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**In Vino Veritas: The Game**

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## **In Vino Veritas: The Game**

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### **Abstract**

This paper describes the design, organization and development of the In Vino Veritas (IVV) application. The main objective is to understand the hybridity, multimodality, pervasiveness and ubiquity potential, combined with games and gamification as enablers of knowledge experiences. The proposal includes the historical heritage of the city and the countryside of Bento Gonçalves in Southern Brazil, as integrator of learning spaces, defined as elements for the culture and citizenship development. In this context, the following problem arises: How this perspective may help to think the new educational designs? This exploratory research used a combined qualitative-quantitative approach and used the intervention-research cartographic method. As instruments it was used the participant observation, pictures, audio, text and video records and interviews. The data was analyzed and interpreted within the theoretical framework in order to reframe the learning gap and educational design in a context of learning environment composed of hybrid, multimodal, pervasive and ubiquitous coexisting spaces. The IVV is a game that can be collaborative when the players are socializing the knowledge which was built in the own game, in the Facebook group - "In Vino Veritas - The Game". Thus this knowledge is assessed for experts and has the possibility of integrate the game, in this case the players becoming the authors. The game uses mobile devices, mixed and with an augmented reality and works to enlarge the learning spaces for the city and the countryside of Bento Gonçalves. The IVV include areas like: History, Enology, Gastronomy and Chemistry, and is developed from a narrative in three acts: Mythology; Italian Immigration and Immigrants in Bento Gonçalves, represented by three 3D characters: God Bacchus, Grandmother Francesca and Italian Giuseppe. These characters are able to encourage players to accomplish missions, interact with the local community and the city and countryside spaces in building a web of knowledge where informational layers are related to personal and collective memories about immigration, aroused by the senses and engaging the subjects in the world of sensations and cultural discovery.

**Keywords:** games, gamification, education, cartography, hybridism.

## **Context, Problem and Goals**

Nowadays people live and live together in a world marked by hybridism regarding the nature of spaces (geographical and digital); presence (physical and digital); technological (analogic and digital) and culture (analogic, digital, gamer, maker, among others), marked by multimodality, in which the physical classroom education modality and online learning coexist; by pervasiveness and by ubiquity that potentiate the situated and pervasive learning, providing to the subject “sensitive” information to his/her profile, needs, environment and other elements in the context of learning in any place and in any time. In this context, technologies of localization (GPS, navigation systems, of people localization); identification technologies (RFID tags and QR Code, markers); sensors, among others, might be present in several applications, games and gaming processes. It is in this context that the current learning subjects develop themselves, making one unique culture in congruence with this historical and social space-time.

However, a controversy is settled when we look to the formal institutions of education and what we observe are the rigid and bureaucratic spaces, similar to a mass production assembly line, inherent of the industrial society. Institutions with little or no possibility of innovation, which are mainly marked by the teaching culture. In this environment there are the teachers that need to follow routines, conventions, and static and monopolitical habits of a management system with little flexibility. By the other side, nowadays it is necessary to construct space of formation for inventiveness that makes possible to the subjects identify to understand and give innovative and creative solutions to the problems of the current world.

In view of this, the cultural aspects of formal education institutions condition and mediate, but do not determine the action of the educator, who through reflection and autonomy in pedagogical practice, influences the quality of the educational process.

Considering the context above, the motivation has origin to develop IVV, that arises: a) from the current designs of education uneasiness, mainly bound to the Distance Education; b) from the underutilization observation of the in classroom poles, in the context of the Distance Education; c) from the perceived gap between the teaching practice and how individuals learn, considering the means with which they interact; d) from the need to investigate the hybridism, multimodality, pervasiveness and ubiquity potential, linked to the games and gamification that includes the city and the country side as spaces that integrate learnings, possibility enablers of knowledge experiences.

Bound to this motivation there was the possibility of the product to be submitted to the specialists’ critical evaluation in Distance Education, who were participants of the 21<sup>st</sup> International Distance Education Congress, organized by the Brazilian Association of Distance Education – ABED - that would be held in October, 2015, in Bento Gonçalves, RS, Brazil.

IVV arises, bound to the research “Gamification in Hybrid and Multimodal Living Space: Education in digital culture”, financed by Higher Education Level

Personnel Improvement Commission – CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior), National Council for Scientific and Technological Development - CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico) and Rio Grande do Sul State Foundation for Research Support – FAPERGS (Fundação de Amparo à Pesquisa do Estado do Rio Grande do Sul), developed in the Group of Digital Education Research - Gpe-dU.

How hybridism, multimodality, pervasiveness and ubiquity attached to the games and gamification perspective can contribute to the construction of new education designs? This is the research problem which gives origin to IVV.

The main goal is to understand the potential of hybridism, multimodality, pervasiveness and ubiquity attached to games and gamification in the construction of the new education designs (mainly Distance Education). These educational designs include the city and the country side as learning integrating spaces, possibility enablers of knowledge experiences. Thus, the specific goals are: to investigate new forms of in classroom poles usage; to develop pedagogical practices coherent with the ways as the subjects learn, taking into account the means with which they interact.

### **Methodological Design**

The research is exploratory, of qualitative and quantitative approach. The methodology to develop the Alternate Reality Game - ARG IVV, and the research was inspired in the concept of Living Lab, proposed by William J. Mitchell and in the research-intervention cartographic method, proposed by Kastrup (2007), Passos, Kastrup and Escóssia (2009) and Passos, Kastrup and Tedesco (2014), through which we made the cartography of the constructed process in the ARG development and in the research.

The concept of Living Labs originated in the 1990s in the researches developed by the architect William J. Mitchell from MIT (Massachusetts Institute of Technology), amplified in the partnership with Kent Larson and Alex Sandy Pentland. Mitchell's proposal consists of including the user in the construction of solutions to the city designs, justified by the evidences that are the people, in a first instance, that use urban structure. Living Labs refer to an open innovative ecosystem, collaborative, centered in the subject, in the ambit of the public-privative research (companies, government, academy, technological centers), normally linked to a territorial context. The main idea is the co-creation of processes and innovation researches by the subjects that live and live together in a determined territorial context.

The co-creation involves interdisciplinary teams that might happen in different levels of the research and innovation process, from the exploration, experimentation and evaluation of emergent ideas, innovative scenarios and artifacts, to the effective participation in the conception, development, accompaniment and evaluation of an idea, concept, technological artifact, developed in the daily life situations/cases. The concept involves the subjects/communities while the actors are in the creation process of knowledge, and not only as observers or users. In this way, an alive laboratory is made as an

experiential environment (experimental + living) in which the subjects are immersed in a creative social space to conceive, project, accompany and evaluate its own future. Thus, this concept is bound to the changes and social transformation.

The Cartographic Method of Research-Intervention (Kastrup, 2007; Passos, Kastrup and Escóssia, 2009; Paqssos, Kastrup & Tedesco) aims at following the process and not represent an object. The cartographic attention is defined as concentrated and open, featuring itself by four varieties: tracking, touch, landing and attentive recognition. The data analysis happens in the process and in the cartography movement, what makes possible to accomplish the intervention while the process is happening.

The research Instruments used were: a participating observation; photo, audio, text and video and semi-structured interviews registration. The data were analyzed and interpreted from the theoretical reference which is presented as follows, what made possible to reframe the learning spaces and the educational designs, taking into account the living, multimodal, pervasive and ubiquitous hybrid space.

### **Human Actors and Non Human Actors: The Actor-Network Theory**

The Actor-Network-Theory (ANT) emerged in the 1980s with the researches of Bruno Latour, Michel Callon and Madelaine Akrich, as an alternative to the modernity binarisms avoiding all shared vision of reality by giving emphasis to the participation of non-humans objects and almost objects in the social relations. According to Latour (2012) the social is the net formed by human and non-humans actors, where an actor is any person, thing, (almost) object, institution that makes agency and that has its noticed participation, even if indirectly in the net(s).

The non-human actors also interfere in the happenings, in the creation of meanings – they work in the reflexive and symbolic sphere. The net is understood as a rhizome, something alive, changeable – flows, circulations, alliances and movements of animate and inanimate elements and not as a steady entity, reduced as a set of actors. It is the associated element that forms the social, it is before an analysis instrument than its object. The perspective of the binomial Actor-Net proposes that the actor never works alone. When the work is influenced by these nets, part of its actors is influence by them. Thus, who is working, acting, is never clear. The actor is at the same time constructor and receiver of the nets.

Then, for Latour (2012) the social does not have a pre-defined locus, since it is understood as provisional, performative, as processes of aggregation, association and reassociations, between human actors and non-human actors. Something fluid, in connection processes, where everything is connected in a net with multiple entrances and that is always in a continuous movement and open to new elements. The social is not what it explains, but what needs to be explained. Latour (2012) recommends that the actors may be followed in their associations and reassociations. Nowadays, this associations and reassociations

are made in nomad movements that happen in hybrid, multimodal, pervasive and ubiquitous spaces.

So, in this research context, from the elements brought by ANT, it was possible to find some main principles articulated to what Lemos (2013) proposes:

- HA: Human Actors;
- NHA: Non-Human Actors – objects, systems, languages, places, markers, processes among others;
- Network: it is the associative movement that forms the social. It makes the space and the time in the translations mobility and in the steadiness' setting. Bringing the concept to the IVV, the net is the movement (relations) that happen between human actors (players and alive clues) and non-human actors (mobile devices, applications, wineries, history, culture, gastronomy, etc);
- Acting: it is everything that make movement and difference, that generates an action, may be human or non-human, in the context of IVV it is the actor (human or non-human) that causes any kind of action to happen;
- Translation or mediations: it is the transformation of acting and net. Everything is mediation, or there is mediation or there is nothing. It is bound to the idea of circulation, non-humans making things for humans and humans making things for non-humans. The IVV game is like that by means of mobile device, since it demands action from the human actors, which, by its turn, needs to use the functions of mobile devices;
- Principle of symmetry or plane ontology: proposes that human and non-human actings may have the same importance, since they are in the same level. In this perspective, the player and the objects and systems are referred in the same level because they need each other to carry on all the process.
- Space-time: ANT shows a space and time tension in which the space is what we produce in the mediation between the objects (human and non-human).
- Black-box: it is the steadiness, the resolution of a problem. Every association tends to turn into a black-box to get steady and to cease all controversy. Every time a player does and finishes a mission, he/she ends up getting steady or solving a problem. Thus, the proposal is to open the black-boxes highlighting the need to look at the controversies, look at the new things.
- Controversy: it is the observation time and space, where they make the associations and the social. Comes out before getting steady in black-boxes. The act of tracking the observations may unveil interesting associations and in the controversies is possible to see the social in its maker tension. When the observations are directed to the controversies, we start looking at the nets in formation and in dispute by the steadiness, when the player is engaged by the game (playing). When he/she finishes the missions or the game, the so-called black-boxes

come out, understood as the ones gotten from the different reflections and associations made by the different human actors involved in the research.

### **Games in Context of Hybridism, Multimodality, Pervasiveness and Ubiquity**

The games are more and more present in children, teenagers, youngsters, adults, elderly's life, of both genders, what causes the emergence of a gamer culture. This culture is a phenomenon that is developed in the ambit of contemporary technoculture in the videogames context that are not restrained to specific machines as pinball, consoles or personal computers, but rather to elongate in the context of mobility, in tablets and smartphones, so that the games might and be found in several formats and for different devices and digital technological platforms. According to Schwartz (2015):

The uses of the digital game overcome the entertainment, incorporated to the activities of education, to scientific researches, to trainings (since the corporative ambit until national defense), besides having use in the capacitation related to the heed in health, in the choice and development of vocations, and in architecture and civil construction. This was the main conclusion of the study on the industry of digital games in Brazil and in the world led by PGT-FEA-USP to BNDES in 2014. (p. 165).

The game industry is the third kind of industry that grows more in the World, just losing to car and arm industry. In 2010 it moved US\$ 57 billion while the cinema moved US\$ 31, 8 billion, according to Schwartz (2015).

What is motivating such a growth? What we can learn with the Gamer Culture? The games can put the players in a world of fiction, imagination and fantasy, making possible interactivity, immersion, narrative, agency, fun and transformation, among other elements that contribute to this engagement. The games are meaningful to the players, mainly because they make possible to live an experience. The player is challenged to explore, to accomplish missions, what puts in him/her the control of the process, where, by means, the action and interaction (in the end with the environment of the game, with non-player character (NPC) or other players) faces problems, discovers ways and solutions, defines strategies, makes decisions, and at last, lives fun experiences, enabling the immersion and the engagement.

In the cultural gamer context, emerge the movements as "Games for Change", whose goal consists in using the games for social development. According to McGonigal (2011), if we look at what happens in the games, we will see that many people do not want to compete but work with their friends to reach a common goal, to be together. If the players are disposed to solve challenges that involve obstacles, many times unnecessary, it means that they have capacity of mobilize themselves, then the games might be used as instrument for the social transformation.



The games might be analogic, digital or even hybrid. For Latour (1994), the hybrid is made by multiple matrixes, mixtures of nature and culture, therefore, there is no separation between culture/nature, human/non-human, etc. It is about actions and interactions between AH and ANH in geographical and digital spaces in an interweaving of different cultures (analogic, digital, gamer, maker, among others) being made of inseparable phenomena, nets that link natures, techniques and cultures.

The hybrid emerge as intermediaries among heterogeneous elements – objective, individual and collective subjects. There are ways that connect, at the same time, to the nature of things and to the social context, without, however, getting reduced nor to one thing, or to another one”! (LATOURE, 1994, p. 11). This intermediation is possible because such elements are not static. Therefore, the hybrid is herein understood as the nature of the spaces (geographic and digital), related to the presence (physical and digital), related to the technologies (analogic and digital) and related to the culture (pre-digital and digital)

The multimodality include distinct interwoven educational modalities – physical in classroom modality and online modality, being possible to match: electronic learning, mobile learning, pervasive learning, ubiquitous learning, immersive learning, gamification learning and game based learning (GBL).

The pervasiveness and the ubiquity assume that the information may be dispersed in space and in the things/objects, binding geographical spaces and virtual digital spaces and might be accessed by mobile devices, connected to nets of wireless communication. Thus, they may potentiate the situated and pervasive learning, availing to the subject “sensitive” information to profile, needs, environment and further elements of the learning context, in any space and in any time. Identification technologies (RFID tags and QR Code markers); sensors, among others, might be present in several applications, games and gamed processes. The ubiquity collaborates to integrate the learners to learning contexts and to the surroundings, permitting to form physical classroom mode nets and virtual digital among people, objects, situations or events.

In spaces configured as ubiquitous, interfaces that provide human-computer interaction tend to disappear because the computing is "embedded" by integrating more and more people, places and things-objects (through communication networks that allow data traffic between different devices and networks scattered by buildings, streets, cars, in short, everywhere). The interface becomes virtually invisible, allowing us to use the technology almost without thinking as we do with electricity. (SACCOL, SCHLEMMER and BARBOSA, 2011).

Related to mobility, pervasiveness and ubiquity, it can be a "mixed reality" and "augmented reality". The mixed reality combine a scene in geographic space seen by an observer with a digital scene, and in the case of augmented reality, the digital adds information to the geographical scene enlarging it, meaning "increase the scene", enhancing knowledge about objects, places or events. Both MR and RA have different concepts and different types of configurations, but both consist basically in the recognition of an object, named

"marker", designed in a geographic environment, a camera that captures this object and a specific software able to receive the information sent by the camera, interpret them and design the digital information on the object of the geographical space.

### **In Vino Veritas: The Project and The Game**

The IVV design and development, from the concept of Living Labs, included different human actors in the framework of public-private research (companies - institutions, partnerships, associations - ABED, academy - Federal Institute of Education of Bento Gonçalves (IFRS-BG) and UNISINOS (University of the Sinos River Valley). This actors and the users become co-creators in the research and open innovation collaborative process that was ongoing, bound to a particular territorial context - the city of Bento Gonçalves. This co-creation involved interdisciplinary team and occurred at different levels of the research and innovation process. Thus, from exploration - mapping, testing and assessment of emerging ideas, innovative scenarios and artifacts, to effective participation in the conception, development, accompaniment and evaluation of the idea, the concept and the technological artifact, everything was developed. Next we describe the process.

The IVV project emerge from the problems and goals explained earlier, also shared by the IFRS-BG, due to the project being regionalized in the city of Bento Gonçalves and its expertise focusing initially thought to the project (enology and chemistry of wine). In meetings with IFRS-BG management and professors, it was decided that IVV would address also Gastronomy and History areas. In this way, the wineries and gastronomic partners were identified considering the cultural tourism potential and specific characteristics that made unique and evidenced the potential of each partner. The partners indicated to the project were: Vinícola Miolo, Vinícola Aurora, Vinícola Dal Pizzol, Vinícola Larentis, Vinícola Caverna Geisse, Canta Maria Restaurante, Itallinni Biscotteria, Casa da Erva-Mate, Casa da Ovelha, Casa do Tomate and the partners ABED and IFRS-Bento Gonçalves.

The visits to the partners were started to present the project and to make the invitations. As they accepted to make part of the project, the cartographic method of intervention research was started with the mapping of spaces, from the four movements that caught the attention of the cartographer - tracking, landing, touch and attentive recognition. Thus, the analysis of the spaces was made to explore the establishment in order to identify significant areas that showed the enterprises' cultural, historical and tourist relationship.

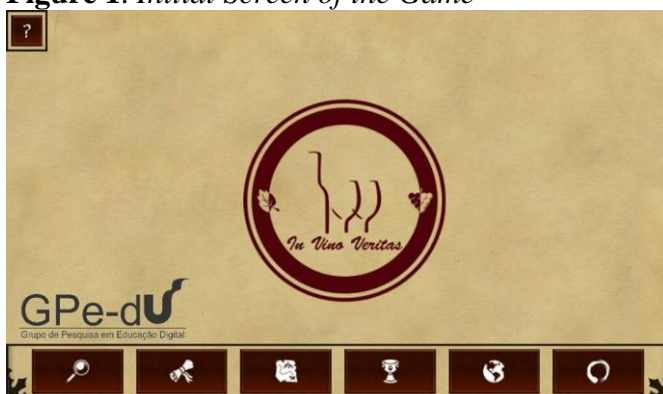
In this process, the proposal now includes the historical material and immaterial heritage of the city and of the countryside of Bento Gonçalves, as learning integrator spaces in the areas of Enology, Gastronomy, Chemistry and History, understood as elements for the development of culture and citizenship. In this context, informational layers on the knowledge areas discussed in text were related to personal and or collective memories about Italian immigration,

aroused by the senses, engaging the subjects in a world of sensations and cultural discovery.

Bento Gonçalves has its history and culture marked by the presence of Italian immigrants who since the year of 1875, occupy the land. From the arrival of the immigrants, the former colony Dona Isabel, today known as Bento Gonçalves, starts to have as its main economic activity the wineries, which became the "Brazilian Grape and Wine Capital". Bento Gonçalves is recognized to be a major tourist hub in Southern Brazil, since it has several tourist routes with emphasis on Oenology and Gastronomy tourism.

The IVV concept involved the development of an ARG IVV application (Alternate Reality Game) for mobile devices, created from the Unity game engine. This engine allows you to develop applications that can amplify the coexistence beyond the geographical space and analogic technologies favoring hybridity, multimodality, pervasiveness and ubiquity, mainly in this case, being associated with mobile technologies and wireless, mixed reality and augmented reality. IVV makes use of mechanical and dynamic present in the MMORPG - Massive Multiplayer Online Role Play Game type and has a visual identity with characteristic elements of the Italian immigration history and culture, as well as elements of the grape and wine production. IVV is available for the operational system IOS and Android.

**Figure 1.** *Initial Screen of the Game*



From an initial narrative, the players who access by clicking on the scroll icon engage in a history divided into three acts: Act 1 - Mythology; Act 2 - Italian Immigration; Act 3 - Immigrants in Bento Gonçalves.

The narrative draws the players to accomplish missions, accessed by clicking on the map icon. This map has a layout that shows an old city map with icons representing wineries and gastronomic spaces (partners) present in the game and gives access to missions to be carried out.

**Figure 2.** Stylized Map of the city of Bento Gonçalves with the Spots of the Missions



Clicking on the icon of the partner, a presentation screen opens with the summary of mission, location information and a cutscene – a video that shows the mission spot to the player. The player has the possibility to select the icon "how to get there" that directs him/her to Google Maps, and the Google service provides the geographic routes to reach the site of the chosen mission.

**Figure 3.** Mission of Aurora Winery



Each mission is presented by a patterned 3D character - Bacchus, Nonna Francesca and The Italian Giuseppe, who are continuing the narrative, prompting the player to carry out missions and interact with the local community in the city and the countryside areas in the construction of a plot knowledge distributed in twelve missions.

**Figure 4.** *Characters of the Game*



Choosing the mission and move to the geographical location where it occurs, the player will find markers that need to be read to identify the "Online Clues" - RM and RA and "Live Tracks" - people connected to the site, reference on the knowledge necessary to develop the mission.

So, to start the game path, the player must select the magnifier icon and point to the marker. One of the characters in the game interacts with the player, leading him/her by the mission paths, with several possibilities, from interacting with live tracks, find specific products, taste food, among others.

**Figure 5.** *Players Starting a Mission at Itallinni Biscotteria*



The game also allows the player to choose between four languages to interact with the application.

**Figure 6.** *Options to Choose the Language*



When performing the missions, the player can share experiences, feelings and discoveries, interact with other players in a community created on Facebook. The players can make suggestions, criticize, becoming co-authors of the game.

**Figure 7.** *Facebook “In Vino Veritas – The Game” Group*



Thus, IVV constitutes a hybrid multimodal, pervasive and ubiquitous, game, which can also be cooperative, in the sense that the players can be authors, socialize the experience knowledge built into the game itself.

IVV was released and played in 21 CIAED-ABED and also had empiricism beyond the link with the areas of winemaking, food, chemical and history, linked to the immersion of the public participating in the culture and tourism of Bento Gonçalves. The desire was that the subjects felt incited, provoked, curious, engaged in learning, and that this could happen in a fun way.

### Final Considerations

From its conception, IVV had the concern to provide interaction between digital technologies, geographical spaces and local community. The experiment involved people and community as actors in the knowledge creation process, and not only as observers or users. Establishing itself as an experiential

environment (experimental + experiential), in which the people were immersed in a creative social space to conceive, design, monitor and evaluate the creation, thus, showing its characteristic as Living Labs.

The game was developed in order to provide knowledge experience, from information socialized by live clues, representing the collection of human libraries on Italian immigration, viticulture and gastronomy in Bento Gonçalves. In a human library, people become "human books" from knowledge and desire to socialize their life experiences, different views, values and paths. Live clues are people who know the significant stories of Italian immigrants, as well as important events in the city. So, the interaction with the information application, combined with the presence of live clues, is configured as a special area of conservation and enhancement of the community memory, favoring the movement of traditional knowledge by multiple spaces from different fields of knowledge.

It is important to observe that IVV allows interaction between digital technologies, geographical spaces and local community, favors interactions that enhance located and immersive learning, engaging the players in knowledge experiences on Enology, History, Gastronomy and Chemistry. The results show that the actions and interactions between human and non-human actors were made possible by IVV, through the hybridity of geographical and digital spaces in an interweaving of different cultures, legitimizing them.

The multimodality gave a continuity of character and extension of actions and interactions in time and in space, enabling the knowledge building which is developed in the classroom overlapping mode with the online mode through the pervasive and ubiquitous game that involved played missions in different parts of the city and resulted in the capture of information from the environment and the people as well as the capture and/or production of geo-information, using mixed reality and augmented reality, as well as interaction in the Facebook group set up for sharing experience among players.

This construction helps us to understand that hybridity, multimodality, pervasiveness and ubiquity allow the creation of living spaces that legitimize different human actors and non-human actors in the learning process, including the city and its socialities. Thus, we understand that Hybridism, Multimodal, Pervasive and Ubiquitous Living Spaces can contribute to the education, an emancipatory and citizen perspective to the extent that amplify and hybridize "places" and times, as well as how the teaching and learning processes occur, enabling human actors to act and interact in this context, increasing the observable and build meanings that allow them to assign meaning to their participatory and responsible action in the/and with the city (not human actors ) and, therefore, to society in order to weave in the signification process a network of relationships that links nature, techniques and cultures, giving it a meaning.

Another point that the game has is the principle of symmetry or flat ontology, where AH and ANH have the same importance and are at the same level, i.e., subjects and objects in the same plane producing movements and generating actions, "making do things".

## References

- Kastrup, V. (2007) *O funcionamento da atenção no trabalho do cartógrafo. Psicologia & Sociedade* [The functioning of attention in the work of the cartographer. *Psychology & Society*] 19(1), 15-22. [online]: [www.scielo.br/scielo.php?script=sci\\_pdf&pid=S0102-71822007000100003 &lng=pt&nrm=iso&tlng=pt](http://www.scielo.br/scielo.php?script=sci_pdf&pid=S0102-71822007000100003&lng=pt&nrm=iso&tlng=pt).
- Latour, B. (1994) *Jamais fomos modernos* [We have never been modern] Editora 34, Rio de Janeiro.
- Latour, B. (2012) *Reagregando o social: uma introdução à teoria do ator-rede* [Reassembling the social: an introduction to actor-network-theory] EDUSC, São Paulo.
- Lemos, A. (2013) *A comunicação das coisas: teoria ator-rede e cibercultura* [The communication of things: actor-network theory and cyberculture] AnnaBlume, São Paulo.
- McGonigal, J. (2011) *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. Penguin Press, HC.
- Passos, E.; Kastrup, V.; Escóssia, L. (2009). *Pistas do método da cartografia: pesquisa-intervenção e produção de subjetividades* [Tracks of the cartography method: research-intervention and subjectivities production], Sulina, Porto Alegre.
- Passos, E.; Kastrup, V.; Tedesco, S. (2014) *Pistas do método da cartografia: a experiência da pesquisa e o plano comum* [Tracks of the cartographic method: the research experience and the common plan], Sulina, Porto Alegre.
- Saccol A.; Schlemmer E.; Barbosa J. (2011) *M-Learning e U-Learning – novas perspectivas da aprendizagem móvel e ubíqua* [M-Learning and U-Learning - new perspectives of mobile and ubiquitous learning] Pearson, São Paulo.
- Schwartz, G. (2015) *Cidade do conhecimento e a iconomia dos jogos com moedas criativas* [City of knowledge and the iconomy of games with creative currencies]. *Revista Organicom*, v. 12, pp 160-179