Improving Web-based Learning by Means of Narrative

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Abstract. Web-based learning mostly relies on written, asynchronous interaction, which grants learners time for reflection and freedom in the organization of their activity. Written communication, however, is considered an impoverished means by many people, because it lacks non-verbal cues, with consequent negative influence on the quality of the learning process, as concerns both its cognitive and motivational/emotional aspects. Hence, the research on web-based learning is increasingly giving attention to ways to overcome this problem. Based on the analysis of three different examples drawn from the literature, this paper argues that introducing a targeted narrative activity in the design of web-based learning can represent a valuable way to contextualize the learning activity and enhance social presence, in that narrative is a multifaceted form of communication which results natural in all cultures and is suitable for any learning subject.

Keywords: Social presence, narrative, web-based learning

1   Introduction

It is increasingly recognized in the literature that successful online teaching and learning involve dialogue, that is, the discussion and sharing of ideas among all the subjects involved [1]. Online discourse, however, taking place mostly in written, asynchronous way, is often criticized as an impoverished form of communication, since it lacks non-verbal cues, such as face expression and tone of voice [2], with consequent limited reach and negative influence on the quality of the learning process, in both its cognitive and motivational/emotional aspects. The situation is made worst by the fact that often online participation is affected by some level of anonymity, either because participants use a nickname or simply because they have scarce or none opportunities to meet in person.

Therefore, possible ways to overcome this problem have increasingly been an object of investigation. A number of research studies carried out in the past years have spotted lack of context, of ownership and of social presence as sources of uneasiness in online learning situations, with consequent negative effects on the learning outcomes. A number of approaches to improve online learning in this respect were also proposed, as mentioned in the next section.

In this paper, we argue that including some narrative task in the design of online activities could help learners develop social presence, contextualize their work and gain a sense of ownership of the learning environment, therefore overcoming the

limitations of written asynchronous interaction and improving learning effectiveness. To this end, we discuss three examples, drawn from the literature, of different narrative activities that appear suitable for online learning environments, highlighting that narrative can be used in different ways, but with similar benefits, to enhance learning through the development of social presence.

2   Towards rich online learning experiences

Among the many research studies aiming to improve online learning by overcoming the current limitations of virtual settings, three orientations emerge, that is, attention to context, to feeling of ownership over the learning space and to social presence.

The importance of setting a suitable learning context is highlighted, for instance, by Afonso [3], who points out that virtual educational settings often pay scarce attention to the construction of an appropriate learning context, that is, "everything individuals find as relevant to perform a certain task and make sense of it" (p. 153). Without a relevant context, learning appears much less meaningful. Communities - such as groups of learners working together in virtual settings - help to create contexts for an effective management of learning if they promote interaction, collaboration and a sense of belonging.

Feeling of ownership and inclusion in the learning space are emphasized by Christiansen [4], who attributes the uneasiness of many participants in online learning activities to the "lack of dwelling" which is consequent on the lack of a physical reference point for the learning activities. She observes that the source of problems is not virtuality *per se*, nor written communication (in that letters have always been an effective medium of communication and academic reflection), but the fact that learners need to know that their experience has a place and counts as a contribution in the learning space, where they can feel included, guided and able to transform. This can hardly be achieved if the lack of a physical space is not compensated by suitable features in the organization of the online environments and learning activities.

Social presence, that is, "*the degree to which a person is perceived as a* real person *in mediated communication*" [5, p. 9] is widely discussed in the literature. This concept, which has its roots in previous studies concerning face-to-face communities [6], [7], received much attention after becoming part, with cognitive presence and teaching presence, of the three characterizing dimensions of the Community of inquiry Framework proposed by Garrison, Anderson and Archer [2]. These three kinds of presence correspond to the three kinds of interaction that usually take place in learning activities, that is, with teacher, with content and with the other learners. These authors define it as ''*the ability of learners to project themselves socially and emotionally as 'real' people into a community of learners*'' [p. 94] and point out that being present entails interacting and relating with people, expressing one's feelings and reacting, being recognized, perceived, accepted, changing or trying to change the others.

It appears from the above definitions that these three orientations are not in contradiction with each other, but only express in different ways the need to set up online learning spaces where the learners may experience inclusion, control and

affection, and are encouraged to put themselves deeply into play. In other words, all of them proceed in similar ways to add a dimension of reality to virtual environments, overcoming the lack of social and non-verbal cues by means of suitable, and consistent, activities. We can, therefore, make reference to any of these ways to address the problem with the peace of mind that we are not disregarding the possibilities suggested by other approaches.

Social presence is recognized as very important for the realization of cognitive aims and the development of critical thinking skills [8], [9]. It is rooted in social interaction but does not reduce to it [10], [11]. Since learning in online environments arises from a purposeful integration of cognitive, social and teaching presence, social interaction should be strictly intertwined with learners' cognitive engagement. As Garrison and Cleveland-Innes point out [10], it is not the quantity of interaction that matters, but the quality of discourse. Social interaction and presence may create the conditions for sharing and challenging ideas but does not directly create cognitive presence, which makes learning happen. It appears therefore important to find ways to foster social presence not *per sè* but in relation with the cognitive task at hand.

The realization of social presence is not automatic nor easy, but needs to be stimulated and supported by means of appealing, engaging, and rewarding group interactions. Several authors in the literature (e.g. [6], [11]) offer a number of suggestions to support its creation, addressed either to course designers - such as posting welcome messages, including participants' profile, structuring collaborative activities - and to course participants (tutors and learners) - such as improving expressiveness by means of emoticons, replying promptly, asking thought-provoking questions, keeping focused). Aragon [6] also mentions that tutors and learners should share personal stories and experiences as a way to achieve credibility and to improve active participation.

We go further, suggesting that a purposeful use of narrative - in the form of stories and narrations - should be included in the design of online learning activities, so as to make use of it systematically and in relation with the learning tasks, rather than leaving its presence depend on voluntary and sporadic actions of individual participants, with outcomes that are possibly unrelated with each other and with the learning task. As we will argue in the next sections, narrative can be a valuable tool in supporting the creation of social presence, and deserves to be exploited more widely than it is at present.

3   Learning potential of narrative

Narrative has been increasingly used in education in the past decade, since it is recognized as a natural expressive form for people of any age and culture [12], as well as a privileged way to help develop cognitive abilities and organize knowledge [13]. It leads people to engage in symbolic activities to construct and make sense of themselves and work out a coherent meaning for their experiences [14].

The roots of this rich cognitive potential can be recognized in the definition that Bruner [14, p. 43] gives of narrative as "...*a unique sequence of events, mental states, happenings. ... But these constituents do not have a life or meaning of their own.*

Their meaning is given by their place in the overall configuration of the sequence as a whole". This definition spots the presence of logical relationships among narrative elements as a key point provoking active thinking and supporting meaning construction. This concerns both invented narratives (stories) and true ones (history and narrations of experience) [15].

The literature highlights that narrative's positive influence on learning concerns not only cognition, but also motivation and emotions. As Bruner [14] points out, "*narrative in all its forms is a dialectic between what was expected and what came to pass*" (p.15), as well as "*an invitation to problem finding, not a lesson in problem solving*" (p. 20). For this reason, the use of narrative in learning can be challenging and stimulate curiosity and fantasy, which are major components of intrinsic motivation. The support to emotions raises from the fact that narrative is based on an interplay between characters and causation [16], which leads the user to highlight aspects of personality, emotional state and social standing, as well as the motives and intentions which underlie actions.

Narrative can help the creation of social presence of the participants in online learning activities in a variety of ways, for several reasons:

- Narrative always has a narrator, hence it is told from an explicitly declared perspective, which can help people get aware of the existence of many agents and different points of view.

- Narrative concerns actions and events, which are something concrete and apt to raise mental images in its readers/listeners; this helps overcome the abstractness of virtual environments and constitute solid ground for discussion and reflection; as Wenger [17, pg. 203] points out, "*stories ... can be appropriated easily because they allow us to enter the events, the characters and their plights by calling upon our imagination*".

- Sharing stories is traditionally a social activity, hence narrative is particularly suitable to create a social atmosphere; this is important from the point of view of learning, in that "*the cultural contexts that favour mental development are principally and inevitably interpersonal*" [18, p. 68].

- Narrative can be useful in the creation of learning contexts engaging learners from the emotional/motivational point of view and connecting this aspect with content knowledge [19].

4.   Supporting social presence by means of narrative

4.1   Sharing personal experiences

Arnold et al. [20] report the case of a group of students involved in a distance education degree program, who autonomously organized a discussion space, independently of their study provider, where they used to share personal stories concerning their learning strategies, issues, feelings and attitudes. Stories shared in this space were often prompted by participants' questions on how to organize online

learning or how to carry out some task, and were reported in narrative form. The authors do not specify the study subject of this group of students, nor the structure and social organization of the courses they were enrolled in. We may suppose, however, that the social aspects of the course they were taking were not well supported, since the students felt the need to create an external social space to exchange information and opinions and to reflect together on the online learning experience.

As the authors point out, personal stories narrated in this example represent a potential learning resource for all participant. With this mean, learning actions become visible and provoke reaction and reflection. Thanks to these personal narrations, the strategies suggested to tackle tasks or to cope with the novelty of online learning are perceived quite differently than analogous suggestions possibly provided by official booklets, whose authors remain invisible. This kind of stories let the participants' context emerge, both at individual and community level.

This case exemplifies well the need of online students to develop a social dimension. This is pointed out by the fact that the community was started by the students themselves, independently of the study provider, and by their need to get support avoiding the anonymity of user manuals and online helps. We can view the social activity carried out in this environment as a kind of technical support concerning online learning, realized by means of stories. This narrative form of communication appears to play a central role in the existence and meaning of such a community: giving each other support in plain technical way would probably be perceived as a plain time-consuming service, and therefore, on the long run, as a burden to drop. Sharing personal narrations, on the contrary, appears enriching for the authors as much as for the readers, in that narrating is a powerful way to make sense of one's own experience, as pointed out in the literature (see Section 3). A narrative activity of this kind within an online community is a way to disclose one's own presence in a rich and meaningful way, as well as a useful support to reflection on one's own learning process.

Moreover, narrating personal experiences, helps the students acquire awareness of one's own strategies and achievements, prompted by the questions of peers, and therefore supports self-awareness and self-efficacy; it also stimulates reflection and meta-reflection, through comparison of the perspectives of different narrators. Since all these are important components of self-regulated learning [21], making oneself socially visible by means of this reciprocal narrative activity appears not only as a good way to acquire knowledge, but also as an occasion to consolidate learning competence.

4.2   A narrative simulation game

In a master on juridical translation to several languages, run for the past 5 years by the Faculty of Foreign languages of the University of Genoa [22], a socio-professional simulation game is proposed at the beginning of the course. This master, which is addressed to graduate students with at least an average knowledge of the language of their interest, aims to build competence in the translation of juridical documents. It is run completely online, lasts 25 weeks and includes both individual and collaborative

activities. At the beginning of the course, participants are split in groups of 4 to 6 people, with heterogeneous background and different language levels.

The simulation game proposed consists in asking the groups to get organized as real "translation agencies". Based on this assumption, all the master activities are seen as steps of a context in which the agencies take part to win a big translation job offered by the European Community. This gives a slightly playful flavour to the various tasks proposed during the master, and motivates the students to tackle them in professional way, committing to obtain the best scores and hence win the context. The first of the assigned tasks is a self-presentation that each "translation agency" is asked to build, so as to look professional and appealing. The invitation to behave like a real translation agency is then carried on throughout the master, with the aim to encourage the students to take advantage as much as possible from the collaboration with the group mates.

Lupi and colleagues [22] analysed the interactions inside the course from different points of view, and compared the outcomes of an edition of the master in which the simulation game was widely exploited with another edition where it was not. They remarked that the interactions were much more numerous and alive in the first case, and the participants obtained better results in the final exam.

The apparently childish task to prepare a professional presentation for a hypothetical translation agency is actually the occasion to learn expressive forms which may be useful at professional level, and at the same time has several positive side-effects on the overall learning. It helps group members to get acquainted with each other, which is essential to establish and exploit social presence; it helps set up negotiation dynamics inside the groups, which is crucial in the subsequent joint translation work [23]; and it boosts a creative attitude towards the course work, which is important non only because creativity appears to support social presence [24], but also because the law systems of different countries are not completely congruent and hence translating juridical documents is not simply a matter of learning technical words, but also, and especially, to find the best possible correspondent of the juridical concepts in the documents assigned for translation. Hence, we clearly see in this case a strict intertwinement of social interaction and cognitive activity.

This simulation is actually a narrative activity, in that the students are invited to take part in a role playing game, where the roles played are imaginary but realistically connected with the (possible) future profession of the participants, and the actions they are asked to perform in such roles leads them to show their presence in group work and at the same time to immerse themselves in the cognitive task assigned. The stories that come out from this role playing are the daily activities of groups of professional translators who put into play their own abilities and personality to emerge over their competitors. The effect on social presence is therefore evident, and so is also the boost granted to motivation and learning.

The positive influence on social presence and learning of asking the students to act as if they were in a given role is underlined by Garrison and Cleveland-Innes [10], who point out that it leads the students to bypass their own social identity as students and work with the course material from a different (and hopefully wider) perspective.

4.3 Narrating by means of metaphors

Delfino & Manca [25] and Delfino [26] describe two studies on the use of metaphors in the online component of a blended course in educational technologies, addressed to trainee teachers.

In the first study, the use of metaphors spontaneously arose during the course, without being encouraged by the tutors. They were equally used by students with any background, and emerged more frequently in relation with meaningful or critical events. They were used by course participants as a means to express in a vivid way their view of the learning environment and to disclose their identity, emotions, feelings, without the need to talk of themselves directly, in first person.

In the second study, on the other hand, the use of metaphors was explicitly stimulated, by asking the students to tackle the course as a sea journey and by giving the discussion conferences in the familiarization area the name of different types of boat (e.g., fishing boat, caravel, cruise liner etc.). The study reports that participants mostly accepted without problem the request to use the metaphor of navigation, expressed a good amount of creativity in its use, and even extended it beyond the end of the familiarization phase where it had been proposed.

Summarising the outcomes of the two studies, Delfino [25] concludes that figurative language proved to be beneficial to support the participants' social interaction, in particular by facilitating the expression of emotions associated with the learning experience. It resulted to be a creative way to give concreteness to the virtual space where the course was taking place. It allowed the students to alleviate their anxiety for the new way to take a course by expressing their emotions in disguised but effective form, that is, by describing themselves and their actions by means of images of animals, vehicles, fictional characters, etc. (e.g. "In this brand-new activity, I feel like a little turtle going slowly, slowly ..."). Hence, the use of metaphors resulted as a non intrusive and very expressive way to develop social presence and at the same time reflect on the learning experience carried out.

Certainly figurative language can not always be viewed as narrative, when it consists of static images depicting a situation rather than narrating actions, mental states and events. It appears proper, however, to consider it a narrative form in this example, since the use made by the students was actually to share with the course mates actions and feelings that it would have been difficult, for subjective or objective reasons, to communicate in other form. Moreover, in the second case metaphors followed the students throughout the course, creating a sort of continuing story of the various boats while finding their way through the difficult sea of the unusual learning environment.

The association with vivid and concrete images allowed by figurative language appears, therefore, as a powerful way to make oneself present in a shared virtual space. Moreover, the choice of unreal characters and features to describe one's actions and feelings allows, better than plain language, the modulation of emphasis (for instance, the turtle in the above example is defined as "small", and this adjective, modifying the image, points out something important concerning its authors, who likely, with plain language, would not have defined herself as "small" to convey her sense of humility with respect to the task at hand). This image-based emphasis appears to compensate for the lack of non-verbal cues in written language, and hence,

despite its making reference to imagined things and events, it helps to cope with the virtuality of online environments.

5 Concluding remarks

The three examples selected represent different ways to use a narrative activity in web-based learning to support the development of social presence, and by this means favour understanding and learning. They obviously do not cover all possibilities in this respect; they, however, can well give an idea of the range of possibilities offered by narrative for this purpose.

In the self-organized community of students, real stories are narrated; the students talk from their own position and disclose themselves to their peers, giving concreteness, by this means, to their own person and at the same time to the competence they share. Social presence is created by providing each other support, with a positive influence on both the cognitive and emotional aspects of learning.

In the simulation game, the narrative is between real and unreal, in that the students are invited to play a role which is not their true one at the moment, but is one they could be playing for real in the near future, thanks to the competence they are acquiring in the course. Hence, narrative appears here as a way of conceptually situating learners in their possible future working contexts, helping them to establish a mental connection with the professional community in which the competence they are acquiring makes most sense. Playing their role in the simulation appears as a way for the learners to intertwine and make explicit their social and cognitive presences.

In the courses where metaphors were used, the narrative is completely unreal. Nevertheless, the narrative framework set up by figurative language resonates with learners' perception of the course as a journey into an unknown world, and allows them to express their feelings and thoughts in an imaginative and not embarrassing way. Social presence is induced by the rich possibilities to express oneself, and reinforced by the narrativity of metaphors, which, in turn, boosts cognitive presence by stimulating reflection.

Despite their differences, all the described ways to establish social presence by means of a narrative activity appear to have been effective, and to have induced a positive influence on learning. This is independent of the content knowledge addressed in the respective learning activities. This is not surprising, since, as pointed out in Section 3, narrative is not simply an activity, but rather a form of thought which is innate in human beings, as well as a natural form of communication.

None of these different ways to use narrative appears to be preferable to the others, but rather they have different aims and effects; hence, the choice for one or the other can only be determined by the features and requirements of the context of use, as well as the inclination of the course designers, teachers/tutors and participants.

In all cases, the use of other kinds of discourse - such as descriptions or argumentations - does not appear as much suitable to induce the same effect, since none of them entail like narrative the presence of narrating voices, which socially recalls the presence of narrators.

In the three examples, the generated narrations appear to be connected to learning in a subtle way, that is, not only to the content knowledge which is object of study, but especially to the learning process and competence growth. In this respect, in all three cases the narrative activity, besides helping to develop social presence, constitutes a useful starting point for meta-reflection. This suggests a consideration regarding the educational power of web-base learning, that is, making good use of it entails to put effort on aspects, like social presence, which are usually taken for granted in face-to-face learning, but this extra effort required is in the end rewarded by students' achievement of a better awareness of their learning.

In conclusion, this study underlines, in the wake of other recent studies, that communication within web-based learning environments is not necessarily impoverished with respect to face-to-face one. Learners can avoid feelings of isolation and anonymity in several ways; the implementation of a narrative activity can very well serve this purpose.

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