Computer Supported Intercultural Collaborative Learning: A Study on Challenges as Perceived by Students

Vitaliy Popov, Omid Noroozi, Harm J.A. Biemans, and Martin Mulder

Chair Group of Education and Competence Studies, Wageningen University, The Netherlands
{vitaliy.popov,omid.noroozi,harm.biemans,martin.mulder}@wur.nl

Abstract. This study examines challenges that are inherent in computer supported intercultural collaborative learning (CSICL) in higher education. For this purpose, a 22-item survey was completed by students (N=98) who worked collaboratively in culturally diverse pairs on an online learning task focused on the field of life sciences. Students were required to rate on a Likert scale the importance of a certain challenge in CSICL. Descriptive statistics were used to determine what challenges are perceived to be the most important by students in CSICL. The results suggest that 'a collaborative partner is not communicating properly', 'a low level of motivation' and 'insufficient English language skills' were perceived by all study participants to be the most important challenges in CSICL.

Keywords: computer supported collaborative learning, cultural diversity, challenges.

1 Purpose

This paper presents the results of a study that was conducted in a Dutch university aiming at better understanding the cross-cultural cooperation while working in culturally heterogeneous groups in CSCL environments. This study has a dual purpose: (1) to identify challenges that are inherent to CSICL in higher education based on previous research studies, and (2) to examine the extent to which culturally diverse students perceive different challenges to be important in this setting.

2 Design/Methodology

All participants (N=98) were assigned to dyads based on their disciplinary backgrounds, such that every dyad had complimentary expertise (one learner with water management disciplinary background and one learner with international development background). It resulted in 10 culturally homogeneous and 39 heterogeneous dyads. These 10 culturally homogeneous dyads were omitted from the further analysis because they did not meet the requirements of this research study.

Participants were asked to collaborate, discuss, and argue with their assigned partner to develop possible solutions for the task (i.e. as task required students to develop a plan for fostering sustainable behavior among wheat farmers in a province of Iran and to ultimately reach an agreement about that solution). All interaction between the dyad partners was conducted online, using the chat window of the CSCL environment. A total of 26 countries were represented by our study's international participants. All students were interacting with the study personnel and with each other in English. After the experiment, participants filled in a questionnaire about the challenges in CSCL environment. The list of challenges included in the questionnaire used for this study was derived from earlier research on online collaborative learning.

3   Findings

The results of the descriptive analysis showed that almost all challenges were considered to be at least of some importance by all participants of this study (scores higher than 3 within 5-point Likert-type scale). Second, according to the students, 'a collaborative partner is not communicating properly' (M=4.17, SD=0.74), 'a low level of motivation' (M=4.13, SD=0.89) and 'insufficient English language skills' (M=4.07, SD=0.85) were the most challenging issues in CSCL for culturally diverse dyads.

Table 1. Means and Standard Deviations for the most important challenges (here presented only 10 challenges out of 22 due to space constraints)

Challenges	Mean	SD
a collaborative partner is not communicating properly	4.17	0.74
a low level of motivation	4.13	0.89
insufficient English language skills	4.07	0.85
free-riding	4.00	1.02
technical problems	3.91	0.91
attitudinal problems such as dislike, mistrust and lack of cohesion	3.89	0.90
insufficient social presence	3.74	1.01
conflicts in a collaborative pair	3.64	0.99
dominating collaborative partner	3.56	1.15
the pressure to defend group decisions whilst not agreeing with them	3.45	0.90

4   Research Limitations/Implications

Such challenges have to be considered by many different groups and collaboration forms (dyads was the only form tested in this study) in order to draw more general conclusions.