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DEVELOPING NARRATIVE INTELLIGENCE - KEY DIMENSIONS IN TEACHERS' TRAINING PROGRAMS THROUGH VIRTUAL LEARNING ENVIRONMENT

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Abstract**:** *Most arguments and points that describe the quality of training programs demonstrate that narrative art plays a central role in the theory and practice of training and change. The paper we propose supports an enthusiastic viewpoint that aims to reveal few basic guidelines of a plea for narrative art. We present a set of reasons supporting the importance of developing narrative intelligence through training programs, to be used by trainers that promote and create virtual learning environments. Throughout the paper we address few possible interrogations: What is narrative intelligence? What is a story/narration that calls for an action? What goals should be aimed by including a story/narration in a online training session? Is narrative intelligence only a useful communication tool, or can it be used as an evaluation criteria for the effectiveness of all forms of communication directed to action? How to insert narration in a training session? How can you call to action using the art of narration? Is there a secret language of the trainer? What is the profile of the cyber education field and how does narrative intelligence contributes to build this new world? This paper describes some of the properties of a world of "virtual reality" constructed according to narrative principles and their force to act in educational space to create the authentic virtual learning environment.*

Keywords**:** virtual learning reality; narrative intelligence; storytelling; teachers' training programs

"If stories come to you, care for them. And learn to give them away where they are needed. Sometimes a person needs a story more than food to stay alive."
Barry Lopez

The new requirements regarding the professionalization of teachers revolve around the use of communicational and informational technologies as the moment of reference in the field of basic changes of educational systems. Equipping of schools and the assurance of necessary resources, the assurance of quality in education and life-long learning, were and are necessary priorities and desiderates. They are inadequate if they are not accompanied by the review of the strategies with respect to initial and regular training of teachers for primary and early education. These teachers are directed to generate new competences and capabilities fitted to certain new formational profiles and to a didactical skilfulness with spirited valences. The rapid development in information technology in the last decades made possible for the progress of a new educational infrastructure that promises to promote adaptive learning in ways never imagined. As earlier generations could have only dreamed, this new educational infrastructure, developed around the Internet, makes possible the creation of learning environments that are individually responsive. Certainly, the effective promotion of the new information technologies and the speed of integrating it must be considered through the need developing transferable competences, structures and mental operations supposed by the actual opportunities of professional improvement. Through these new technologies the teachers and the

students find themselves in new roles, based on the creation of new educational tools, materials and environments.

This article addresses three specific audiences: the teachers in schools who want to know more about the tasks of virtual learning environment and about e-competences and abilities, the students to become teachers, and the university educational staff responsibile for quality control and therefore of training teachers. This article is organized into two sections. Each section explores a theme and the implications of narrative intelligence for the creation of an authentic virtual learning environment. Hence, two relevant questions guide this discourse:

1. What is narrative intelligence?
2. What is the profile of cyber education field and how does narrative intelligence contribute to build this new world?

I. INTRODUCTION: WHAT IS NARRATIVE INTELLIGENCE?

Human beings prefer to receive information in a package that includes a natural starting place, an exciting, tension-filled middle, topped off by a satisfying finish. We prefer stories with plots that make sense of the order of events by revealing their meanings. *"Stories have the felicitous capacity of capturing exactly those elements that formal decision methods leave out. Logic tries to generalize, to strip the decision making from the specific context, to remove it from subjective emotions. Stories capture the context, capture the emotions. Stories are important cognitive events, for they encapsulate, into one compact package, information, knowledge, context, and emotion"* (Don Norman, *Things That Make Us Smart*.)

We learn to approach the world, as children, through narrative frameworks (Nelson 1989). According to Mateas and Senger (1999), as adults, we supply our worlds with meaning, as we continue to be surrounded with stories, making sense of the world. We order the events in our lives and find their "meaning" by incorporating them into more-or-less familiar narratives. It is this *human ability to organize experience into narrative form* that David Blair and Tom Meyer call "Narrative Intelligence" (Blair and Meyer 1997).

Narrative Intelligence can be defined as the *"capacity to think the world in a narrative manner"*, which implies to master the various components and dimensions of narratives, the various narrative models and to be able to foresee their impact in different situations. The ability to think narrative reflects recognition of the fact that the narrative aspects of the world matter, that goals that humans adopt matter, that stories/narratives do the best job to summarize these goals.

Human beings think in narratives, their hopes and fears are expressed through narratives. Imagination consists of stories, as well as our plans. We love, think, even gossip, within stories. Emotions have a narrative character. When we communicate our emotions we use a story. Our decision making processes are mostly linked to a narrative process. How should narrative intelligence be defined?

Research in this field is not as advanced as in others, but some basic facts were identified. Recognizing the fundamental role of narrative in the human behavior is the subject of an increasing number of psychological research studies. (D. P. Mc. Adams and J. L. Pals, "The New Big Five: Fundamental Principles for the Integrative Science of Personality ", American Psychologist, 2006, pp. 204-217). The central role played by the art of storytelling in successful leadership is confirmed by studies showing that stories are more effective than analytical reasoning when it comes to persuasion. Social psychology studies show that information is remembered faster and more accurate if presented as an example or story, especially a fascinating one. The power of stories is even greater as they are mythical, universal, stories that transcend cultures, that resonate deeply with human motivations and that convey complex meanings. We can experience these stories developing skills and human virtues.

The preference of humans to communicate in a narrative format has an evolutionary origin that has co-evolved with increasingly complex social dynamics among our human ancestors.

According to Kerstin Dautenhahn (1999), the *Narrative Intelligence Hypothesis* consists of the following line of arguments:

a) *„individualized societies are a necessary (but possibly not sufficient) 'substrate' for the evolution of narratives. In such societies members know each other and relate to each other on an individual level (animals with 'personalities', 'minds'), and interact with each other through transactional processes;*
b) *the specific narrative format of such transactions serves an important communicative function among primates, and possibly independently in other groups of species that live in individualized societies;*

c) *narrative co-evolved along and in order to cope with increasingly complex dynamics in the primate social field;*

d) *the evolution of communication in terms of narrative language (story-telling) was an important factor in human evolution that has shaped the evolution of human cognition, societies and human culture. The use of language in a narrative format provided an efficient means of social grooming;*

e) *human cultures which are fundamentally 'narrative' in nature provide an environment that young human primates are immersed in and facilitates not only the development of a skilled story-teller and communicator, but the development of an autobiographical self."*

People use storytelling as an interesting and inexpensive way to deliver memorable messages. We like to hear stories, and to repeat them. In teachers' training, as well as in business or other domains, narration can be used to:

- send a memorable message
- capture attention
- build credibility
- bring a team closer together.
- establish rapport

We all know teachers who seem to have an innate ability to tell stories. Stories can guide behavior, providing mental scripts, as Roger Shank describes in "Tell Me a Story, Narrative and Intelligence". Listeners relate the story delivered to one of their own, personalizing the message being delivered and adopting the meaning as internal.
The mastery of storytelling involves the following steps:

- considering the learners' past experiences
- understanding the meanings of those experiences
- send key messages using stories

When used to support an overall training or mentoring communication plan, stories can convey values and priorities in a memorable way, can share lessons, can highlight desired behaviors.

II. RETHINKING AND RESHAPING THE VIRTUAL LEARNING ENVIRONMENT

The face-to-face environment cannot be transferred online. Virtual learning environments can only be effective if the design is learner-centric, providing opportunities for different types of interaction, flexibility, choice, collaboration, real-world skills, and learner control. The role of cyber educators is changing from a facilitator to a partner in learning. Cyber education must be rethought and reshaped in order to have online learning programs grounded in trust. For the learners to be successful, trust must maintained and nurtured in the digital environment. The demand for online learning in higher education, directed to teacher training, continues to be a central focus for administrators and instructors, who must be prepared to meet the needs of students.

Cyber educators and face-to-face educators alike are compelled to learn new ways of teaching. The skills needed to present a traditional lesson are far different than those required to present it online. The role of the instructor evolves from one of subject matter expert and provider of content to a facilitator and, eventually, a partner in learning (Beldarrain, 2006). This requires a commitment of excellence on the part of the organization or institution, thus recognizing the importance of designing for online learning and allocating the time, effort and structure needed to create and implement alternative teaching practices. Learner-centric environments promote choice, flexibility and personalize the learning experience based on interests, motivation, abilities and learning styles. In this area, a common problem for new online learning programs is design. Constructivism describes how learning should provide real-life experiences through interactive and collaborative interactions. In this way, learning becomes authentic (Jonassen, 1994). Through social negotiation and knowledge exchange, learners co-construct and gain more knowledge than it may be evident to the instructor. Online learners, especially adults, have more autonomy and are more self-directed. It is the role of the instructor to guide students toward the learning objectives and involve them in the educational process.

If narrative is one central component of human intelligence, then it should also play an important role in artificial agents which model aspects of human intelligence. (Schank 1990, Dautenhahn and Nehaniv 1998).

Human cognitive and narrative capacities are constrained by human evolution. Technological extensions and enhancements (new media, new means of communication, new interfaces and implants) have adapted to that. Building *narrative technology*, in particular interactive environments is a growing area, ranging from applications in education and therapy to entertainment. The narrative capacity of humans is involved not only in entertainment and fun, but it serves an important cognitive function in the development of social cognition and a sense of self. Technology needs to respect human narrative grounding in order to avoid undesirable and unforeseen effects.

In "Towards Narrative-Centered Learning Environments," Bradford W. Mott, Charles B. Callaway, Luke S. Zettlemoyer, Seung Y. Lee and James C. Lester describe the potential for virtual environments which use narrative as a supporting element for education. Rich stories with compelling characters may provide an environment which better motivates students to become involved and to care about the material being presented. In "Narrative in Virtual Environments – Towards Emergent Narrative," Aylett describes many of the issues that arise when narrative can or should emerge from the interactions of autonomous agents within a simulated virtual environment. Many educators are using new technologies to support learning through simulations and virtual games. They use strategies, simulations, puzzles, role playing, inquiry, sports, problem solving, adventures and are very open to promote narrative intelligence.

A successful training program articulates clear and inspiring ideas for change that are conveyed through the trainers' enthusiasm and desire to interact with people, through their dedication to make change possible. When trainers want to induce change in trainees, to channel them to adopt a position of openness to the world, to have them find motivation in the intrinsic values of the activities pursued, they should fuel the effort to convince others to follow from their inner forum. Inner commitment brings life to the words of the trainers (those who have developed narrative intelligence!) and turn into the center of gravity of the new story.

Although trainers love to focus on the content of the story to be delivered, is not less important to *connect with the live story of their audience*. If one does not understand the story of people is addressing, how can a message that will arouse interest be conveyed? Abraham Lincoln said: " When I am getting ready to reason with a man, I spend one-third of my time thinking about myself and what I am going to say and two-thirds about him and what he is going to say." How does this translates in virtual learning environments?

Each type of virtual environment presents opportunities to use different combinations of technologies in order to design engaging learning experiences. *Using avatars is a very powerful technique*. Avatars are used as forms of self-representation for students as well as instructors. Avatars are models driven by human beings. Social interactions can be transformed in essentially three ways: through self-representations, social-sensory abilities and the social environment (Bailenson et al, 2008). According to these authors, self-representation is the "strategic decoupling" of the behavior of

the avatars from the humans driving their behaviors. An user may choose to design its avatar to resemble himself physically and to behave similarly. Others may choose to do the opposite. Researchers believe that users view avatars that look like themselves more favorably and intimately than those who look or behave differently. The role of avatars in virtual worlds of learning will continue to evolve. They were originally introduced as an interface tool that provided basic information. Mixed adaptive environments provide the learner with more support for long term learning (Dufresne & Paquette, 2000), this includes using avatars to enhance the learning environment and also facilitate learning. Avatars are likely to become role models for the student because they are easily adaptable and can manipulate any given scenario to obtain desired learner behaviors. Their ability to use gaze to gain the user's attention can be used to optimize learning. Second Life©, one of the most popular virtual worlds on the Internet is unique in the way that its residents are able to develop it and participate, much like a real community. The possibilities are exceptionally rich and adaptable to education. Second Life® has become an example of a virtual environment that is ripe for educational applications because it has an already well-established community. Much of this virtual world can be maneuvered and changed to create entirely new learning experiences, including the manipulation of identity and form of both the avatar and the physical space.

Trainers shall overcome the The Fundamental Attribution Error and understand their audience with all their differences. Trainers shall not see them as obstacles, but realities that must give shape to the thoughts that their lips are eager to persuade. And the best way to understand our audience is to understand their story! How can we achieve this? We have to see if and why the trainees have different opinions about the idea of change that has to be conveyed. Which story is keeping them captive? What real or imaginary constraints keep their mind's eye off a different landscape? Which of their fondest aspirations are not fulfilled. And more. Only then we can build a new story to resonate with them and this is usually the easy part.

Committing to tell real stories or stories that can be real contributes to the increase of the *level of trust in virtual environments*. How people choose to behave depends on the given situation, but also on their prior experiences and sense of identity. Feng, Lazar, and Preece (2004) conducted a research study that focused on empathy. It discerned that both empathetic accuracy and communications style had an impact on the level of trust online. Personal communication that was interpreted to be empathically accurate and supportive also increased trust. In a trusting online learning environment, the student should trust that the instructor has his best interest at heart both academically and personally. This new level of trust is likely to redefine the roles of the instructor as that of a partner in the learning process, someone who is there to cultivate knowledge, love of learning, but also to continue learning. Learner preferences regarding the level of interaction and visibility must be considered when designing online programs. Prevention through assessment design and course design should be emphasized, employing reliable and authentic assessment techniques and pedagogical approaches.

III. CONCLUSIONS

Cyber educators are responsible for monitoring the digital environment, but the most important act is the *design of the course, the story behind technology* that must offer opportunities for collaboration, focusing on increasing rapport and collegial discourse. Instructors are also responsible for lowering the affective filter to encourage participants, for instance, to express themselves freely without fear of embarrassment or retribution. In digitally mediated learning, the cyber educators have the responsibility to provide a learning environment that is safe for students.

An important issue is how pedagogy benefits by the use of virtual worlds. Several approaches seem to have merit: digital storytelling, role playing, community involvement and peer-to-peer tutoring. With digital storytelling, participants use the environment to tell a story; they work in groups and create stories using avatars, renditions of physical objects and spaces. Role playing frees the learner to view a situation from different perspectives. The options for creating content, scenarios and

discussions are endless. There are also many opportunities for learners in virtual worlds to connect with others that are geographically dispersed but may have common interests or concerns.

The designers of teachers' training programs shall be receptive to narrative intelligence issues by using and building narrative intelligence into virtual learning environments and aim to develop narrative intelligence abilities also in their trainees.

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