Fostering online socio-cognitive identity

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Abstract

In order to enrich the research regarding the dynamics related to the construction of online participant's identity in web learning contexts, this contribution begins with a theoretical overview on the importance of social relations for learning, and then discusses the possibility of planning and implementing specific strategies to foster online socio-cognitive identity. An examination of some messages posted by participants involved in an online learning process follows. Participants were invited to reflect on their own way of communicating, the emotions felt, the strategies used to complete the requested tasks and to become aware of difficulties met during the interaction process. At the end some brief final reflections where the importance of using meta-reflection strategies to foster online socio-cognitive identity are provided.

Keywords: group dynamics; social learning; socio-cognitive identity; social presence; meta-reflection

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Introduction

From the perspective emphasizing the importance of social interaction, it is interesting to note that in a relationship between different individuals new meanings may arise and re-define the identity of each actor. According to Bara (2007), this sharing represents the boundary of cognitive science for the next twenty years, because through sharing it is possible to link the concept of «I» with the «We». Neuroscience research, and in particular the studies about mirror-neurons (Rizzolati & Sinigaglia, 2006), supports this consideration. In fact, these neurons allow us to better understand the meaning of other people's behaviour, imitate them and recognize the reasons for those actions; they also let us understand and share different emotional states.

Another trend of interesting studies and research comes from the evolutionist/anthropologist group coordinated by Tomasello and colleagues (2005). According to them, «shared intentionality» is an important aspect of the sharing concept among human beings. They assert, «Only human beings are biologically adapted for participating in collaborative activities involving shared goals and socially coordinated action plan. [...] Interactions of this type require not only an understanding of the goals, but also, in addition, a motivation to share these things in interaction with others and perhaps special forms of dialogic cognitive representation for doing so» (p. 676).

Additionally, Bara (2005) suggests that communication is considered a joined activity among actors that, consciously and intentionally, cooperate to build together the meaning of their interaction; it includes both the specific contents of communication and the relation within which each interaction occurs.

Therefore, in order to have an effective communication it is necessary that the actors are able to build an interaction mainly based on sharing, intentionality (every participant must have an intention to do it) and awareness (it is not possible to perform an intentional communication without knowing it).

This contribution is based on these considerations and aims to integrate some important theoretical implications about «shared sociality» into online learning processes.

The social-cognitive aspects of an online environment

Based on the previous reflections, it became more and more necessary to re-define social learning environments so that they support the development of relation and communication networks among participants, and provide them with a new dimension of their Self as well as promote the development of collective identities.

According to Ligorio and colleagues (2008), «learning is an experience that promotes changes, that alters the way we see ourselves and our abilities [...] Learning is an identity-changing experience and training context cannot therefore merely aim to 'draw out' who we are, but rather must undertake to offer the possibility of 'building' the self» (p. 58).

In order to understand the interaction between cognitive and social aspects, Davis and Denning (2000) identify two categories, *group* and *learning dynamics*, which – if well harmonized – can make the relationship among actors of an online learning community more cooperative.

«Group dynamics» include socially oriented elements (e.g. the capability to successfully manage the conflicts), whereas the «learning dynamics» regard the mechanisms throughout learning might be promoted (e.g. building or scaffolding ideas, experimenting, meta-communication and reflection). By revising the grid developed by Davis and Denning (2000) it is possible to produce new hypotheses about how individual, collective and socio-cognitive identities put themselves in relation with the learning and group dynamics (see Table 1).

The first box comprises the so-called *task-oriented individual identity*: participants show individualist behaviour, indifferent to other people, and the group represents only a place for individual participation.

The second box contains *individual identity with no evolution*, both from a cognitive and socio-affective point of view.

In the third box, the so-called *collective identity* takes place: participants are happy to stay together but they do not want to become involved in order to achieve the common learning objectives; at the same time the group offers an important socio-emotional scaffolding.

The fourth box regards the *socio-cognitive identity*: participants not only are happy to stay together, but they have also developed the capability to socialize the process in which items of knowledge are built together in order to carry out a common artefact.

Table 1. Adapted from Davis and Denning's grid (2000)

	Low Group Dynamics High	
High Learning Dynamics Low	*1* A group where learning dynamics are high and group ones are low *Development of task-oriented individual identity*	*4* An inter-dependent group with good learning and group dynamics, participants are inclined to develop cooperative attitudes *Development of socio-cognitive identity*
	2 A group that doesn't work well, participants tend to be inactive and indifferent *Lack of every evolution and dialogue among parts of one's own identity and parts of identity of others*	*3* A group with positive group dynamics, but with low learning outcomes *Development of collective identity*

In the «sharing era» there is a need to develop online learning environments that can direct and balance the progressive development of individual and collective identity towards a socio-cognitive identity. To do so, a series of more socially oriented strategies have been developed, designed for considering better how each participant behaves with respect to learning and group dynamics (Benigno & Chifari, 2007).

    This contribution describes the study activities of an online course focused on the topic «Specific Learning Disabilities (SLD): An integration of cognitive treatment with the use of Information Communication Technologies». The course involved 15 female undergraduate students attending the Faculty of Psychology at Genoa University, during the 2007/08 academic year. The average age was 21 with the exception of two part time students aged 55 and 36. All the activities were delivered entirely online, except for the first and last meetings that took place in the classroom to allow tutors to start up and close the course activities.

In particular, the modules were as follows:

1)   the use of ICT to support the rehabilitation of children with learning disabilities;

2)   online software for children with learning disabilities: how to carry out an effective search and evaluation;

3)   the design of a rehabilitation and psychological path.

The learning-by-doing methodology was adopted with the aim of guiding students to acquire specific skills in the cognitive treatment of SLD; in addition, all the activities were based on the supported online training methodology so as to allow students to cooperate and to have proactive communication with the tutor (Mason, 2002).

In the next section some sample messages are analyzed. They were written by students in response to the stimuli they received in order to reflect on their own Self and on their way of interacting with the other remote students.

The role of meta-reflection

The collaborative building of an artefact needs to be supported by acknowledging oneself as a constructive and active part of the learning process. To be aware of his/her own cognitive and emotional processes is not simple at all. There may be difficulties in self-analysis or in ascribing to others intents and emotions different from one's own. This is particularly true in online contexts where every action or thought is mainly mediated by the use of written language. In such a context the role of constructive-oriented social feedback is even more important.

During their study activities, the students were invited to reflect on their specific ways of communicating, the emotions they felt, the way they tackled the requested tasks, their ability to interact and to become aware of the difficulties met by the other participants, so as to acquire more efficient self-regulation strategies. In order to achieve this aim, Bales' (1951) interaction diagram was used to allow participants to observe, analyze and classify individual, positive or negative, attitudes in a discussion group. In particular, the diagram was adapted to the specific research context, modifying items and the method of administration (Benigno & Chifari, 2007). Specifically, the modified diagram was used to support

students to become more aware of their own behaviour, both in terms of ways of communicating with the other remote students and of ability to express suitable emotions according to the situation (e.g., «During the activities I helped and supported the group with my ideas» or «During the activities I was self-centered», and so on). So, the checklist could be used in two ways: as a guide to perform or avoid behaviours to successfully manage the group interactions, and as a tool to self-monitor their own interactions both during and at the end of the learning activities.

From individual identity towards socio-cognitive identity

An online discussion forum was opened to stimulate students to reflect on their specific ways of communicating and participating in the activities. In particular, the students, both during the cooperative study activities and at the end of each module, could reflect on the way they behave in the group: the kind of emotions they felt, the kind of cooperation strategies they used, the difficulties they met, the strategies they chose to carry out the requested tasks and so on. The tutors discussed messages posted in the forum with the students, thus stimulating the participants to acquire ever-greater cognitive and emotional awareness.

Some examples of messages are given to stress the importance of reflecting on how to interact with the learning community during learning activities.

Extract 1
From Martina
Analyzing my behaviour and my attitudes in our first module, I have realized that the task-oriented actions have prevailed. In comparison, I have maybe devoted too little of care to urging cooperative interaction among us...

From Ilaria
I completely agree with you, Martina, I also have been found more task-oriented, and I still have some difficulties working in a cooperative way with the group, but I think it is also due to the fact that it is practically impossible to meet each other on the web...

Both the posts clearly show that at the beginning the students' positions were mainly self-oriented, although this first activity was already of a co-

operative nature. In this first phase, preceded by an intense ice-breaking activity, the presence of the other – seen as an interlocutor with whom it is possible to build something together – is not yet clearly perceived.

This may be due to different factors, such as the physical distance, the still in progress of the feeling of trust, considered as an assumption that makes easier for everyone to express themselves, and, last but not least, the difficulty to decentralize from its points of view.

In the next section, it is possible to appreciate the slow change from an individual position towards a more socio-cognitive one.

Extract 2
From Martina
I want to make my considerations and my comparisons with the activity of the first module… inspired by Bales's diagram, it seems to me I have better split my attention between the task and the relations with the others; this has made my work not only more pleasant but also more constructive than in the first module… I have enjoyed very much to cooperate, this time with more intensity…

From Ilaria
I agree with Martina about the positive evolution of our group's good understanding. For some days I could not follow the online module activity, … Notwithstanding, it was not difficult for me to edit the module, I think also thanks to the good understanding and to the agreement born along the way. I feel an atmosphere of complementarity among us, and I think it has positive repercussions on the behaviour of everyone (at least, surely on mine), improving interaction and cooperation…

The two previous posts show the growth of the feeling of belonging and the importance given to relations and sociality, considered as essential elements to generate meaningful socio-cognitive artefacts. It is likely that the stimulus to meta-reflect has helped students to shift their attention from their own Self to the others' Self.

Another two messages follow which show how the individual identity had acquired new meanings and, in particular, how the two cited participants acknowledge a new identity which they have helped to create, the socio-cognitive one.

Extract 3
From Martina
It seems to me that also this module is going on in a positive way, the work is co-

operative and the group atmosphere seems of full sharing… The task we are facing is surely more difficult than those of the previous modules, but despite this I think we have little by little learned to get better organized and to pay the same attention to the task and to the necessity to cooperate inside the group…

From Ilaria
…I have really felt the sense of the group unity. We are almost at the end and this experience has left many positive feelings for me … it has greatly increased my store of knowledge and I feel I have grown up in various aspects. I enjoyed the friendly atmosphere that has arisen since the first days when – a bit shy – we all were about to try this enterprise that has seen the agreement and the sense of the group growing day by day...

Conclusions

This contribution stresses the importance of social relations in fostering the socio-cognitive identity. Research from different fields asserts the importance of relationships, sharing and socialization because in a meaningful interaction each person can get to know herself/himself and others better. From these relationships new meanings may arise to re-define the individual identity by enriching it with social and cognitive aspects.

In an online context the relationships between students can be more complex because of the exclusive use of written language. So, it is useful to support the students with several social and cognitive strategies.

This contribution has examined a meta-reflection strategy, useful to students in acquiring self-awareness of their behaviour within the group and in understanding the meaning of other people's actions and emotions. This meta-reflection activity is «strategic» because knowing one's own mental states (desires, emotions, beliefs) and those of others, and being able to monitor these states are important aspects for improving cognitive performance and interacting appropriately and effectively with others. Besides, this strategy helped the group to improve the feeling of belonging and trust and facilitated communication for the development of the socio-cognitive identity. Finally, it is also important to reflect on the need to integrate metacognitive activities in the learning processes rather than consider them as an add-on procedure.

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