Appendix A. Social presence coding scheme

Category	Indicator	Examples
Affective	Expressions of emotions	"This is a little confusing at first…" *(JAL_T1_GC_2013)*
		"I feel very lucky, Kisses ;)" *(PC_T1_GB_2012)*
	Use of humor	"Put a picture in your profile for people to know how cute you are :D" *(IRP_T1_GH_2012)*
		"In the end we made more than a WebQuest lol" *(VDC_T3_GH_2013)*
		"…because my WebQuest is quite frankly ugly XD" *(MLA_T3_GE_2013)*
	Self-disclosure	"I have had personal problems" *(FMA_T1_GE_2012)*
		"I did not help enough in the previous activity" *(RDG_T2_GB_2012)*
	Apology	"I am sorry, I am late =S" *(SPA_T1_GA_2012)*
Interactive	Referring explicitly to others' messages	"As our colleague said …" *(PC_T3_GB_2012)*
	Asking questions	"How can we know who the members of our group are?" *(CME_T1_GC_2012)*
		"How do we organize for the activity?" *(FSY_T2_GB_2012)*
	Expressing appreciation	"Thank you very much for the link" *(JPT_T3_GA_2013)*
	Expressing agreement	"Your thoughts seem very good, I agree with you" *(MPF_T3_GG_2013)*
		"I totally agree with your choice" *(MAB_T2_GA_2013)*
	Expressing disagreement	"I understand your position, but I do not agree" *(PZV_T3_GC_2013)*
		"The truth is that I see it unnecessary" *(ARG_T3_GA_2013)*
	Inviting, suggesting	"What do you think if we send the activity tomorrow …"*(BLM_T2_GD_2012)*
Cohesive	(Vocatives) Addressing peers by name	"Thanks Ana for offering" *(FMA_T1_GF_2012)*
		"Thank you very much for your interest Manuel" *(MMM_T1_GE_2012)*
	Addressing the group as we, us, our, group	"We have done an excellent job" *(TCF_T3_GC_2012)*
		"this is a great group" *(LLC_T1_GC_2013)*
	Communicating solely for social function	"I'm glad you're feeling better" *(MVM_T3_GH_2013)*
		"cheer up!" *(MDE_T2_GG_2012)*

Appendix B. Cognitive presence coding scheme

Category	Indicator	Examples
Triggering	Recognizing the problem	"We must follow some certain guidelines to do the task" *(PRM_T3_GC_2013)* "Remember that there is only one week to deliver the second activity" *(MDE_T2_GG_2012)*
Exploration	Divergence of ideas	"We need to reach an agreement" *(IRP_T1_GH_2012)* "I totally disagree, nobody deserves that" *(MCO_T1_GD_2013)*
	Exchanging ideas	"Ask about their responsibility, as a result of the problems at school" *(LAT_T1_GE_2013)* "Peter is a child who has a great lack of interest in the study" *(SCP_T1_GE_2013)*
	Suggestions for consideration	"I'm sharing a very good link, when I saw this video I thought about the issue that concerns us right now" *(JMH_T1_GF_2013)* "I propose to write this set of problems" *(GDP_T1_GG_2012)*
Integration	Convergence among group members	"Just as my colleague, I totally agree that there are thousands of cases" *(MDE_T1_GG_2012)* "As you said, it is essential to make a Plan of Drug Prevention" *(SES_T2_GF_2013)*
	Connecting ideas, inference, synthesis	"The keys are education and prevention at an early age" *(AGR_T1_GA_2013)* "I joined all opinions" *(FMA_T1_GF_2012)* "In summary, we have the following tasks…"*(VDC_T3_GH_2013)*
	Creating solutions	"For example, a possible solution would be to propose extra-curricular activities" *(ZMJ_T1_GD_2012)* "I have corrected the error" *(ARG_T3_GA_2013)*
Resolution	Application to real world	"It is a good idea for people to become aware of what they really know or think they know" *(FSY_T2_GB_2012)* "The activity is completed and shared" *(CMQ_T3_GB_2013)*

Appendix C. Metrics for Social Network Analysis.

Factor	Measures
Degree centrality	The number of incoming and outgoing ties, and indicates how well an actor is connected within the overall network. Evaluated by: – Centrality (out) is the number of messages sent by the student. – Centrality (in) is the number of messages received by the student.
Network cohesion	The cohesion is measured by the density index (Berkowitz, 2013). Density = 2a / n (n-1), where a = the real number of interactions and n = the number of participants in the network. It is calculated by dividing the number of real relationships between the number of possible relationships and multiplying by 100.
Network centralization	Its measurement is comprised of an overall value between 0-100. A star network (approximately 100 value). On the other hand, a fully connected network (approximately 0 value) means there are no central actors, but all communication is distributed to all members of the group (all linked actors).Valued by: – Centralization (out). This measure is regard to emitted messages – Centralization (in). This measure is regard to received messages

Appendix D. Summary of the moderating influence of the type of task

Task	Social presence	Cognitive presence	Density	Centralization
Analyzing case study (ACS)	Group identity (cohesion) expressions were lower than in the CWQ task.	In the ACS task, the exploratory and group integration activity was lower than in the CWQ task. The group activity concentrated mainly on the brainstorming phase (exploration).	It was especially stimulating for an open exchange between the members of the group (interactivity). It also encouraged demonstrations of group belonging by its members (cohesion). The connections between the members of the group were important in the first phase –definition of the problem and organization of the task–.	Centralization (out) ha effect on all social pre Also, although to a les an inverse effect on th cognitive presence. Centralization (in)-for addressed to all, were of open communicatio
Creating a WebQuest (CWQ)	The expressions of group belonging (cohesion) were the highest. Likewise, the social activity of the group was higher than in the more specific and exploratory tasks.	In all phases, the cognitive activity of the group was greater than in the more closed and exploratory tasks. The exchange of ideas and suggestions (exploration) was the phase of greatest group activity.	The influence of density was as important as the activity of the coordinators in all categories of social presence (i.e., affective climate, open expression, and demonstrations of group membership). The influence of the connections within the groups was especially important in the exploration phase, i.e., exchange of suggestions on the production of the coordinators.	Centralization (out) ha the cognitive presence effect was positive in organization and defir On the other hand, it h effect on the explorati of ideas. The centralization (in) especially important a in which the ideas of t the group are presente