

Effects of Online Cooperative Learning on Motivation in Learning Korean as a Foreign Language

Hiroki Yoshida, Seiji Tani, Tomoko Uchida, Jitsuko Masui, and Akira Nakayama

Abstract—Previous studies highlight positive effects of cooperative learning on language learning motivation. Many attempts have been made to implement cooperative learning in language classes. Now with the use of computer-mediated communications tools, language learners can learn cooperatively online, out of class. Online cooperative learning provides language learners to communicate with native speakers of their target language, and leads to enhance their motivation in language learning. This study purposed to examine the effects of online cooperative learning on language learners' motivation in KFL. Results indicate that online cooperative learning promotes learners' intrinsic motivation in KFL.

Index Terms—Cooperative learning, intrinsic motivation, Korean as a foreign language, online learning.

I. INTRODUCTION

Cooperative learning has been implemented in many classes in order to enhance active interaction among the learners. Cooperative learning according to Johnson and Johnson [1] is defined as “the instructional use of small groups so that students work together to maximize their own and each other’s learning.” Effective cooperative learning requires 1) positive interdependence, 2) individual accountability, 3) promotive interaction, 4) social skills, and 5) group processing [2], [3]. When these elements are well structured into the learning process, cooperative learning leads to increase not only learners’ academic performance, but also their participation, responsibility [4], basic needs, and intrinsic motivation [5].

Using synchronous and asynchronous computer-mediated communication tools, cooperative learning is now possible online. Internet-based cooperative learning enables learners who are far away from each other collaborate/cooperate and achieve a common goal. Furthermore, Bliss and Lawrence [6], [7] have reported that computer-mediated cooperative learning resulted in significant increase of student participation, frequency of interaction, and the quality of students’ conversation. With the use of computer-mediated communication tools in cooperative learning, educators can provide their learners 1) task-based interaction [8], [9], 2) opportunities to acquire cooperative learning strategies and skills [10]-[12], and 3) authentic and meaningful learning environments [13], [14].

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Many studies have shown the impact of cooperative learning in language classes. Studies have shown the effects of cooperative learning on language learners’ academic achievements such as grammar achievement [15], reading [12], [16]-[18], and writing [19]. It has also been noted that cooperative learning positively affects language learners’ motivation [18], [20], [21].

Japanese students’ motivation in foreign/second language learning has been recognized as one of the key factors that determine learners’ behavior and achievement. Horino and Ichikawa [22] explored the relationship between language learning motives and strategies in high-school students and found that content-attached motives have a significant effect on cognitive strategies such as organization, elaboration, and rehearsal strategies. Kubo [23] advanced Horino and Ichikawa’s study and revealed that language learning motives affect learners’ behavior in EFL.

In the field of learning Korean as a foreign language (hereinafter referred to as KFL), however, the impact of computer-mediated cooperative learning on motivation has remained under-explored. Therefore, this study aims to identify the effects of online asynchronous cooperative learning on learners’ motivation in KFL.

II. PURPOSE

The purpose of this study is to identify the effects of online cooperative learning on Japanese university students’ motivation in KFL. The research question to be addressed in this paper is: What effects does online cooperative learning have on Japanese university students’ motivation in KFL?

All of the participants in this study had never learned Korean language before they entered college. Most of the students had interest in Korean language and culture, but they could take Korean classes only once a week and they didn’t have any native Korean teachers in their university. Furthermore, there are only about six thousand Korean people in Shizuoka, Japan in which the students live [24]. So the students did not have many opportunities to communicate with Koreans and/or to contact with Korean culture. Therefore, we aimed to provide the participants an opportunity to communicate with Korean people of their age.

III. METHODOLOGY

The study was conducted from October, 2012 to December, 2012, with the purpose of identifying the effects of online cooperative learning on KFL learners’ motivation.

A. Participants

The participants were 24 Japanese first-year university

students who participated in Korean language classes. The participants experienced project-based cooperative learning via the Internet with Korean university students who study in Jeju, Korea. During the Internet-based cooperative learning session, participants worked in a group of five students: two or three Japanese students and two or three Korean students.

B. Questionnaire

Participants completed a questionnaire that assesses their motivation in KFL. The questionnaire consists of 24 questions on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The questions were made by reference to language learning motivation scales developed by Lim [25], Chan [26], Nuibe [27], Narita [28], and Kobayashi [29]. The 24 questions were:

I am learning Korean because:

- 1) Korean language is popular in Japan.
- 2) I want to be superior in grades in Korean.
- 3) It will be useful for my future career.
- 4) Korean is one of the international auxiliary languages.
- 5) I want to work with Korean language in the future.
- 6) I want to be considered a cultured person.
- 7) I am interested in Korean language study itself.
- 8) I am interested in Korean films and television programs.
- 9) I want to enjoy Korean songs.
- 10) I am interested in Korean literature and history.
- 11) I enjoy studying Korean language.
- 12) I want to read and write Korean articles.
- 13) I want to speak in Korean.
- 14) I want to broaden my perspective.
- 15) I want to be friendly with Korean people.
- 16) I have a Korean friend.
- 17) I want to write letters and e-mails to Korean people.
- 18) I want to communicate with Korean people.
- 19) I am interested in Korean people's life style.
- 20) I want to travel in Korea.
- 21) Korean is an easy language to start.
- 22) I simply want to learn another language.
- 23) My parent(s)/teacher(s) urge me to learn Korean.
- 24) My friend(s) urge me to learn Korean.

C. Groupware

In this study, Yahoo! Groups was applied as the groupware for cooperative learning. Yahoo! Groups was determined to be used because Yahoo! is the most popular portal site in Japan [30], and Yahoo! Groups can be accessed and used not only from PCs but also from cell phones. Additionally, Yahoo! Groups has a briefcase function so the students could exchange and/or share digital files. However, Yahoo! Groups does not have an instant messaging service/function or a chatting service/function. So the participants in Japan and Korea communicated asynchronously using mailing lists and electronic bulletin boards.

D. Procedure

The participants first got lectured about the learning objectives and tasks of the Internet-based cooperative learning activity they were to experience with university students in Korea. Then, participants were demonstrated and taught how to operate the groupware Yahoo! Groups which they were to use during the cooperative learning session.

After the demonstration of the system, participants answered to a questionnaire on their motivation in KFL.

During the cooperative learning session, firstly, the Japanese students and Korean students discussed and decided what topic they want to talk about and study. Topics such as "Fashion trends in Japan and Korea," "College life in Japan and Korea," "Working part-time in Japan and in Korea," and "Japanese and Korean people's views of marriage" were adopted. Secondly, the participants explained the actual conditions in their countries. Then, the participants conducted a survey on each topic and exchanged their findings. Lastly, they exchanged impressions and ideas, drew conclusions about the topic, and wrote research reports. While the participants learned cooperatively, teachers facilitated creative conversation and provided students technical support. All of the participants' comments and teachers' comments were stored online.

After the cooperative learning session, the participants answered to a questionnaire on their motivation in KFL again.

IV. RESULTS

All of the participants completed a questionnaire survey that was conducted before and after the online learning session. This means that the response rate was 100.00 percent. Hereinafter, the results of the 24 answers will be introduced.

A. Participants' Profile

Table I shows the breakdown of participants by gender, and their experience of communicating with Koreans.

TABLE I: PROFILE OF PARTICIPANTS

Profile of participants		Frequency	%
Gender	Male	3	12.50%
	Female	21	87.50%
	Total	24	
Experience of communicating with Koreans	Yes	7	29.17%
	No	17	70.83%
	Total	24	
Possession of a personal computer	Yes	12	50.00%
	No	12	50.00%
	Total	24	
Frequency of computer use	Everyday	3	12.50%
	3-4 times a week	7	29.17%
	1-2 times a week	7	29.17%
	Seldom	7	29.17%
	Total	24	

Nearly 90 percent of the participants were women. The reason for the large proportion of the women is that all of the participants were language learners who major in foreign studies. More than 70 percent of the participants mentioned that they have never communicated with Korean people before. Personal computer ownership was 50.00 percent which is relatively low compared with the penetration rate of computers in Japan which is 77.3 percent as of March, 2012

[31]. Only 12.50 percent of the participants replied that they use computers every day, and 29.17 percent said that they seldom use computers.

TABLE II: PARTICIPANTS' MOTIVATION IN KFL

Items	Pre, mean (SD)	Post, Mean (SD)
1. Korean language is popular in Japan.	2.83 (0.55)	2.75 (0.53)
2. I want to be superior in grades in Korean.	3.00 (0.78)	3.00 (0.78)
3. It will be useful for my future career.	3.00 (0.51)	2.96 (0.62)
4. Korean is one of the international auxiliary languages.	2.54 (0.59)	2.46 (0.66)
5. I want to work with Korean language in the future.	2.33 (0.70)	2.42 (0.78)
6. I want to be considered a cultured person.	2.33 (0.56)	2.25 (0.74)
7. I am interested in Korean language study itself.	3.08 (1.14)	3.46 (0.59)
8. I am interested in Korean films and television programs.	2.83 (1.17)	3.38 (0.77)
9. I want to enjoy Korean songs.	2.88 (1.12)	3.33 (0.76)
10. I am interested in Korean literature and history.	2.38 (1.10)	2.71 (0.91)
11. I enjoy studying Korean language.	2.92 (1.21)	3.42 (0.65)
12. I want to read and write Korean articles.	3.33 (1.17)	3.46 (0.66)
13. I want to speak in Korean.	3.25 (1.19)	3.67 (0.48)
14. I want to broaden my perspective.	3.21 (1.18)	3.46 (0.72)
15. I want to be friendly with Korean people.	2.88 (1.08)	3.13 (0.80)
16. I have a Korean friend.	1.54 (0.88)	1.83 (0.96)
17. I want to write letters and e-mails to Korean people.	2.17 (0.96)	2.50 (0.93)
18. I want to communicate with Korean people.	2.67 (1.13)	3.42 (0.65)
19. I am interested in Korean people's life style.	2.63 (1.06)	3.25 (0.79)
20. I want to travel in Korea.	3.13 (1.26)	3.58 (0.72)
21. Korean is an easy language to start.	2.46 (0.82)	2.54 (0.78)
22. I simply want to learn another language.	2.88 (0.84)	2.67 (0.87)
23. My parent(s)/teacher(s) urge me to learn Korean.	1.83 (0.75)	1.63 (0.71)
24. My friend(s) urge me to learn Korean.	1.83 (0.62)	1.58 (0.72)

B. Participants' Motivation in KFL

Before and after learning cooperatively online, the participants were asked why they are learning Korean language.

Table II shows the participants' motivation in KFL. The mean was calculated by giving each of the Likert scale points

a number value, where *strongly disagree*=1, *disagree*=2, *agree*=3, and *strongly agree*=4.

C. Explanatory Factor Analysis

An exploratory factor analysis was conducted to determine the interrelationships among the questionnaire items. In order to determine the item for each KFL motivation subscale, items that did not load on any factors at >.35 were eliminated. As a result, item #6, #16, and #24 were deleted from further analysis. After varimax rotation, a four-factor solution was chosen, accounting for 70.08% (see Table III). The factors were interpreted: intrinsic motivation (items 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19, 20), instrumental motivation (items 4, 5, 17), induced motivation (items 21, 22, 23), and extrinsic motivation (items 1, 2, 3).

TABLE III: FACTORS LOADINGS FOR MOTIVATION IN KFL

No.	Factor 1	Factor 2	Factor 3	Factor 4
<i>Factor I Intrinsic Motivation</i>				
12.	0.89	0.32	-0.17	-0.03
7.	0.89	0.25	-0.08	0.10
14.	0.84	0.38	-0.10	0.08
15.	0.83	0.34	-0.02	0.15
13.	0.82	0.43	-0.21	-0.04
9.	0.81	0.13	0.19	0.20
19.	0.80	0.07	0.00	0.42
8.	0.80	0.01	0.10	0.07
11.	0.70	0.23	-0.48	0.21
20.	0.69	0.46	0.33	-0.02
18.	0.68	0.54	-0.03	0.29
10.	0.57	0.06	-0.54	-0.06
<i>Factor II Instrumental Motivation</i>				
4.	0.24	0.73	-0.29	0.10
17.	0.37	0.69	-0.08	0.12
5.	0.12	0.63	0.05	0.04
<i>Factor III Induced Motivation</i>				
21.	0.05	0.10	0.82	0.03
23.	-0.07	-0.32	0.70	-0.22
22.	0.29	-0.08	0.46	0.42
<i>Factor IV Extrinsic Motivation</i>				
2.	0.13	0.04	0.09	0.67
1.	0.22	0.14	-0.24	0.61
3.	-0.47	0.18	-0.07	0.52

D. Effects of Online Cooperative Learning on Motivation in KFL

Effects of online cooperative learning on motivation in KFL were examined by comparing the degree of the increase or decrease of the participants' motivation. For evaluation of the differences, Student's *t*-test was used. The degree of the increase/decrease of motivation was calculated by subtracting the pre-survey motivation scores from the post-survey scores.

Table IV to Table VII show the effects of online cooperative learning on the increase/decrease of participants' motivation in KFL. Results indicate that learners' intrinsic

motivation in KFL significantly increased by experiencing online cooperative learning ($t(23) = 1.98, p < .05$). However, there was not a significant increase/decrease of the participants' instrumental motivation ($t(23) = 1.07, .05n.s.$), induced motivation ($t(23) = 1.27, .05n.s.$), and extrinsic motivation ($t(23) = 0.50, .05n.s.$).

TABLE IV: EFFECTS OF ONLINE COOPERATIVE LEARNING ON INTRINSIC MOTIVATION IN KFL

	pre, mean (SD)	post, mean (SD)	df	t	P
Intrinsic Motivation	35.17 (12.38)	40.25 (5.86)	23	1.98	0.03

TABLE V: EFFECTS OF ONLINE COOPERATIVE LEARNING ON INSTRUMENTAL MOTIVATION IN KFL

	pre, mean (SD)	post, mean (SD)	df	t	P
Instrumental Motivation	7.04 (1.85)	7.38 (1.84)	23	1.07	0.15

TABLE VI: EFFECTS OF ONLINE COOPERATIVE LEARNING ON INDUCED MOTIVATION IN KFL

	pre, mean (SD)	post, mean (SD)	df	t	P
Induced Motivation	7.17 (1.83)	6.83 (1.74)	23	1.27	0.11

TABLE VII: EFFECTS OF ONLINE COOPERATIVE LEARNING ON EXTRINSIC MOTIVATION IN KFL

	pre, mean (SD)	post, mean (SD)	df	t	P
Extrinsic Motivation	8.83 (1.40)	8.71 (1.27)	23	0.50	0.31

V. DISCUSSIONS

The purpose of the study was to identify the effects of online cooperative learning on Japanese university students' motivation in KFL. In order to gather learners' motivation in KFL, questionnaire surveys were conducted.

Regarding the research question "What effects do online cooperative learning have on Japanese university students' motivation in KFL?" results of questionnaire surveys suggest that Japanese universities students' experience of cooperative learning with Korean university students increased their intrinsic motivation. The results of the study indicate that if Japanese students have an opportunity to learn cooperatively with Korean students and talk about their culture and life styles, they could increase their motivation about learning Korean language and Korean culture. That is to say that the authentic, meaningful, and task-based learning environment which online cooperative learning provides leads to the increase of students' intrinsic motivation in KFL.

VI. CONCLUSION

The results of the study suggest that Japanese university

students' intrinsic motivation in KFL increases by communicating cooperatively and working on authentic and/or meaningful tasks with Korean university students via the Internet. As previously mentioned, participants in this study were all first-year students and they were studying Korean in university classes only once a week. And for most of the students, this was their first chance to communicate with Korean people. With the results that such learners increased their intrinsic motivation, it is suggested that online cooperative learning out of the classroom can promote learners' interest and/or enjoyment in KFL. However, increasing students' motivation is not the goal of foreign language learning. The findings of this study must contribute to develop cooperative learning activities/tasks that enhance learners' motivation and leads to learners' positive behaviors and achievements in KFL. For example, Lim [25] suggests that introducing learners to their interest area promotes their motivation. It is expected that future studies investigate the interaction between cooperative learning activities and tasks with learning motivation in KFL.

Although the findings in this study provide pedagogical implications, they also have a few limitations. Since the participants of this study were Japanese university students who learn Korean language, and were mainly women who are not highly ICT literate, using another sample from elsewhere is required for future generalization.

Moreover, participants in this study used Yahoo! Groups as a groupware for internet-based cooperative learning, and communicated via mailing lists and electronic bulletin boards, which means that participants' communication was primarily text-based and was entirely asynchronous. Therefore, it is recommended that future studies examine the effects of computer mediated communication with voice and/or images, and apply synchronous communication tools such as video-conferencing and chatting.

Given the findings of this study, future study must focus on investigating facilitation techniques and methods to increase learners' motivation in KFL. Previous studies suggest the significance of the role of online facilitators in Internet-based cooperative learning [32]-[37]. Therefore, it is expected to specify the roles and responsibilities of online facilitators with the aim of helping learners who cooperatively learn online increase their motivation in KFL.

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