

Blogs and narratives in education: Deciphering me



<https://doi.org/10.56238/Connexpemultidisdevelpfut-107>

Maria Cristina Rigão Iop

Institution: University of Santa Cruz do Sul –
UNISC – RS, Brazil
PhD in Education

Maria Helena Rigão

Institution: Federal University of Santa Maria –
UFSM – RS, Brazil
PhD in Agronomy

ABSTRACT

Using as a theoretical basis the paradigm of complexity, supported by authors such as Humberto Maturana, Francisco Varela and Edgar Morin, I propose some reflections from an activity with narratives for the recovery of the author subject. The intention was to disturb young people through the use of blogs, involving self-experience and

autonomy, so that they build knowledge/subjectivity in an inseparable way, considering the human/machine coupling. The narratives show the process of self-constitution and cognition emerging together, through the production of meanings for living, reconfiguring their life history and raising their level of complexity. As I get involved in the process, I start thinking about everyone involved, the emotion comes in, and then I start learning. The narratives allow us to make a reading of emotions, enchantment, learning and understanding. It is an awareness of oneself, of the process of living, of social interactions. It is a construction that takes place in a process of reflection, because educating is the process of living with the other and transforming oneself in a reciprocal way. We are educated in educating.

Keywords: Narratives, Blog, Complexity, Digital Technology.

1 INTRODUCTION

In view of my educational practice, developed over the years at the Municipal School of Elementary Education Padre Nóbrega, Santa Maria, RS, involving the use of digital technologies, and taking into account the emerging paradigm of complexity, which has guided my theoretical studies, I developed this experience with the objective of using the narratives for the recovery of the author subject. The intention was to disturb the students through a practice, with blogs, involving self-experience and autonomy, so that they build knowledge/subjectivity in an inseparable way.

And so that you better understand the title of this article: "Blogs and Narratives in Education: Deciphering Me", I explain that it was through the narratives, the trying to understand them as complex language, that I ended up deciphering myself in several fields. According to Gustsack (2008, p. 14), "when I tell the world what I think, what I know: I decipher myself; and I devour what I am. That's how I learn. As one who consumes and reveals himself in the very act of learning."

Narratives are very valuable instruments, which provide us with the analysis of the self-organizing emergencies that arise in language. They show us the process of self-constitution and cognition emerging together, through the production of meanings for living.



Then I begin to decipher myself. Freire (1995, p.24) points out that "reviewing what was seen before almost always implies seeing unperceived angles. The later reading of the world can be more critical, less naïve, more rigorous." I begin to understand then the importance of narratives in the process of constitution of each one and how I can use them to enhance my practice as an educator and develop interaction with students.

This text is structured in four blocks, in the first called Paradigm of Complexity, I seek to explain the theories that support my experience, emphasizing concepts such as the biology of cognition, autopoiesis, structural coupling and the theory of complexification by noise, from authors such as Humberto Maturana, Francisco Varela and Edgar Morin.

In the second block that I called Narratives in Education, I work on the importance of narratives as language, because they allow the resignification of the experienced. By writing about ourselves we reinvent ourselves, just as students when writing about our encounters, in this way they retrace the path traveled by practicing a metacognition, which is nothing more than the recursion of the system.

Disturbing was the name I gave to the third block, which will tell how the practical experience with the use of digital technologies happens through the use of blogs and narratives, and how I try to perceive with a sensitive listening the disturbances that arose from this experience. And I end with Contributions where I leave my impressions of what flowed during this experience.

2 COMPLEXITY PARADIGM

The theories of complexity, which constitute a new paradigm, underpin my theoretical studies. They break with the fragmentation of Cartesianism, and make us understand how interconnected the episodes of everyday life are. Morin (2011, p.13) states that "*complexus*: it is what is woven together". Thus, it is possible to have a greater understanding of certain facts that involve educational practice.

The main changes occurred in the twentieth century, in several sciences simultaneously, with emphasis on biology that pointed to living organisms as integrated totalities, one of the characteristics of systems thinking, because the limitations that the reductionist model imposed for the studies of organisms made this evident.

The great impact that came with the science of the twentieth century was the realization that systems cannot be understood by analysis. The properties of the parts are not intrinsic properties, but can only be understood within the context of the larger whole. In this way, the relationship between the parts and the whole was reversed. In the systemic approach, the properties of the parts can be understood only from the organization of the whole (CAPRA, 2004, p. 41).

Thus, systems thinking emerges that is contextual and considers the broader whole. Among the characteristics of systems thinking, the broadest is the shift from the parts to the whole, the parts can only be understood within the context of a larger whole.



Edgar Morin (2011, p.74) explains that: "In a physical hologram, the smallest point of the hologram image contains almost all the information of the object represented. Not only the part is in the whole, but the whole is in the part", with this placement on the hologrammatic principle he reaffirms systems thinking.

Among the principles of complexity the systemic shows that the parts can only be understood within the larger context, that is, the systemic thinking is contextual. Therefore, the pedagogical practice must take into account the subject properly involved in its context and all the factors that influenced it. Edgar Morin (1996, p.23) says that "a whole emerges from constitutive elements that interact, and the organizing whole that has been constituted retroacts on the parts that constitute it. This feedback means that these parts can only work thanks to the whole."

With the first cybernetics appeared important elements such as network logic, self-organization, *feed-back* And from them the complexity is gaining more space.

The second cybernetics will emerge when the Austrian Heinz Von Foerster with his epistemological studies proposed the inclusion of the observer in the observed reality. He has been studying self-organizing systems for more than two decades. He is considered the father of the second cybernetics and conceived the principle of order by noise

He introduced the phrase "order from noise" to indicate that a self-organizing system not only "imports" order from its environment but also collects energy-rich matter, integrates it into its own structure and, through this, increases its internal order (CAPRA, 2004, p.79).

This principle states that noise is the source of self-organizing movements, systems are closed to information and open to energy flows, and what the system perceives is through disturbances.

The dialogical principle of complexity unites different and at the same time inseparable notions, order/disorder/organization. For Morin (2011, p.63) "the complexity of the relation order/disorder/organization arises, therefore, when it is empirically verified that disordered phenomena are necessary under certain conditions, in certain cases, for the production of organized phenomena, which contribute to the growth of order."

Entropy, that is, the maximum disorder, leads to reorganization, complexification, and development, that is, "the self-organized order can only be complexified from the disorder, or rather, since we are in an informal order, from the noise" (MORIN, 2011, p.31) this foundation follows a complex logic.

But at the same time, that the self-organizing system stands out from the environment and is distinguished from it by its autonomy and its individuality, it is still linked to it by the increase of openness and exchange that accompany all progress of complexity: it is self-eco-organizing (MORIN, 2011, p.33).



With this we see that the self-organizing system has its individuality linked to the environment, which will be almost a co-organizer, so it is not self-sufficient, it needs the external environment.

The principle of Order by Noise will give rise to the theory of Complexity by Noise by Henri Atlan and the Biology of Knowing by Humberto Maturana and Francisco Varela. Both biological theories, starting from the same principle, elaborate different applications in relation to cognition and life, but having as a common axis the question of self-organization.

From the unfolding of the second cybernetics, Maturana and Varela elaborated the Biology of Cognition that revolutionized the fields of biology and epistemology with the inseparability of living from knowing. "Maturana and Varela pursue the principle of Von Foerster (2003): living systems are closed to information and open to energy flows" (PELLANDA, 2009, p.22), what the system perceives is from disturbances. The Biology of Cognition is also known as the Biology of Knowing and comes to be confused with the concept of autopoiesis, which is central to this theory.

The Biology of Cognition has assumptions such as circular logic, recursion, *feed-back mechanisms*, self-organization and understands the nervous system as closed and self-organizing in the face of the disturbances of the environment.

In this theory the observer is committed to the act of observing, is an active participant of the observed object. Thus, what is observed depends on the perspective of the observer, on their practical structural interactions. Each observer's experience is unique, so it's important to realize how inappropriate transferring models from different classroom situations is.

Maturana and Varela, in 1970, used the term autopoiesis to define living beings as systems, which continuously produce themselves, is a system at the same time producer and product. To make them autonomously they need to turn to the environment, so they are both autonomous and dependent.

Starting from the assumption of autopoiesis, that is, of the self-constitution of young people, I tried to understand the possibility of the emergence of a learning process, which will occur from a structural coupling.

Each living system is determined by its structure, this gives each system a perception of the world. The type of interaction that exists between its components will be different for each. Reality is differently perceived by each system. Perception will happen through interactions with the environment, as Mariotti points out in his studies on this topic.

Maturana states that systems and the environment in which they live change constantly and congruently. To this interactive process he gives the name of structural coupling. In your comparison, the foot is always adjusting to the shoe and vice versa. It is a good way of saying that the environment produces changes in the structure of the systems, which in turn act on it, changing it (MARIOTTI, 2000, p.73).



We are systems with structures that change constantly, but whose organization remains the same. Due to this interaction between the living unit and its environment, beings are changing and adapting to each other.

A structurally coupled system is a learning system, because it learns to live/coexist with the environment. Knowledge has a lot to do with the environment, which needs to be of respect to authorships, where human beings can flow in their autopoietic processes.

It is, therefore, through structural coupling that the different ways in which living systems interact with their respective environments are established. Each living organism responds to the influences of the environment with structural changes that, in turn, alter the future behavior of living beings (MORAES, 2003, p.94).

Thus, we can affirm that the students in interaction with the environment of digital technologies showed emergencies from the human/machine coupling. The different technologies generate different narratives, or different ways of narrating their complexities, their paths, seeking to decipher themselves.

3 NARRATIVES IN EDUCATION

Seeking to provide students with the path of knowing, emerging along with living I believe that narratives are the best option in this process. The use of narratives as language constructs processes through which individuals create multiple meanings. The history of an individual is the history of the construction of his knowledge. Knowledge and experience are inseparable, the construction of meanings is a fundamental aspect of human knowledge. Language is the central process in the construction of meanings.

The narrative makes the individual know more and more himself, and build an authorship. All narrative and all knowledge is in one context. Narratives give meaning, connection, and continuity to experiences. They only have coherence if they are linked to experience, "to begin to narrate implies procedural experience, in which the narrator is constantly lending himself as co-author of the narrated" (ARAUJO, 2002, p. 86).

The jovem finds several possibilities for himself, starring in his narrative and raising his level of complexity. According to the words of Gonçalves (2004, p.35) "Narrative discourse has precisely what to do with this union between understanding and living (dialectic between existence-knowledge-hermeneutics), this is, uniting the passage and the future in the creative process of existing."

And this reaffirms the importance of using narratives to integrate, structure and interpret situations and the knowledge experienced. What people narrate constitutes an educational process, as Delory-Momberger tells us:



What gives shape to the lived and the experience of men are the narratives that they make of themselves. Narration is not only the instrument of formation, the language in which it would express itself: narration is the place in which the individual takes shape, in which he elaborates and experiences the story of his life. (DELORY-MOMBERGER, 2008, p.56).

Corroborates this with Araújo (2002, p. 86) when he says that: "the stories happen to me before I narrate them. Between the lived experience and its subsequent narration, the act of configuration is performed as a placement in integral." Thus, once again we realize that the narrative will allow the process of reconfiguration, interpretation of the lived history.

It is the ontological condition of the individual and directly implicated in narrating and narrating oneself. Whether from oneself to oneself, or from oneself to others, or from others in search of oneself, the fact is that the great adventure of inscribed in the experience of living concerns above all, the ability to generate and organize meanings in this timeline in which events are arranged (PICCININ and SOSTER, 2012, p. 9).

Thus, it is important to emphasize "that we are determined systems in our structures and, therefore, that there are certain phenomena that do not occur within the body, but in relations with others" (MATURANA, 2002, p.27). Therefore, I can not simply transmit, I need to disturb students with educational practices so that they, when they feel touched by some argument, information, etc., will become complex, reinventing themselves, reframing and thus organizing their knowledge.

What guides the human being are the emotions, and the language is linked to the emotions, which are the flow of conversations in living with others, thus enabling the emergence of knowledge, as Pellanda shows us.

Language that is therefore directly linked to emotions will provide the development of the brain and the emergence of an increasingly refined intelligence. The human brain is of great plasticity and is becoming more and more complex in the interaction of human beings with reality due to the type of life they lead in terms of a coupling with reality, which we call learning (PELLANDA, 2009, p.83).

As Freire (2002, p.77) points out, "respecting the student's reading of the world means taking it as a starting point for understanding the role of curiosity, in general, and of the human, in particular, as one of the founding impulses of the production of knowledge", thus providing that the student feels part of this network of conversations that will culminate with learning.

4 DISTURBING

With the intention of putting into practice an activity that would disturb the students, where each one would choose something that had meaning for him, that would give him pleasure to do and at the same time provide the organization of his new knowledge, I proposed to the students of the 9th years that they use *the blog* to disseminate their opinions about the various books of literature, that



they chose to read, because language can only arise from coordination of actions in which there is mutual acceptance, with recurrent, engaging and broad interactions (MATURANA, 2002, p. 24).

As a professor of informatics, soon my proposal involving language, also went through the use of ICTs (Information and Communication Technologies) as an ally, as José Lagarto says.

The old (or current) paradigm of the classroom, where often the role of the teacher focuses on the methodologies and methods of teaching, will have to be changed to methodologies and techniques focused essentially on the ways of learning of their students. And the use of ICT is undoubtedly a powerful ally (LAGARTO, 2013, p. 133).

The use of the *educational blog* helps in the construction of knowledge, encourages cooperation and collective construction. It also makes students feel an integral part of the educational process, as they can interact with other students, with the teacher himself and with all those who access the *blog*.

The word *blog* is an abbreviation from the English term *web log*, which means network diary. The *Blog* consists of a *web* page that presents characteristics of a personal and virtual diary, emerged in 1999, through the *blogger* software, as a tool that offers support for various types of narratives.

Blogs can provide commentary or news on a particular subject; others function as online diaries. A typical *blog* combines text, images, and *links* to other *blogs* or to *web* pages and media related to its topic. Readers can leave comments in order to interact with the author and other readers. It is interactive, that is, it allows interaction with other individuals. "The activities proposed through devices such as *blogs*, hypertexts, readings and self-narratives function as triggers that mobilize the internal processes of self-organization, recursion and complexification" (PELLANDA, 2007, p.7).

Among the definitions of *educational blog* we will find the one used by Moresco and Behar:

The blog becomes a privileged educational space, as it allows reflection on the reading and writing of what is posted by the author, as well as on the messages posted by visitors, who collaborate and cooperate forming an open and receptive community. In this way, the possibilities of a more authentic and profound dialogue with other forms of knowledge, other points of view, favoring interdisciplinarity, helping to build social networks and networks of knowledge are expanded (MORESCO and BEHAR, 2013, p.3).

I believe that young people build knowledge/subjectivity inseparably in the digital environment, hence the importance of this experience.

Lucia Santaella (2013) establishes the profile of an appropriate reader of the new digital technological changes that makes it compatible with the current digital culture, which she called "Ubiquitous Reader", because as well as the possibilities of this current world he can respond to different focuses without lingering on any of them. The Ubiquitous Reader has the

... ability to read and move between forms, volumes, masses, interactions of forces, movements, directions, traces, colors, lights that turn on and off, finally this reader whose organism has changed gear, synchronizing itself to the nomadism of the acceleration and buzz



of the world in which it circulates in cars, collective transport and quickly on foot (SANTAELLA, 2013, p. 3).

So we ask: how can we take advantage of the potentialities of the education that we know as formal developed in schools, to touch this ubiquitous reader? That is why this proposal involves digital technologies.

Knowledge is something that emerges in the process of living of each one, in their experience of relating to the world, already in the digital environment this happens with greater autonomy, the subjects need to reorganize themselves to solve the situations of the way, but this is highly enhancing. And in education we must value the environments conducive to learning.

The work dynamics included two classes of 9th grade, of approximately 25 students, aged between 13 and 15 years, in each class was chosen among them those who had greater interest in participating in the preparation of the blog, thus formed a responsible team that created an email account for each class and then the *blog*. The *blog* already prepared was presented to everyone in the class, who gave their opinions and suggestions on changes. Then each student chose the book they wanted to read, after this was done they elaborated their opinion and recommendations about the book, which was posted on the *blog*.

The *blog* takes place through written language, reading, that is, it stimulates reflection. It is also possible to make new posts providing collaborative, logical, coherent and interactive writing. It is a great space for the exchange of knowledge and allows other people, in addition to the students themselves and their teachers, to read and interact with the group.

After the first posts, between the students of the two classes, book exchanges were made from what they read from the posts of their colleagues. An average of five books were read by students during each semester.

The experience with the classes made it possible to observe characteristics such as autonomy, circularity, cooperation, coupling with the machine and others.

From this proposal I asked the students to write about this activity, to be able to feel how it happened, from their point of view. I will highlight here some narratives:

According to student X, from class 92, *the idea of the blog was very good, because it encouraged us to read more and all people could see the books and our reports, encouraging other people to read this book and also indicated good books of all genres and for all ages. Reading these books was very good, as it further developed my imagination and creativity, while still improving my vocabulary and writing¹.*

¹ Narratives made by the students of classes 91 and 92 of EMEF Padre Nóbrega – Santa Maria, RS, after activity developed with blogs. Class 91 blog: <http://pensamentosliterarios-91.blogspot.com.br/>, Class 92 blog: <http://turma92dopadrenobreg.wix.com/leituradaalma>.



Student Y, from class 91, says that: *The incentive to start reading more, by our teachers, was good, because my reading habit was little and soon after that I noticed having a larger vocabulary of words and having more ease in the production of texts.*

Students X and Y record in their narratives the evaluation of their own writing and reading, this writing made them think about their own process, leading to other levels of complexification, configuring their self-production. From this analysis emerge their emergencies, because as Cragolini (2001, p.137) puts it, "we begin by indicating that we become what we are by writing", these students demonstrate their involvement in the process.

In the following narrative I observe the emotion that happens during the interactions of coexistence, because as Maturana (2002, p.22) points out, "love is the emotion that constitutes the domain of actions in which our recurrent interactions with the other make the other a legitimate other in coexistence. The recurring interactions in love amplify and stabilize coexistence."

This is what the student Z, from class 91 demonstrates in her narrative: *Well, the blog did make a difference, because it encouraged me a lot to read, I already liked to read, but I never had an incentive, because the school proposed this opportunity to me and to my colleagues. What I liked the most was the teachers getting closer to us and knowing our reading tastes so the blog was all good.*

The unfolding of this activity, accompanied by the reflections made on language showed me that it is the action that flows and that will enable several changes, reconfigurations in the way of thinking and acting, as Maturana points out.

Language as a phenomenon, as an operator of the observer, does not occur in the head nor does it consist of a set of rules, but occurs in the space of relations and belongs to the scope of the coordination of action, as a way of flowing in them. If my structure changes, I change my way of being in relation to others and therefore change my language. If my language changes, it changes the linguistic space in which I am, and changing the interactions in which I participate with my language (MATURANA, 2002, pp. 27-28).

When we propose to a student to write, we also have to be open to read his writing, to perform a sensitive listening, where we can feel the affective, imaginary and cognitive universe of the young people involved, to understand their ideas and values.

Through the narrative he shows us what remained, what disturbed him and allowed him to be transformed into knowledge. The words that are used reveal what they think, as well as reveal the direction of our doing.

Writing is what organizes the thought and the word, even if it is from words that language is made, that people are made. The word is what plays, so that the language can be, so that the person can be the story of himself, his self-narrative (GUSTSACK, 2008, p.10).



Thus, I have to be attentive to the flow of languages, relationships, emotions, both with the students and I as an educator. Freire (2002, p.12) already said that "those who teach learn by teaching and those who learn teach by learning".

"Complex thinking is the thought that strives to unite, not in confusion, but by operating differentiations" (MORIN, 1999, p.33). So it is so important to analyze the emergencies that will arise, letting each subject involved show us their point of view, pointing out the differences of opinions, often the divergences, but that sometimes lead to a common point. Hence, the importance of sensitive listening, because it "recognizes the unconditional acceptance of the other. It does not judge, it does not measure, it does not compare. It understands without, however, adhering to opinions or identifying with the other, with what is enunciated or practiced" (BARBIER, 2007, p.94).

For Pons and Boettcher, the different educational environments required by the evolution of technologies are confirmed by the biological theories that underlie this experience.

The evolution of science and technology and knowledge in flux have been demanding different educational environments, whose methodological practices are based on new paradigms, currently emphasized on epistemological bases, confirmed by biological theories (PONS and BOETTCHER, 2012, p. 197).

5 CONTRIBUTIONS

Language is very important for everyone and especially in the field of education, because we have to coordinate actions of mutual acceptance, which expand our coexistence, involving everyone. As I get involved in the process, I start thinking about everyone involved, get in there and emotion and then start learning.

The students demonstrated their digital technological coupling, through the use of the blog, their autonomy when narrating themselves, enabling the construction of knowledge during their experience, in an inseparable way.

Narratives allow us to make a reading of emotions, enchantment, learning and understanding. It is an awareness of yourself, of your process of living, of social interactions. It is a construction that takes place in a process of reflection. For educating is the process of living with the other and transforming oneself in a reciprocal way. We are educated in educating.



REFERENCES

- Araujo, M. G. C. (2002) *Subjetividade, crise e narratividade*. Revista Mal-estar e Subjetividade, Fortaleza, v. 1, ed. mar. p.79-91.
- Barbier, R. (2007) *A pesquisa-ação*. Brasília: Liber.
- Capra, F. (2004) *A Teia da Vida*. São Paulo: Cultrix.
- Cragolini, M. B. (2001). Do Corpo-Escrita. Nietzsche, seu "eu" e seus escritos. In: Feitosa, C. et al (Org.). *Assim falou Nietzsche III: Para uma Filosofia do Futuro*. Rio de Janeiro: 7 Letras.
- Delory-Monberger, C. (2008) *Biografia e educação: figuras do indivíduo-projeto*. Natal: EDUFRN; São Paulo: Paulus.
- Freire, P. (1995) *À Sombra desta Mangueira*. São Paulo: Olho D'água.
- Freire, P. (2002) *Pedagogia da Autonomia*. Coletivo Sabotagem.
- Gonçalves, O. F. (2004) *Psicoterapia Cognitiva Narrativa*. Sevilha: Desclée de Brouwer S.A.
- Gustsack, F. (2008) Elogios da Linguagem: Perturbações na Formação de Professores. In: Seminário de Pesquisa em Educação da Região Sul, VII, 2008, Itajaí. *Anais ANPED Sul 2008*. Itajaí: Univali. Disponível em: <http://www.portalanpedsul.com.br/admin/uploads/2008/Formacao_de_professores/Trabalho/08_32_49_ELOGIOS_DA_LINGUAGEM__PERTURBACOES_NA_FORMACAO_DE_PROFESSORE.pdf>. Acesso em: 08 jan. 2014.
- Lagarto, J. R. (2013) *Inovação, TIC e Sala de Aula*. In: Cavalheiri, A.; Engeroff, S. N.; Silva, J. C.. *As Novas Tecnologias e os Desafios Para uma Educação Humanizadora*. Santa Maria - RS: Biblos.
- Mariotti, H. (2000) *As Paixões do Ego: Complexidade, política e solidariedade*. São Paulo: Palas Athenas.
- Maturana, H. (2002) *Emoções e Linguagens na Educação e na Política*. 3. ed. Belo Horizonte: UFMG.
- Moraes, M. C. (2003) *Educar na Biologia do Amor e da Solidariedade*. Petrópolis: Vozes.
- Moresco, S. F. S.; Beahar, P. A. (2013) *Blogs para a Aprendizagem de Física e Química*. Disponível em: <<http://seer.ufrgs.br/renote/article/viewFile/14121/7996>>. Acesso em: 10 maio 2013.
- Morin, E. (1996) *O Problema Epistemológico da Complexidade*. Lisboa: Publicações Europa América, LDA.
- Morin, E. (2003) *Da Necessidade de um Pensamento Complexo*. In: Martins, Francisco Mendes; Machado, J. *Para Navegar no Sec XXI: Tecnologias do Imaginário e Cibercultura*. Porto Alegre: Sulina/edipucrs.
- Morin, E. (2011) *Introdução ao Pensamento Complexo*. 4. ed. Porto Alegre: Sulina.
- Pellanda, N. M. C. (2007) *Leitura e Complexificação*. In: Congresso de Leitura do Brasil, 16., 2007, Campinas. *Anais*. Campinas: Unicamp. Disponível em: <http://alb.com.br/arquivo-morto/edicoes_antiores/anais16/sem05pdf/sm05ss14_06.pdf>. Acesso em: 24 jan. 2014.



Pellanda, N. M. C. (2009) *Maturana e a Educação*. Belo Horizonte: Autêntica.

Piccinin, F.; Soster, D. A. (2012) *Uma Narrativa sobre um caminho de pesquisa*. In: Piccinin, F.; Soster, D. A. (Org.). *Narrativas Comunicacionais Complexificadas*. Santa Cruz do Sul: Edunisc.

Pons, M. E. D.; Boettcher, D. M. (2012) *Blogs e Narrativas no "Espaço Digital"*. In: Piccinin, F.; Soster, D. A. (Org.). *Narrativas Comunicacionais Complexificadas*. Santa Cruz do Sul: Edunisc.

Santaella, L. (2013) *Desafios da ubiquidade para a educação*. Disponível em: <<http://www.revistaensinosuperior.gr.unicamp.br/artigos/desafios-da-ubiquidade-para-a-educacao>>. Acesso em: 26 fev. 2014.