

Learners' representation of their affective domain through figurative language in a web-based learning environment

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Abstract

This study investigated how the participants of an online learning course employed figurative language to express their emotions and feelings during the learning experience. Textual analysis was carried out in the social and metacognitive discussion areas as those mainly related to the expression of the social dimension. Its aim was to analyse the distribution of figurative language across the course, to understand if figurative language elicited creation of new figurative language and to classify recurring types of conceptual categories. Results show that figurative language use increased in occurrence with crucial social events; it did not necessarily encourage the production of further figurative language; and it allowed participants to represent their affective domain and to conceptualize the learning environment in an original manner.

Introduction

The social, relational and affective dynamics of learning are receiving more and more attention in the study of learning processes. Cognitive, affective and emotional processes seem to be closely related: this kind of co-origination is borne out within the context of neurosciences (Damasio, 1994; LeDoux, 1996), Artificial Intelligence (Picard, 1997; Dautenhahn et al., 2002;

Trappi et al., 2003), cognitive psychology (Forgas, 2000; Frijda et al., 2000), and education (Gardner, 1983; Goleman, 1995).

This common origin has also been acknowledged also in the field of web-based learning. A well-established social dimension appears to be the prerequisite for collaborative learning and group-based working, especially within those approaches that are more sensitive to the socio-constructivist provisions (e.g. Garrison & Anderson, 2003). Learning always implies a social dialogical process where individuals are mutually engaged in the construction and sharing of new knowledge (Vygotskij, 1978). Pedagogical approaches based on these assumptions combine the advantages of a learning strategy that promotes deeper level learning, critical thinking, and shared understanding, with those related to the development of social and communication skills (Garrison et al., 1999).

Learning experiences on the Internet is commonly characterized by written and asynchronous communication (Feenberg, 1989; Lapadat, 2002). In asynchronous learning environments the educational and psychological dimensions are strictly linked to the dialogues that participants construct. The written discourse also influences the socio-affective dimension of learning. Hence it is especially important to investigate how computer-mediated communication (CMC) may convey specific social affordances (i.e., the possible uses of the language that rely both on technology features and on the cultural context where the related actions take place; see Kreijns et al., 2002).

There are a number of ways in which textual indicators are able to manifest social presence and express representation of learners' affective domain (see Rourke et al., 1999; Stacey, 2002; Fay, 2003; Swan & Shih, 2005; Jeong, 2006). However, except for a very few studies (De Simone et al., 2001), the role that metaphors and figurative language in facilitating the

expression of emotions and the affective domain in web-based learning environments has not been investigated that well.

This paper reports an explorative study about the use of figurative language by the participants in a web-based course. The use of figurative language in this web-based course emerged spontaneously. It was not solicited nor predicted by the designers and tutors. As a matter of fact, after the end of the course, the authors noticed that both tutors and students had produced a significant amount of figurative language in their written discourse.

The concept of “figurative language” in this study refers to the iconic use of language aimed at expressing a non literal meaning: not just metaphors, but also other figures of speech such as hyperboles, idioms, understatement, similes, etc. (Roberts & Kreuz, 1994).

Linguistic creativity is what distinguishes writing in CMC settings from written language in other kinds of communicative contexts (Crystal, 2001). For this reason, the aim of the study was to examine only those uses of figurative language that are acknowledged as original. This means that stereotyped and abused metaphors (e.g., those that express feelings in the form of “feeling down” or those belonging to the Internet such as “netsurfing”, “navigating the environment”, etc.) were neglected. Examples of creative uses of figurative language made by participants are: “In this brand-new activity, I feel a bit like a little turtle going slowly, slowly,” or “To me, this course was the discovery of a New World”. All of them were used by participants to communicate their learning experience, to give voice to their emotions, perceptions and feelings, and to describe from a personal perspective the online learning context.

This study is a follow up of a previous research project that was based on quantitative analysis conducted to investigate the relationship between figurative language and the structure of the communication threads, and the distribution of figurative language during the length of the

course (Delfino & Manca, in press). The current study extends that research with further qualitative analysis to see what kind of images learners created to express their feelings and emotions towards both, other participants and the learning context in correspondence with crucial and significant events of the course. A brief summary of figurative language distribution across time and across threads follows.

Theoretical Background

The Social Dimension in Online Learning

Early approaches in the study of CMC noted that the lack of non-verbal cues (e.g. facial expression, posture, gesture, proximity) would limit the richness and scope of communication in such settings (Short et al., 1976; Rice, 1993). CMC was thought to be an impoverished means of communication giving little chance to gather important information about the context, the commonly shared rules of conduct and their influence on communication – all of which foster uninhibited speech and flaming (Sproull & Kiesler, 1986). Lacking non-verbal indicators, CMC was seen to be characterized by a very low level of social presence and it was thought that this feature could invalidate the learning purposes.

More recent studies have shown that with written communication alone, typically used in chat and e-mail, it is possible to stimulate social and affective presence, provided that interlocutors are allowed to manage their time freely (Parks & Floyd, 1996; Walther, 1996; Jacobson, 1999). Users compensate for the limitations of written discourse with linguistic inventions and adaptations (e.g., emoticons, typographical marks and other textual features, including the use of capital letters, ellipses, exclamation marks, as well as typing errors), in order

to express with appropriate orthographical strategies the aspects of non-verbal communication (Murphy & Collins, 1997; Crystal, 2001). In this way, a higher degree of familiarity and intimacy in content, style, structures, and timing of the exchanged postings would not only be a linguistic adaptation able to incorporate colloquial and informal registers, but it could also strike a balance between the features of the medium and an acceptable level of immediacy (Danchak et al., 2001). As a matter of fact, written communication is able to convey specific and unique socio-emotional affordances (Kreijns et al., 2002).

In the context of distance learning, social presence has been recently defined as “the ability of participants in a community of inquiry to project themselves socially and emotionally, as ‘real’ people (i.e., their full personality), through the medium of communication being used” (Garrison et al., 1999, p. 94). Social presence seems to support cognitive objectives as it encourages and supports meaningful critical thinking processes in a community of learners. Affective objectives that result in appealing, engaging, and rewarding group interactions may lead to an increase in socio-academic and institutional integration and results (Rourke et al., 1999). Social presence has also been investigated as a predictor of satisfaction and perceived learning (Gunawardena & Zittle, 1997; Richardson & Swan, 2003) and as an indicator of success and quality of the learning experience (Stacey, 2002; Shin, 2003; Swan & Shih, 2005). All these studies focus on the fundamental intertwining of cognitive and affective elements of learning processes (see also Jones & Issroff, 2005). Other studies have focussed on the relationship between the role of the tutor/instructor and affective and cognitive learning outcomes in the online classroom (Anderson et al., 2001; Baker, 2004) and on the relationship between social presence and perception of online privacy with regard to feeling at ease in an online learning environment (Tu, 2002).

Most of these studies have used different combinations of survey instruments (i.e. scale-graduated questionnaires) and analyses of students' online interaction with qualitative and quantitative methods (for a survey of instruments, see van Baren & IJsselsteijn, 2004). Only a few have so far investigated the expression of social presence through content analysis. Rourke et al. (1999), for instance, identified 12 indicators of social presence belonging to three categories (*affective, interactive and cohesive*), based on previous research and on an analysis of online communication transcripts.

In more recent times researchers and practitioners have begun to extensively study the role of emotions in online learning. These studies make use of a number of indicators: the effect of stress (Allan & Lawless, 2003), the emotions involved when starting an online course (Conrad, 2002), student distress in a web-based course (Hara & Kling, 2000), and feelings of alienation and low sense of community (Rovai & Wighting, 2005). O'Regan (2003) reports how some emotions (fear/anxiety, shame/embarrassment, enthusiasm/excitement and pride) seem to inhibit or enhance the teaching/learning process in an online environment. MacFadden et al. (2005) propose a constructivist model of web-based education emphasizing the use of emotion in e-learning, based on the belief that emotional emphasis may facilitate constructivist learning goals.

Figurative Language and the Construction of Experience

The literature on metaphorical and figurative language has a long, controversial and ongoing tradition. Aristotle himself points out at least two different features of metaphors: on one side he gives an explicit definition and explains how a metaphor functions (*Poetics*), on the other he underlines the cognitive function of metaphors in knowledge processes (*Rhetoric*). Since then, the linguistic structures and the related syntactic processes (Lausberg, 1998), the pragmatic value

(Grice, 1967; Searle, 1979; Weinrich, 1976), the psychological and cognitive role (Glucksberg & Keysar, 1990; Blasko, 1999; Gibbs & Steen, 1999), the philosophical evidence (Ricoeur, 1975), as well as the links between metaphors and argumentation (Perelman & Olbrechts-Tyteca, 1958), have become the basis of the study and interpretation of figurative language. In cognitive science, metaphoric language has a central role in everyday discourse and seems to shape the ways in which we think, creating a bridge from abstract domains to perceptual experience (Katz et al., 1998). As Lakoff and Johnson state (2003), “metaphors may create realities for us, especially social realities. A metaphor may thus be a guide for future action. Such actions will, of course, fit the metaphor. This will, in turn, reinforce the power of the metaphor to make experience coherent. In this sense metaphors can be self-fulfilling prophecies” (p. 156).

From this perspective, figurative language helps to understand a new domain of experience in terms of what is already familiar. According to Ricoeur (1975), it is the rhetorical process by which discourse unleashes the power that certain fictions have to redescribe reality or to build a new one.

At the same time, the use of figurative language has a central role in establishing a climate of closer intimacy between speakers. The power of imagery facilitates the sharing of personal experience and creates involvement, communicating meanings and emotions (Tannen, 1989, 1992).

The affective and emotional functions of metaphors have been closely investigated in a number of studies. Emotion concepts emerge as social-cognitive constructions based on metaphors (Kövecses, 2002). Ortony and Fainsilber (1989) underline concrete vividness as the main characteristic of metaphor and figurative language in the expression of emotions. According to them, an important function of metaphorical language is to express what is difficult

to express with literal language alone. Their results also indicate that intense emotions lead to a greater use of metaphor than mild emotions in the description of feelings but not in the description of actions associated with emotions.

Other authors (Gibbs et al., 2002) state that figurative language is special because it concerns emotional communication, which accurately reflects something about people's ordinary conceptualizations of their complex emotional experience. In addition, it is a special communicative tool because it can create and increase the sense of closeness and intimacy between speaker and listener, allowing people to speak about their own emotions without being touched directly in a more intimate manner. For this reason it seems that people would be more likely to use metaphors and metaphorical comparisons to describe their subjective experience of emotion than to describe the actions they took in response to the emotional experience (Fussell & Moss, 1998).

Method

Context and Participants

The context of this research was a ten-week course delivered at a distance via a computer conferencing system, held by the Institute for Educational Technology of the Italian National Research Council (ITD-CNR) during the 2002-2003 academic year, on the topic of educational technology (Delfino & Persico, in press). The course was offered to fifty-seven student teachers of the local Post-graduate School for Secondary School teachers (SSIS) and was managed by seven tutors. Ten teacher training supervisors (TTS) also took part in the course.

Instructional activities were carried out in small groups and organised in a number of phases. This included reflection upon the main learning theories; analysis and comparison between educational software and discussion on its integration in the school setting; and development of a project for the implementation of educational technology in a specific educational context. One of the course aims was to encourage collaborative learning processes and the development of a community of learners (Scardamalia & Bereiter, 1994; Dillenbourg, 1999; Conrad, 2005). The use of some familiarization facilities (a Café area) and a metacognitive reflection area was especially promoted for socialization and reflection purposes.

The course was delivered entirely online through a CMC platform (Centrinity FirstClass[®]), with the exception of three face-to-face meetings (at the beginning, in the middle, and at the end of the course), aimed at identifying and discussing problems, as well as reviewing the ongoing activities.

Fifty-five students out of the 57 enrolled in the course posted messages in the course, as did six of the 7 tutors and five of 10 TTS. Students were organised into different streams according to their graduate degrees and the subjects they intended to teach: arts and foreign languages (N=25), scientific (N=24) and special education (N=6). Their mean age was 32.43 (SD=6.01) and 48 of them were female. For 92.31% of the participants this course was their first online education experience.

Purpose

The purpose of our overall research was to provide answers to the following questions: 1) did figurative language occur accidentally across the course or did it especially emerge in conjunction with some course events?; 2) did the adoption of figurative language encourage

further use by peers and tutors?; 3) are instances of figurative language classifiable according to some set of recurring types of conceptual categories?

An inductive and iterative content-based analysis was conducted on a longitudinal basis in the discussion areas devoted to socialization and metacognitive reflection purposes because they are mainly related to the expression of self-disclosure and of the social dimension of learners.

The results of this qualitative analysis were firstly subjected to quantitative and statistical analysis to verify the hypotheses in research questions 1 and 2; then, they were subjected to further qualitative treatment in relation to question 3.

Procedure

The uses of figurative language had to be *original* and *living* (Ricoeur, 1975), in the sense that it had some power to strike the reader as novel, strange, unpredictable and related to the creation of new meanings and aspects of reality. As a consequence, all the expressions that had lost their metaphorical import through frequent use, and could no longer invite creative interpretation, were not taken into account.

Following the computer-mediated discourse analysis approach (Herring, 2004) that proposes classification of text features into categories and indicators (Rourke et al., 1999; Job-Sluder & Barab, 2004), the unit of analysis chosen in this study was the single posting, since it was recognized as the smallest meaningful, independent and exhaustive datum for analysis (Henri, 1992; Chi, 1997). Given that a single posting could host more than a single figurative language instance (*occurrence*), segments of postings were also considered.

At this stage, two coders worked independently of each other and applied the same coding procedure to the same set of units of analysis. The coders had to indicate (1) if the posting

contained original uses of figurative language and if so (2) how many occurrences were present. Acceptable levels of inter-rater reliability were achieved (Capozzoli et al., 1999; Krippendorff, 2004). Percent agreement was 0.97, Krippendorff's alpha and Cohen's kappa were both 0.84.

Next all the occurrences were classified according to two emerging and alternative categories, *Feelings* and *Context*, which were further analyzed according to the categories of *Disguise/Orientation* and *Embodiment/Animation*.

At this stage the process of codification was repeated on the new corpus of figurative occurrences. Reliable outcomes were again obtained (percent agreement was 0.90, Krippendorff's alpha and Cohen's kappa were both 0.89) and disagreements were resolved through discussion.

The set of categories emerged

The qualitative analysis process resulted in a classification scheme with the following main categories: *Feelings* and *Context*.

The former is related to the expression of participants' emotions, moods, and affectivity. As a matter of fact, participants frequently used figurative language to express how they felt in specific moments of the learning experience, both in terms of self-representation and attribution of affective properties to the others.

From further inductive and iterative analysis, different kinds of iconic images to represent this affective and perceptive domain emerged. Participants provided themselves and others with a corporeal identity, using images of animals, objects or human qualities (*Disguise*) and with the sense of movement in the immateriality of CMC environments (*Orientation*). Depending on the learning speed and the rhythm they experienced, they talked about their travel in the new world

of the course through representations of navigators and explorers, means of transport, animals, etc. Sometimes the topic of their discourse was the journey itself and the various kinds of actions associated to find one's way around the virtual space.

The category of *Context* is referred to the several iconic representations used to depict the components of the course context in which participants were immersed. In this case figurative language was used to give a soul to inanimate objects (*Animation*), such as the computer; or to give a body to immaterial entities (*Embodiment*), such as the CMC environment or the course topics. The CMC environment was represented through images of expanding cities in which it was easy to get lost or through which people really appear as they are; the computer as a playful and teasing contraption endowed with life; or the communication environment as a dancehall after the party.

Outcomes

The total number of postings analysed was 843: 651 were posted by students ($M=11.84$, $SD=13.17$), 177 by the tutors ($M=29.50$, $SD=30.36$) and 15 by the TTS ($M=3.00$, $SD=3.08$). 86 out of 843 postings (10.20%) contained original uses of figurative language and they were produced by about half of the participants: 28 students produced 69 postings with original figurative language ($M=2.46$, $SD=2.78$) whereas 3 tutors wrote 17 postings ($M=5.67$, $SD=5.03$).

The number of figurative language occurrences was 103, each posting contained not more than three occurrences. The average was of 1.19 per posting ($SD=0.47$).

The number of *Feelings* and *Context* units of meaning coded were respectively N=57 and N=46. Table 1 shows the distribution of occurrences relative to *Feelings* and *Context*, together with a specification of the different types of figures.

[Insert Table 1 here]

Figurative language distribution across time and across threads

In order to examine the temporal distribution of written material containing figurative language, postings were analysed and then compared according to the property “containing or not containing figurative language”.

Data revealed a constant trend of postings without figurative language with the occurrence of figurative language postings marked by the presence of three positive peaks. The positive peaks correspond to weeks 2, 6 and 10, and the negative one to week 5 (Fig. 1).

Statistical analysis showed a variation in the use of figurative language in the presence of crucial events (for details, see Delfino & Manca, in press).

[Insert Figure 1 here]

The first positive peak is in coincidence with the period soon after the first face-to-face meeting, during which students were encouraged to express and manifest their feelings about the novelty of the learning experience. The negative peak is related to a particular and very delicate moment, when there was an atmosphere of unease and uncertainty due to some rather unclear tasks assigned by tutors, and participants felt tired because of the heavy workload. This negative

atmosphere did not emerge from written discussion: the group seemed to have chosen to be silent to show disappointment (see Conrad, 2002). The need to emphasize this kind of negative emotive involvement with silence seems in line with results of other studies that underline the presence of a transition period at the midpoint of the collaborative activity, showing a decline of task-oriented communications, motivation and positive mood (Michinov & Michinov, 2007).

It was only in the second face-to-face meeting where students were able to express their negative feelings and therefore able to resolve most of their problems. The second positive peak is associated with the follow-up to this meeting, when the criticism expressed by students continued online during week 6. Finally, the third positive peak is located just before the final meeting, when students were again encouraged to share their feelings and impressions about the whole course experience.

In order to find meaningful relationships between expression of emotions and self-reflection and their position in the threaded discourse, patterns of distribution of figurative language across postings and their organization in threads were analyzed. Regarding position, postings were classified according to three typologies: first posting of the thread (i.e., the beginning of a thread or chain of postings); reply (if posted as a reply within a thread), and unthreaded posting (if it was not contained within a thread). The two distributions were not significantly different, both containing proportionally the same structure of posting typologies. Table 2 shows the distribution of patterns of postings with and without figurative language, per posting typology.

[Insert Table 2 here]

In analyzing the structure of the threads to identify different types of structure and their nature in terms of replies (i.e. containing figurative language or not), it emerged that the average length of threads (i.e. the number of replies) whose first posting contained figurative language wasn't significantly different from the length of threads whose first posting was without figurative language. The ratio between the overall number of postings and the number of figurative language postings wasn't significantly different either.

In brief, our statistical analysis demonstrates that figurative language postings were equally distributed in the two kinds of threads and that there was no real evidence that figurative language expressed in the first posting of the thread encouraged the production of further figurative language (for details, see Delfino & Manca, in press).

Descriptive analysis

Statistical data seem to uphold our hypothesis that figurative language was a very important linguistic resource used to express participants' feelings, both in positive (e.g., appreciation, sense of relief, enthusiasm, etc.) and negative terms (e.g., frustration, anger, discouragement, etc.), and their conceptualization of the learning context in coincidence with social crucial events.

The variety of concepts and images expressed by the students in order to describe themselves and their learning experience has been ascribed to the categories of *Feelings* and *Context*. In the following, illustrations of figurative language occurrences are provided in accordance with these two categories. Excerpts from the postings exchanged during the weeks that have been labelled as crucial (i.e., the second, the sixth and the tenth week of the course) are reported chronologically. Students' names have been altered to preserve their anonymity.

Categories of Feelings: Disguise/Orientation

At the beginning of the course participants were encouraged by the tutors' to express their impressions around their learning experience. An enthusiastic participant offers an intimate image, and shares with other participants a look at the evening calm of her family:

I really like these online courses. The day is ending (I feel just Marzullo [he is a popular Italian late-night TV presenter; author's note]) and as the silence of the night returns, while kids are sleeping and husbands are reading, the miracle occurs: the *sissino* [it is slang word for the "SSIS student"] gathers her thoughts and discovers that she is still capable of reflecting! She doesn't keep it to herself but emails it to her meta-reflection group like a modern homing pigeon!!! (Chiara - student, Week 2)

During the second week of the course participants made special use of the semantic field of navigation to express feelings related to the new learning environment. In this way a little boat became a vehicle to represent an itinerary and to explain feelings towards the learning experience, revealing some anxiety about the road ahead as there have already been some hitches:

Up to now my little boat has got by without too many hitches... (Evelina - student, Week 2)

The sea, a metaphor that was frequently used to depict the CMC environment, is seen in very different ways by the participants-sailors. Figurative language facilitates the act of confiding a negative experience:

Yesterday I'd have been happy to jump into a virtual lifeboat; I felt a bit like a castaway.
(Corrado - student, Week 2)

In the middle of the course – around the sixth week - images of small boats, castaways and sailing ships are replaced by those of rhythm and speed. One participant explains her feeling of slowness in this way:

I'm going slowly, uphill, but like an old FIAT 500 [It is a very small Italian car famous for toughness and reliability]. I'm determined, I go one step at a time, always trying to learn something new and astonishing. I've managed to overcome part of my hostility towards technology... (Irene - student, Week 6)

Triggered by the posting and in order to reduce the anxiety metaphorically revealed by the student, the tutor's response picks up the image, cautions against the weaknesses of the small car and encourages the student to go forward, promising a beautiful view at the end of the climb:

I think it's important to understand people's feelings about discovering in order to organize learning time and make sure that the little 500s (or those who think they're one) get to the top and enjoy the view! (Matilde - tutor, Week 6)

The course experience was not always an easy one. One of the most widespread difficulties was the need to manage the large amount of postings sent by participants every day. With the irony and levity that usually characterizes the end of a demanding experience, in the last week one student writes:

Have you become online course addicts too? I've got to the point where I need my daily dose of "red flags" [the unread postings in FirstClass], or almost... (Camilla - student, Week 10)

The results of the engagement required that students had some positive effects: one of them expressed her way of seeing the communication areas full of postings as an expanding city:

In these weeks, it is as if we had been populating an empty and deserted city, which now is throbbing with life and traffic! (Simona - student, Week 10)

The profound emotional and social involvement is well summed up by one message sent privately to one of the tutors when the course was over. Just after a visit to the course environment, one student explains through figurative language an experience of great intensity:

I felt like I was in a dance hall, or a club after the party was over: cans everywhere, empty bottles everywhere, scraps, shreds, writings..... some items of clothing as well, showing us how life in there had been lived in every way, to the very end... (Antonio - student, private communication, when the course was over)

Categories of Context: Embodiment/Animation

In the CMC environment the computer is the medium through which communication among people occurs. However transparent it may be, some students were aware of its presence and understood its importance in order to guarantee their participation to the course. They were concerned to be let down from the chance to work with others and to communicate.

In the first weeks of the course one student advises another to ignore the computer presence as a propitiatory gesture:

You are CRAZY! Don't you know that these contraptions have eyes, ears and a tongue? Don't you know that they love playing tricks and being the centre of attention? Of course I'm joking (I've been contaminated by the PC!). (Letizia - student, Week 2)

This invitation is caught by another learner, who declares that the difficulties with computers begin one year after their purchase:

I know perfectly well that these contraptions have a soul, a depraved soul. Their dark side is revealed when they become one year old. A blessing is needed! (Elisabetta - student, Week 2)

Tutor reply follows up the thread. She admits her failure to influence computers' souls, but tries to play the situation down, recurring to irony, fatalism, and a bit of non-sense:

Sorry: I'm not able to give blessings. The only thing I can do is trying to read the coffee grounds, to see whether there is an accomplishing mouse winking at you! (Matilde - student, Week 2)

The course subject, as well as some postings about synchronous and asynchronous communication, is the object of a comparison and a single posting might be a symbol of hope. In this way a student expresses her sense of relief:

I'm very grateful to Giovanna for her last posting. In this world full of anxiety, a reassuring posting is like dew in the desert. Thank you. (Anna - student, Week 2)

In the middle of the course – around the sixth week – images of messages as “life bearers” refer to the entire course, looking back on how it has been lived and understood:

Maybe in the beginning we saw this course almost as an oasis where we could relax a while. Then we realised that it was a serious matter and should be treated as such. (Serena - student, Week 6)

The instructional method adopted required a great deal of participation and involvement, both in terms of collaborative activities and strict deadlines. Here is one of the final evaluations made at the end of the course:

Are we in the army? of course not... but we've had a good dose of training too, haven't we? (Giorgia - student, Week 10)

One of the things people were most enthusiastic about turned out to be synchronous communication, be it scheduled or on the spur-of-the-moment. One student's final assessment was:

Well, in my opinion the chat has been a powerful way to manifest social presence, a sort of glue between people, as well as another window through which to look at each other and try to recognize each other. (Elisa - student, Week 10)

While investigating the phenomenon more closely, the many facets that make chat a high quality experience came to light:

The duels, the expulsions, the waiting: these make the chat real and alive too...The pace of events that can be quick or slow and drawn-out, the dialogues or the more or less in tune polyphonic choirs, the excess of monologues: what kind of emotions are passed, perceived, guessed at, shared or hidden? What kind of empathy are we able to create with the Other/others? (Bianca - tutor, Week 10)

Discussion and implications for practitioners

About half of all the learners in the course expressed themselves affectively and socially, and represented their perceptions of the learning context, through the use of figurative language. Most of them, in this being their first experience of online learning, had to face several new problems, including learning to communicate by written discourse in an asynchronous manner, familiarizing themselves with communication technologies, and collaborating within a group setting.

By acting as other people, or taking on the role of animals, fictional characters, vehicles and so on, the participants explained their inner emotions. For some of them it might have been difficult to explicitly acknowledge their anxiety about the course, but they reduced this problem by changing their perspective (for instance, writing that they were in need of a lifeboat, since

they felt quite shipwrecked). Such disclosure was possible with the reduced degree of epistemic commitment granted by figurative language.

Participants' dressing-up, verbally creating new forms of self-presentation, was also associated with the definition of places. The students that inhabit the virtual world implicitly create a place and refer to it as a more or less defined background. In other words, they activate scenarios and frames that enrich and complete the missing information (for example, the participant that describes himself as a sailor easily activates a marine environment, as the image of a car easily brings to mind a street).

According to Dixon and Durrheim (2000), "it is through language that places themselves are imaginatively constituted in ways that carry implications for 'who we are' (or 'who we can claim to be')" (p. 32). Students of our course demonstrated the validity of this statement: at the beginning of the course their figurative language occurrences, although original and living, were still tied down to stereotypes. During the intervening weeks, they moved from recurrent and topical images (e.g., the sea in the first weeks), to more personal and elaborate ones (e.g., hills, expanding city, dance hall, etc.), thus contributing to individually conceive and socially share their in-progress experience.

What is valuable in accommodating students' need for expressing affective domain is the role played by face-to-face meetings and by the tutors. The opportunity to meet face-to-face and the frequent private chat sessions in small groups helped to sustain the community, by helping participants to face problems and, together with their tutors, find possible solutions. This appeared particularly true in the middle of the course, when disagreements were solved through discussion: the second face-to-face meeting encouraged students to interrupt their silence and write again, thus increasing their sense of togetherness (Conrad, 2005).

Tutors' support and encouragement also took various forms of linguistic empathy. They spontaneously seized the moment and replied to students' postings, picking up the same images and relating to them by the acceptance of their emotional status expressed by means of figurative language.

Considerations related to these factors have profound implications for practitioners and researchers in the field. Our suggestion is that the use of figurative language (in the forms of metaphors, analogies, etc.) should be taken as a textual indicator of social presence in web-based learning environments together with other indicators already suggested by other authors (Rourke et al., 1999).

The use of figurative language could be adopted during the design and conduct of online learning courses, as a stimulus to manifest and share those personal emotions and feelings that are always deeply rooted in any new learning experience. The few examples provided by the literature (De Simone et al., 2001) seem to support the idea that the adoption of metaphors by tutors, for instance, can foster students' sense of belonging to a larger community and provide a framework for role assignment, identity, and responsibility. Along with other facilitation measures, tutors/instructors would be able to use a further feature of aiming at encouraging interaction based on figurative language. It would serve as a stimulus to facilitate the intertwining of the social dimension with learning processes.

Conclusions and future directions

The growth of distance education is rapidly changing how and when adults choose to engage in a learning experience. This shift of perspective is gradually changing our view of the social nature of learning processes too. The latter are deeply intertwined with the affective, emotional and

relational factors that usually emerge in a community of learners (Garrison et al., 1999; Swan & Shih, 2005; Conrad, 2005). In such contexts the process of learning is mostly interrelated with the process of sharing practices and knowledge with that of constructing a common and shared identity (Wenger, 1998).

Results of this study reveal that figurative language may be a creative way through which people construct and reconstruct what Novak (1991) named “the liquid architecture of cyberspace”, by giving it some substance and concreteness. Figurative language can allow participants to represent their affective domain - their emotions and feelings – and to conceptualize the main learning components on the web. Participants in this study used figurative language both to give themselves and other participants shape and body (Giese, 1998; Alzola Romero, 2003), disguising their corporeity and making it move in different settings, as well as to give body and soul to objects. In other words, use of figurative language was made with the effect of changing the shared ontological status of people and objects.

The analysis of metaphors and figurative language also has profound implications in understanding learning processes. Roschelle (1996) suggests that “traditional aspects of the analysis of individual conceptual change have been reinterpreted as simultaneously cognitive and social” (p. 243). From this perspective, convergent conceptual change is only possible starting from “figurative, ambiguous, and imprecise language” (p. 212). One of the future directions could be to investigate how fruitful contamination between the social and cognitive spheres may occur through the analysis of figurative language production. The conceptual and experiential transaction between the two domains could be facilitated by figurative language, which could assure new metaphorical mappings between different contexts of meaning. An interesting line of

research might be to find suitable ways to investigate how the process of giving mental processes some level of concreteness is facilitated by the use of figurative language .

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Categories	Types of figures	Iconic image	N	M and SD
Feelings	I feel like...	Disguise/Orientation (animal, object, human quality)	22	M=0.71 SD=0.97
	We feel like...		17	M=0.55 SD=1.26
	I see you as...		5	M=0.16 SD=0.58
	I see them as...		4	M=0.13 SD=0.43
	I move like...		9	M=0.29 SD=0.69
Context	The CMC environment is...	Embodiment/Animation (give body/soul)	9	M=0.29 SD=0.64
	Written communication is...		16	M=0.52 SD=1.03
	The course is...		9	M=0.29 SD=0.69
	The course subject is...		6	M=0.19 SD=0.48
	The computer is...		6	M=0.19 SD=0.48

Table 1. The set of categories identified to analyze figurative language occurrences and their occurrences.

Posting typology	Postings without FL	Postings with FL
	N	N
First posting of a thread (<i>n</i> =144)	124	20
Reply (<i>n</i> =557)	508	49
- Replies in threads whose first posting did not contain FL	433	38
- Replies in threads whose first posting contained FL	75	11
Unthreaded posting (<i>n</i> =142)	125	17

Table 2. Pattern distributions between postings with and without figurative language per posting typology.

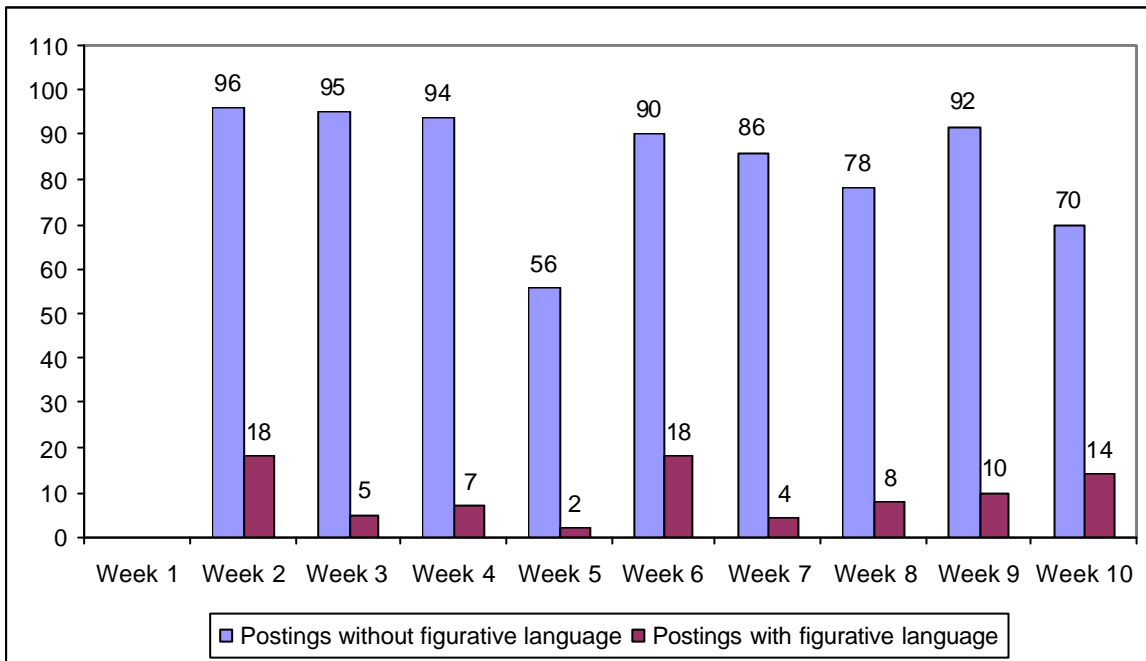


Figure 1. Time distribution of postings with and without figurative language across the ten weeks.