers us in the current tiring tasking.

One of the challenges of the school would be, then, to deal with this flow of information that is at the reach of the students. To what extent is it being possible for though to give its own sense to fast-raising and fast-fleeing information? It is important to clarify that we are departing from the principle that the knowledge does not come about from the gathering of information. It is not about the processing of data from the world that is external to us. Knowledge presupposes an active participation of those who know it. These subjects, in facing new challenges, feel disturbed and instigated to do something to this respect. What happens is a more complex process of reinventions and repetitions that point to a constant restart (Kastrup, 2005).

Similar to other times, in contemporary society, students are also immersed in different social institutions, such as family, religion, etc.; and it is the school's duty to ratify, or, if necessary, to rectify the models of the students' subjectivities. The school, in the parameters of Western capitalist civilization, has been identified as a privileged space to the construction of knowledge and to the socialization of the subjects. However, in spite the importance it has, it seems that is has been constantly questioned regarding the advances of new information/communication technology. Besides the processes that naturalize the transformation of education in merchandize and that intensify the impoverishment of teacher's work, the current moment places a new challenge to teachers: the languages, the technologies, the practices, more broadly, through which subjectivities are built, are not those to which schools are used.

Subject to variations, schools can be organized according to the logic of adequacy to market demands – the instance that in capitalist societies tend to regulate them – and they can also seek to actively put into functioning strategies and practices that lead to the construction of other possibilities of existence, of other ways to construe the subject.

In order to rethink these educational practices, at the level of reflection about the school and subjectivities in contemporaneity, an interest path to follow is that of an analysis that is dedicated to the practical matters of students. In research developed with undergraduate students, Sancovschi and Kastrup (2013) have investigated some o the new forms of subjectivity and cognition that are built from the articulation with new technologies. As has been pointed out previously, these authors draw apart from the discourse of attention deficit, so common in a discussion about the influence of contemporary technology on the production of knowledge, and suggest there must be a learning of attention, propitiated, among other things, by the practices of studying.

The ever-growing presence of computer/Internet in students' everyday life allows us to assume that their attention is being influenced by new technology. However, instead of investigating attention as something given, Sanchovschi and Kastrup (2013) change the direction of the discussion in approaching attention through the learning processes relevant to it. Consequently, they abandon the idea that attention and its processes are natural; rather take them as production.

According to these authors, in the field of Psychology it is common to find researches that focus on the attention span, that is, the ability to hold it or to remain vigilant. According to these perspectives, the maintenance of attention is directly connected to the reassurance of an efficacy in task performance, leading, thus, to the conclusion that it is a matter of performance.

Assuming a very different orientation, Sancovschi and Kastrup (2013) criticize approaches to attention that focus on the performance of tasks, responsible for what they have labeled the politics of recognition, and propose another approach, based on a politics of invention, which values the experience, the thought, and the questioning.

Based on these references, they strongly affirm the non-neutrality of knowledge, and question the type of attention these studies are producing, because they understand that the learning of attention does not take place form ordinary practices. In this sense, they point out that the choices teachers and educators in general make with respect to their pedagogic proposals can put into motion learning very distinct processes of attention: those linked to the performance, or to the necessary time to the experience of study, which, in this case, can turn studying into an activity of transformation of the self and of the world (Sancovschi & Kastrup, 2013, p. 195).

In these circumstances in which informational technologies alter the relationship between students and teachers, between learning and teaching, challenging the traditional school frame, once again, we inquire: how is the school organizing itself in order to deal with these transformations? In times of intense circulation and of excessive amounts of information, which would be the possibilities for the school to generate experiences that enable the development of thought and creation?

Currently, we find innumerous pedagogic proposals in which prevails the questioning of the disciplinarity carried out in traditional school, of the depositing of the contents way of teaching, indicating an important tendency in the field of education to build spaces of teaching that prioritize the autonomy of thought. But there also are experiences that gain weight for being presented as innovative, because they incorporate advanced technological resources, although they neutralize values such as consumption and individuality, attributing to school the job to adapt students to the demands of the marker, without disregarding that such demands are produced from the present relations in society.

Classe inversée and *videoclasses*: educational experiences in contemporaneity

Among the various experiences there are, we have selected two that illustrate the tendencies mentioned above. These experiences have caught our interest because, among other reasons: of their fast diffusion on media; of their presentation as ordinary discourses which provide the solution to traditional forms of education; and, mainly, of their analyses of the effects of pedagogic practices that, in spite being clothed in innovative discourse, may contribute to forms of subjectivity similar to those of the current society, centered in individualism and competition.

A first look at bibliographic references, we found various works on the topic of *sala de aula invertida* (Schneider, Suhr, Rolon & Almeida, 2013; Valente, 2014), *classe inversée* (Lozac'h, 2013; Bissonnette & Gauthier, 2013; Faillet, 2014; Radio France Culture, 2014), and flipped classroom (Pierce & Fox, 2012; Rosenberg, 2013). The abundance of references shows how popular this proposal is. In spite of this popularity, Bisonnette and Gauthier (2013) assert that few research works that thoroughly discuss this pedagogic practice were found.

In the case of *classe inversée* the traditional form of teaching is altered. The access to most part of school contents is outside the school (at home, at the library, etc.) through videos, podcasts, or texts that would replace the teacher's lessons. In school, teacher use the time available to follow up on students, working out their doubts, and resolving exercises. It is also a moment for group discussion among

students. As reported by a teacher interviewed by France Culture (Radio France Culture, 2014), the face-to-face logic gives place to the side-by-side logic.

French teacher interviewed by France Culture pointed out that this proposal of inverting the school dynamics is not in itself new. It first started in the 1920s, and, later in 1960s with the American Psychologist Benjamin Bloom, and in the 1990s, with the incorporation of technological resources.

In the French experience, more than the systematic use of new technologies in education, what deserves to be highlighted is the questioning of the educational model of transmission of content. The *classe inversée* would lead the student to the center of the class; the teacher has the role of mediator in the process of learning and of enabler of cooperation with students. *Classe inversée*, redistributing the use of school time and space, proposes the substitution of a school model based on expository classes to few students who, with more autonomy, create their own rhythm of study.

One of the teacher interviewed (Radio France Culture, 2014) said that cooperation activities in school environment are in tune with interaction on social media, differing from previous forms of relationship based on the model of transmission of content. According to French teacher, one of the strong points of this method would be the fact that it provides the conditions for all students to learn. Each student could go on their own pace of learning, controlling the reception of expository classes. It would also be liberation for the teacher, who would no longer be under the obligation of repeating the same lessons to sleepy or agitated students. This would give time to the teacher to talk directly to each student, either face-to-face, or in small groups.

The videos used at home (*videoclasses*) can be material produced elsewhere as, for example, those produced by Khan Academy, or those produced by the teachers themselves. At this point it is necessary to make some observations about Salman Khan's method. Using different technological resources, videos with school content about various themes are produced in a synthetic and forwards fashion. The material we analyzed from Khan Academy is comprised of scientific papers, websites, magazines, and newspapers.

In a paper discussing the pedagogic proposals by Salman Khan based on analyses of material of a mass magazine, Freitas (2014) questions why this magazine praises the innovative character of Khan Academy. Going further than the critics made by Freitas, we want to point out other aspects of this pedagogic proposal, proceeding in the discussion about the relationship between leaning and attention in contemporaneity.

In an article entitled "O melhor professor do mundo" (*The best teacher in the world*, Weinberg, 2012), Salman Kahn is the professor in the video, whose face does not appear, which would count as the quality of the video, because in this manner the teaching is less scholarly. This article further says that there have been over 2700 videos and exercises produced, all available for free and from forty different areas of knowledge. Other parts of the interview with Salman Kahn clarify this pedagogic proposal, whose aim is to be the opposite of traditional school: "I want to make the school experience more effective and pleasurable" (Weinberg, 2012, p.67). And he further adds, "I dream big. My goal is to offer high level knowledge about absolutely everything, and all for free" (Weinberg, 2012, p.65); "I think I have been able to ally good content to the pace of the network. I deliver my message in an average time of ten minuets" (Weinberg, 2012, p.65). We also found in a lecture given by Salman Khan the concern with time management. According to him, currently the humanization of teaching would have to do with re relation "student-valuable time with the teacher", not to simply the teacher-student relationship (TED, 2011).

Some questions arise when we learn the goals and the methods necessary to achieve these goals. In the opening pace of Khan Academy's website we find the following phrase: "You only need to know one thing: you can learn anything" (pt.khanacademy.org, n.d.). The perspective of promoting fast and effective teaching about absolutely everything is similar to the logic of Google, and it denotes an educational approach highly superficial and utilitarian. The result is, probably, the circulation of oversimplified knowledge. In this sense, would it be possible to guarantee the construction of knowledge?

The *classe inversée* and the Khan Academy proposals are experimentations in the field of education that illustrate the challenges presented by contemporaneity. More than approaching them with innovative methods using information technology, we are interested in discussing them from the angle of the questions raised about the production of subjectivities in contemporaneity, the regimens of attention, and their relations to school education.

Subjectivities and educational experiences

The analysis of reported experiences enables us to understand that the related phenomena to post-modernity, such as time-space compression, are highly intricate in the forms of subjectivity produced in school institutions. We observe that one of the pillars of school organization in disciplinary society, such as control over how students use of time and time, would be placed under attack in the development of educational experiences, as in that of the *classe inversée* and of the *videoclass*.

The foreseen model proposed by the French experience, in which the teacher is expected to be the mediator and the student the center of the process of learning, is not novel in education, and is found in the proposals of the New School, at the beginning of the 20th century, and in the constructivist and socio-constructivist ideas. Even the teachers in *classe inversée* recognize the lack of novelty of some of this educational initiative.

The questioning of traditional forms of teaching based on the transmission of content can start with the taking of a stance that disqualifies socially produced knowledge, and fits the perspective of pragmatic adequacy of the students to the social demands, which in itself is criticized. On the other hand, it is important to observe that the relations established by these traditional forms of teaching can produce passive subjectivities, reducing the capacity to develop autonomous thinking. This would serve as justification to its problematizaion.

The approximation to experiences of *classe inversée* and of *videoclass* allows us to consider that the arrangements that have been proposed by these and other initiatives in new technologies do not form a homogeneous whole. Before proceeding to the discussion of these two experiences, it is important to clarify that videoclasses support the proposal of *classe inversée*, but is not indispensible to its realization. At the same time, it is necessary to point out that these two experiences are disseminated almost concomitantly, and have been mutually influenced to the extend that they preconize similar ways to break with the traditional model of education (Bissonnette & Gauthier, 2013).

With respect to the role of the teacher, in the French experience it is proposed the liberation of the teacher of his function of transmitting knowledge, so he can effectively aid his students to build knowledge. In the case of the Khan Academy experience, their aim is to spread the idea that the teacher can be replaces, with advantages, by technology. The *videoclasses* allows students to directly access contents via computer, at home or elsewhere.

Although the French experience keeps the place of the teacher in the process os teaching and learning, it also proposes the use of videoclasses by students in specific moments. Some question need to be addressed: What would make the teacher-student relationship less scholarly, be a teacher without a face, or the possibility to institute this relationship in such way to privilege the interaction and the dialogue?

These two experiences analyzed also express different ways to understand the relationship between attention and learning. Proposals such as the one put forth by Salman Kahan seem to find support in psychological studies criticized by Sanchovschi and Kastruo (0213), according to which the maintenance of attention obeys an average time span. After the span is over, the tendency is that of reduction of vigilance. This type of neutralizing conception of attention processes tends to reduce attention to one type: vigilant attention. However, is this characteristic of processes that involve attention is verified in specific situations, such as those that demand high levels of concentration and a previous notion of what must be observed, would be limiting to consider it as reference to the others, as, for example, learning situations.

When Kahn says she managed to ally a good content to the network rhythm, delivering the message in an average time of ten minutes, he indicates that the relation of the student with studying should be that of necessity of maintaining a focused attention, vigilant, because he is conscious of what he needs to find and to know. In the terms of Sanchovschi and Kastrup (2013), we can conclude that Khan's study practices are in direct opposition to the conceptions of study as experience. According to these authors, although concentration is important, vigilance and pre-established focus do not allow for the come about of unexpected difference. Thus,

> From the point of view of experience, identifying the target is not what is important, but to maintain attention in order to allow oneself to be penetrated by the text or any other material of study. It is not about control or focus, but a matter of concentration and openness (p.195).

In the case of both *videoclasses* and *classe inversée*, it is possible to say that the use of new technology is in synch with contemporary practices used by students in other areas outside school, e.g. communication, and leisure. What is more, the proposal of this French school meets study practices already employed by students. From the point of view of attention, however, the concern with the effects the use of computer/Internet could have on students is not without merit; so it is necessary to problematize study practices proposed in the experience of *classe inversée* in order to analyze its implications.

Sancovschi and Kastrup's (2013) research with undergraduate Psychology students has identified the way in which this new technology captures attention, producing what the authors have defined as "leaping and rythmless attention". However, these are not the only effects observed by them. According to the authors, the easy access to information can lead to a loss of interest towards better understanding something and can also produce effects of curiosity and eagerness for knowledge, which, in this case, opens up doors for possible relations between students and studying.

Final considerations

Salman Khan's proposal has been widely divulged in every type of media, from the Internet to popular mass magazines. Even before one watches Khan Academy's videos, they have already had access to its discourse, whose aim is to establish truths about the methods and the results attained. This presents to us the fact that just as important as the practice performed by these experiences are the discourses created by them and the truths these discourses seek to establish.

The two regimens of school functioning described by Sibilia – the disciplinary pedagogic gadget, and the informational network connection –, if not identical, can be correlated with the pedagogic practices described by Citton – Magisterial and Interactive – warning us to the importance of co-attention in teaching situations. Depending on how these practices are organized, we can either promote the interaction or reinforce individualization.

In a parallel fashion, Sanchovschi and Kastrup's analysis about the practice of current studies allows us to approach the presence of new technologies in education from their effects of attention regimens. Instead of taking the disciplinary pedagogic model as reference, trying to understand how new technology makes it difficult the functioning of attention (reduced to the act of paying attention), the authors investigate the relationship setting between the student and the studying with the presence of technology. In this sense, other possibilities of the functioning of attention have been noticed, pointing to the importance of the investment in learning of attention, aiming at a more potent configuration between students and studying.

Even with a discourse that maintains the teacher as the one who aids the student in the construction of the knowledge, the proposal of the *classe inversée* provides the necessary time to the experience of studying and seems to give space to processes of learning of types of attention for performance. This last case happens when teachers opt to use Khan Academy's videos, which are built on the logics of storage of content and of cognition as re-cognition of what is pre-existent.

Facing these matters involving pedagogic practices in contemporaneity, new technologies and the production of subjectivity, we concur with Mancebo when she suggests that facing current challenges we not adopt a pessimist stance a priori or an uncritical awestruck. In this sense, with respect to the presence of new technologies in education and to the demand of pedagogic practices regarded as innovative, we would rather analyze the desirable creative potential and the possible risk of standardization of subjectivity. Recalling Guattari's observation on the reappropriation and resingularisation of the use of media, we affirm out intention to seek in this and in other proposals presented as innovative not what

links them to material-technological-discursive indexes of modernization, but what would enable the loopholes in education to other arrangements, other cognitive experiences, what could maximize different ways of functioning, and, therefore, other subjectivities.

References

Bissonnette, S. & Gauthier, C. (2013). Faire classe à l'endroit ou à l'envers. *Formation et profession, 20*(1), 32-40. Recuperado em 10 de julho, 2015, de http://formation-profession.org/fr/files/numeros/1/v20_n01_173.pdf

Citton, Y. (2014). *Pour une écologie de l'attention*. Paris: Éditions du Seuil.

Faillet,V. (2014). La pédagogie inversée: recherche sur la pratique de la classe inversée au lycée. *Sciences et Technologies de l´Information et de la Communication pour l´Éducation et la Formation*, 21. Recuperado em 13 de abril, 2014, de http://sticef.univ-lemans.fr/num/vol2014/23r-faillet/sticef_2014_faillet_23r.htm

Freitas, A. (2014). Os métodos de ensino do "melhor professor do mundo": repetições ou inovações?. *Educação em Revista, 30*(2), 207-222.

Guattari, F. (1992). *Heterogênese.Caosmose: um novo paradigma estético.* Rio de Janeiro: Editora 34.

Harvey, D. (1994). *Condição pós-moderna*. São Paulo: Ed Loyola.

Kahn Academy (s.d.). Khan Academy. Recuperado em 4 de novembro, 2016, de http//pt.khanacademy.org

Kastrup, V. (2005). Políticas cognitivas na formação do professor e o problema do devir-mestre. *Educação e Sociedade, 26* (93), 1273-1288. Recuperado em 10 de outubro, 2014, de http://cedes.unicamp.br

Kastrup, V.(2007). *A invenção de si e do mundo: uma introdução do tempo e do coletivo no estudo da cognição.* Belo Horizonte: Autêntica.

Kastrup, V. (2008). A aprendizagem da atenção na cognição inventiva. In V. Kastrup, S. Tedesco, & E. Passos, E (Orgs.), *Políticas da Cognição*. Porto Alegre: Sulina.

Lozac'h (2013).A..*La classe inversée pour sauver l'école?* Recuperado em 5 de março, 2014, de http://ecolededemain.wordpress.com/2013/09/17/la-classe-inversee-pour-sauver-lecole/

Mancebo, D. (2003). Contemporaneidade e efeitos de subjetivação. In A. Bock (Org.). *Psicologia e compromisso social*. São Paulo: Cortez.

Pierce, R. & Fox, J. (2012). Vodcasts and active-learning exercises in a 'flipped classroom' model of a renal pharmacotherapy module. *American Journal of Pharmaceutical Education, 76*(10). 196 Recuperado em 23 de junho, 2014, de http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3530058/

Radio France Culture (2014). *Qu'est-ce qu'une "Classe inversée" ? A quoi cela peut-il servir?.* Recuperado em 20 de fevereiro, 2014, de http://www.franceculture.fr/emission-rue-des-ecoles-qu-est-ce-qu-une-classe-inversee-a-quoi-cela-peut-il-servir-2014-02-19/

Rosenberg, T. (9 de outubro de 2013). Turning Education Upside Down. *The New York Times*. Recuperado em 10 de dezembro, 2014, de http://opinionator.blogs.nytimes.com/2013/10/09/turning-education-upside-down/?_r=0Turning Education Upside Down The New YRosenberg, 2013ork Times/

Sancovschi, B. & Kastrup, V.(2013). Práticas de estudo contemporâneas e a aprendizagem da atenção. *Psicologia & Sociedade, 25* (1), 193-202.

Schneider, E., Suhr, I., Rolon, V. & Almeida, C. (2013). Sala de aula invertida em EAD: uma proposta de Blended Learning. *Revista Intersaberes, 8* (16), 68-82.

Sibilia, P. (2012). *Redes ou paredes: a escola em tempos de dispersão.* Rio de Janeiro: Contraponto.

Technology, Entertainment and Design [TED] (2011). Salman Khan: Vamos usar os vídeos para reinventar a educação [Video pela Internet]. Recuperado em 4 de novembro, 2016, de http://www.ted.com/talks/salman_khan_let_s_use_video_to_reinvent_education.html

Valente. J. A. (2014). Blended learning e as mudanças no ensino superior: a proposta da sala de aula invertida. *Educar em Revista, Edição Especial* (4), 79-97.

Weinberg, M.(1 de fevereiro de 2012). "O melhor professor do mundo". *Revista Veja,* n.2254. Recuperado em 25 de fevereiro, 2014, de http://veja.abril.com.br/acervodigital/home.aspx?edicao=2254&pg=64 .

Cristina Maria Toledo Massadar Morel: Professora-pesquisadora da Escola Politécnica de Saúde Joaquim Venâncio/ Fiocruz e doutoranda do Programa de Políticas Públicas e Formação Humana/ UERJ.

Luiz Antonio Saléh Amado: professor adjunto da Faculdade de Educação da Baixada Fluminense – UERJ - e professor do Programa de Políticas Públicas e Formação Humana - UERJ, doutor em psicologia social, pelo Programa de Pós-graduação em Psicologia Social – UERJ.