Table 1Coding scheme developed to code speech utterances into collaborative acts

Collaborative process	Definition of the collaborative process	Collaborative act	Definition of the collaborative act
Relationship management	Management of relational aspects of collaboration	Display solidarity	Compliment or encourage partner or group
		Display hostility	Depreciate or disregard partner or group
		Relax atmosphere	Improve atmosphere or alleviate tensions (humor, laughs, teasing)
		Use social convention	Greet, display courtesy, introduce each other
Interaction management	Management of group interaction	Check reception	Initiate or check contact with partner
		Check comprehension	Check comprehension of what partner previously said
		Display active listening	Communicate attentive listening of partner
		Display reflection	Communicate moment of reflection to partner
		Coordinate teamwork	Manage role distribution
		Accept coordination	Accept group coordination
		Refuse coordination	Object to group coordination
Information management	Management of group information	Give Task Information	Give information that can help to solve the problem or remind the rules or task constraints
		Give Explanation	Clarify/elaborate one's own thinking
		Elicit Task Information Give Self Information Elicit Partner Information	Ask information that can help to solve the task or reminding the rules or task constraints Give an information about one's own knowledge or thinking Ask information about partner's knowledge or thinking
		Give recall	Repeat former information
		Elicit recall	Ask again former information
Argumentation management	Management of group argumentation	Give proposition	Propose idea to resolve the task
		Give positive opinion	Support proposed idea
		Give negative opinion	Contradict proposed idea
		Elicit proposition	Elicit new idea from partner
		Elicit opinion	Elicit partner's opinion
		Agree	Agree with proposed idea
		Incorporate	Enriching proposed idea
Task management	Management of collaborative task	Manage task	Manage task progress, what has been done and what still to be done
Tool management	Management of collaborative tool	Manage tool	Manage collaborative tool usage
Other	Other	Other	Communication related to problem-solving task but not falling within any previous category
Outside activity	Outside activity	Outside activity	Communication unrelated with problem-solving task