STUDENTS' EXPERIENCES AND PERCEPTIONS OF ONLINE COLLABORATIVE LEARNING IN HIGHER EDUCATION OF KOREA AND THE UAE

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ABSTRACT

The purpose of this study was to compare the experiences and perceptions of UAE and Korean students in campus-based universities of online collaborative learning (OCL). 262 college students participated in online surveys. Their experiences in terms of frequency, assessment, barriers, support, and attitude for OCL in each country were examined. With Importance-Performance Analysis, the perceived importance of OCL activities was compared with actual frequency. Both countries' students experienced group projects and group presentations the most frequently, while online collaborative writing and online group exams were rarely used. As barriers to OCL, UAE students pointed out language, gender, and privacy as the major barriers while Korean students mentioned students' attitude and language. UAE students had more frequent experiences of and more positive attitudes toward OCL than did Korean students, although the two countries have similar cultural propensities.

Keywords: Online collaborative learning, Korea, UAE, cross-cultural study, IPA.

INTRODUCTION

According to the OECD, group-based activities and interactions are increasingly regarded as important for the 21st century learner (Martin 2018). Many researchers have pointed out the importance of helping learners develop skills related to team-work, uncertainty, and collaborative knowledge construction all associated with collaborative learning (e.g. Muukkonen & Lakkala, 2009). Students' development of work-related competencies depends on the "learning environment and its educational methods (Lakkala, Toom, Ilomäki, & Muukkkonen, 2015, p.521)." A report by the World Bank (2008) suggested that higher education in the Middle East should put greater emphasis on constructivist methodologies, collaborative strategies, student-centered learning as well as the integration of technology. Similar concerns were shared for other developing countries (Adam, 2003), and even in the USA (Choi, Khamalah, Kim, & Burg, 2014).

The diffusion of Internet technologies has stimulated the rapid adoption of online collaborative learning (hereafter OCL). Their affordances enable promoting the pedagogical values of collaborative learning (e.g. higher-order thinking, information retention, cognitive reasoning, improved satisfaction, social skills) beyond the limitations of time and place (Oh & Yoon, 2014). Particularly for campus-based universities, OCL provides learners with the flexibility for extended learning and enables multi-level interactions, resource sharing, and higher-order thinking activities, alongside improving competencies to deal with real-world problems (Oliveira, Tinoca, & Pereira, 2011). This is It is also associated with developing skills such as

cross-cultural communication, developing multiple perspectives, and reflective thinking (Choi et al. 2014). OCL would be one of the most demanding but properly prepared online pedagogies in the recent pandemic situation that brings a forced shift to online learning.

Despite the many benefits and potential of OCL, the actual implementation does not always align with its theoretical promises (Osman, Duffy, Chang, & Lee, 2011), nor do students equally react to such activities (Fung, 2004; Hilliard, Kear, Donelan, & Heaney, 2020). Also, OCL presents the learner with many challenges (Havard, Du, & Xu, 2008) such as the absence of social context (Hishina, Okada, & Suzuki, 2005), possible lack of feedback from facilitators or peers, limited time to participate, slow Internet, and low participation (Chang & Kang, 2016) to name a few.

With advances in technology and the use of social media, and its rapid and massive uptake by young people everywhere, the geographical distances are bridged virtually. Also, internationalization efforts, manifested in student exchange and faculty mobility as well as MOOC offerings, are also increasing cross-cultural communication. As the OCL environment becomes multicultural or transnational, there is a strong need for research on what students from different cultures experience with OCL and how they perceive it. Culturally relevant pedagogy and teaching should be implemented fairly even for the underserved culture (Adams, Rodriquez, & Zimmer, 2019). However, cultural differences have been often tackled superficially in the literature and have lacked empirical supports (Al-Harthi, 2010). Some cultures are also under-represented, and often misunderstood. Examples of these would be Middle Eastern and Asian countries, other than China. Not only are these cultures often stereotyped, but they are also often depicted as a homogeneous entity. It is tenacious to assert that China and Korea in Far East Asia hold similar cultural values. Although the two countries have similar collectivistic propensity, China has very different cultural values than Korea in 'uncertainty avoidance' (Culture Compass™, 2019). Therefore, generic statements about 'Asian learners' or 'Middle Eastern learners' should be treated with caution (Sawir, 2005). As Sawir (2005) suggested, inquiry into students' prior learning experiences and their beliefs about learning should be undertaken, in order to gain a more complete understanding of the students.

Previous studies noted that few empirical studies have examined several aspects of online collaboration from a cross-cultural perspective (Zhu, 2012). There is also a need for research examining cultural influence on OCL in broader contexts other than China and USA (Uzuner, 2009; Zhu, 2012). South Korea is the third-ranked place of origin of international students, and students from the Middle East constitute almost 10% of all international students in the US (IIE, 2018). These under-represented student groups are major international student populations in western universities. It is crucial to understand how these student groups experience online collaborative learning where these groups are major places of origin of international students. Also, Korea and the UAE need to establish a clear mutual understanding in terms of their online learning experiences for their future partnership in the tertiary education field (Human Resources Development Service of Korea, 2019).

To address these needs mentioned above, the following questions were put forth: (1) How do students in Korea and the UAE experience online collaborative learning activities in higher education? (2) How do students in the two countries perceive online collaborative learning? (3) Are there differences between the reported use and perceived importance of online collaborative learning activities in Korea and the UAE?

LITERATURE REVIEW

Culture and Prior Learning Experience in OCL

OCL has become accepted as a pedagogically effective strategy for tertiary education (Oye et al., 2014; Hilliard et al., 2020). Previous studies confirmed its several benefits that could often render it superior to face-to-face collaboration; student engagement is more intense and equally distributed among learners (Angeli, Valanides, & Bonk, 2003), and online collaboration in the form of asynchronous discussions enhances student learning achievement (Young, 2000) by adding flexibility of place and time. It is suggested that online can be a medium for "true collaborative work" since there is little social pressure and greater freedom for learners to express their ideas through more reflective and effective communication (Henri & Rigault, 1996).

Student's and teacher's attitude towards online learning influence its adoption and use, and culture impacts those perceptions (Jung, 2014). Culture may play an important role in the online learning environment (Uzuner, 2009). Previous studies indicate that students from diverse cultures vary in how they behave online (Kim & Bonk, 2002) and in their satisfaction with online learning activities (Gunawardena, 1998; Hannon & D'Netto, 2007). For example, Ramiah (2014) reported that American students prefer e-learning while Asians are not likely to actively participate in online discussion and assessment. By comparing factors affecting the adoption of e-learning systems between USA and Qatar, El-Masri and Tarhini (2017) asserted that the attitude in developing countries differs from in developed ones. Other than the degree of a country's development, several researches have used some indices drawn from Hofstede's cultural dimensions as a framework to understand students' culture. Wang (2007) and Selinger (2004) used 'power distance' to examine its influence on student learning. Some studies suggested that individualism fits more with online communication than collectivism. Collectivistic learners are more group-oriented (Chang & Lim, 2002) and consider relationships to be more important than the task (Trumbull, Rothstein-Fisch, & Greenfield, 2000). In terms of online communication, they try to understand meaning through nonverbal language, while individualistic learners will rely mostly on the words exchanged (Hall, 1976). In individualistic societies, collaboration is a process of the search for solutions. In collectivist societies, on the other hand, an individual may fail to differentiate between her work and the result of group activities. The process of grouping and re-grouping would be more difficult in collectivist than in individualistic cultures (Economides, 2008). However, these assertions from previous studies may not be plausible without understanding students' prior learning experiences, one of the critical sources to represent the current attitude toward learning (Sawir, 2005). In sum, it is critical to understand student group's learning experiences embedded in a certain cultural context. A recent study reported that the dropout rates of the learners from low context culture are greater than in high context culture (Bozkurt & Akbulut, 2019). In sum, culture of learners is a critical component to expect or predict online learning outcomes and engagement.

Experiences around Communication, Barriers, Support, and Assessment in OCL

Students' beliefs about learning are rooted in their prior learning experiences (Sawir, 2005). Some of the most memorable and influential experiences are those related to assessment since what is assessed is what is valued in a learning context (Swan, Shen, & Hiltz, 2006). Assessment has been regarded as the engine driving and shaping student online collaborative activity (Swan, Shen, & Hiltz, 2006) and a way of ensuring participation in online collaboration (Brindley, Walti, & Blaschke, 2009). It will impact the development of online collaborative skills indirectly. Some issues around the assessment of collaboration lie in the complexity of assessing both individual and group collaboration. To encourage collaboration, both individual and group effort must be appropriately assessed since it can maintain individual accountability and also positive interdependence (Johnson & Johnson, 1986). Unfortunately, the examples that implement both individual and group assessment in online collaborative learning are not frequently observed (Swan, Shen, & Hiltz, 2006). Alignment between task and assessment is critical also for online courses (Adams, Rodriquez, & Zimmer, 2019). Compared to face-to-face instructional design, online learning design is relatively lacking alignment between assessment and learning objectives since online learning puts more focus on values of access and content management rather than on pedagogy (Hannon & D'Netto, 2007).

In OCL, students are expected to work in a team effectively, which requires, for example, team work, negotiation, group decision making, project management skills, and handling some technical issues. The whole process of OCL requires practice and time to develop. To nurture these skills, instructional supports are critical. Thorpe (2002) strongly suggested re-conceptualization of the term 'learner support' in online learning since all online learners should be supported, as there are exceptional needs compared to offline. Support from instructors or institutions can help create a more safe and effective learning environment for all learners by reducing hassles, anxiety, and inconvenience (Moore & Kearsley, 2011).

One of the challenges online is the absence of contextual cues found in face-to-face communication (Chang & Lim 2002). Hannon and D'Netto (2007) found that local students whose first language was English had significantly more positive perceptions of online courses and higher mean scores when compared with international students whose first language was not English. Moreover, for students to communicate

clearly online, they must be familiar with the language of a discipline (Macdonald, 2003) in addition to the language of instruction. Although Palloff and Pratt (1999) argue that online environment neutralizes learners' cultural, ethnic, or social conditions, there is an opposite position asserting that online environment plays a role as an escalator to enlarge those cultural differences such as languages (Hannon & D'Netto, 2007). Bates (2015) underscores that importance of realizing that learners collaborating online might be struggling with the language. As globalization in education has expanded, the number of students studying in English has grown. Language difficulties involve different concerns over colloquial language, writing difficulties, and problems of interpretation (Sawir, 2005).

Taken together, these results indicate that students engaged in collaborative learning may have completely different expectations in diverse cultures and also due to different prior OCL experiences. It is critical for instructors to consider the differences of students toward OCL, which enables to design an optimized learning environment and to plan adequate supports.

METHODS

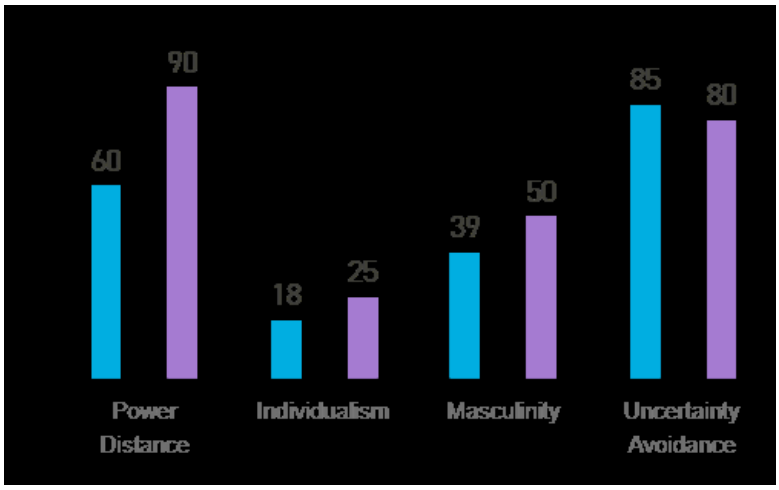
Participants and Context

262 college students participated in the study between November 2015 to January 2016, including 210 from Korea and 52 from the UAE. To recruit participants, the authors contacted 10 instructors working in 10 different colleges in Korea and 9 instructors in 5 colleges in the UAE. The instructors were asked to encourage their students to participate in the online survey. After screening the data, three unsuitable cases were deleted. Participating students in Korea were all Koreans, whilst in the UAE, 62% were Emiratis (UAE nationals); the rest were from Egypt, Sudan, Canada, Palestine, and 8 other countries. The diversity of nationality in the UAE and the homogeneity in Korean participants reflected the current student composition in higher education of each country. All universities targeted for this study were campus-based.

Table 1. Information of participants (n=259)

	Korea (n=208)	**UAE (n=51)**
Nationality	Koreans (n=208, 100%)	UAE (n=31, 60%)
		Egypt (n=3, 6%)
		Canada (n=2, 4%)
		Pakistan (n=2, 4%)
		Palestine (n=2, 4%)
		Sudan (n=2, 4%)
		USA (n=2, 4%)
		Ghana (n=1, 2%)
		India (n=1, 2%)
		Indonesia (n=1, 2%)
		Jordan (n=1, 2%)
		Syria (n=1, 2%)
		Uzbek (n=1, 2%)
		Yemen (n=1, 2%)
Gender	Male (n=63, 30.3%)	Male (n=16, 31.4%)
	Female (n=145, 69.70%)	Female (n=35, 68.6%)
Age	Mean 22.3 (SD= 5.54)	Mean 24.6 (SD=5.59)
Major	Education (n=132, 63.5%)	Design (n=18, 35.3%)
	Engineering (n=48, 23.1%)	Int'l Relations (n=15, 29.4%)
	Computer Science (n=8, 3.8%)	Education (n=5, 9.8%)
	Design (n=5, 2.4%)	Business Management (n=4, 7.8%)
	Library Science (n=4, 1.9%)	Computer Science (n=3, 5.9%)
	Others (n=11, 5.3%)	Others (n=6, 11.8%)

Korea is an East Asian country, speaking Korean, mostly with a racially homogeneous student population in higher education. The UAE is an Arab country located in the Arabian Peninsula. About 10% of the population is Emiratis, whereas most of the rest are multi-cultural expatriate workers and their families. Although Arabic is the official language of the country, English is more widely spoken. UAE students are exposed to other cultures and educational contexts, especially with a majority of expatriate faculty (Madsen & Cook, 2010). According to Hofstede (1986) and Hofstede Insights (2018), Korea and the UAE have a similar cultural propensity toward his four dimensions (collectivism-individualism, femininity-masculinity, power distance, and uncertainty avoidance). However, there is a slight difference in that Korea is characterized by having smaller power distance, more collectivism, more femininity, and slightly stronger uncertainty avoidance than the UAE (see Figure 1).



Note: Left bar (blue) is Korea and right bar (purple) is the UAE.

Figure 1. Cultural Beliefs of Korea and the UAE

Source: https://www.hofstede-insights.com/country-comparison

Instrument

The survey questionnaire consisted of 48 items in three sections. As it was hard to find the appropriate existing survey questionnaire that fit our purpose, the questionnaire was developed by referencing several existing surveys, which were designed to ask about perceptions of instructional innovations (Zhu & Engels, 2014) and online learning issues (Magjuka, Shi, & Bonk, 2005). The list of specific OCL activities were established from the one on one interviews with 9 instructors from the UAE and 10 from Korea, which was one of the data collection methods for another research by the authors (in review). The first section had 5 questions to collect demographic information. The second contained 21 items to elicit students' experiences and perceptions of OCL regarding frequency, communication tools, beliefs, barriers, support, and assessment. The third consisted of 22 items that collected actual frequency usage of collaborative learning activities versus perceived pedagogical importance. The instrument was developed in English and Korean. For the reliability of the two versions, the Korean version was translated back into English, compared with the English version, and corrected where there were inconsistencies. The reliability of the instrument was high (Cronbach alpha = .821).

Data Analysis

The survey data were analysed using SPSS 21.0. To examine the mean difference between Korean and UAE students in terms of the experience and perception of OCL, Welch's t-test was conducted. It could address the unequal sample size problems since it may increase the probability of Type 1 error and lower the statistical power (Fraenkle & Wallen, 2011). To answer the third research question, an Importance-Performance Analysis was performed.

RESULTS

Experience with OCL

The participants were asked to answer the number of courses that employed OCL in the current semester. UAE students seemed to have more courses with OCL components than Korean students had and were required to spend more hours on online communication. There were significant differences in the number of courses having online collaborative components (t=-2.29, p=.024) and the time spent for online communication (t=-2.88, p=.001).

Table 2. Number of courses with online collaborative learning and hours on online communication

		M	*SD*	*t*	*Df*
No. of Courses/term	Korea	2.57	1.58	-2.29*	76.307
	UAE	3.12	1.50		
Hrs. of online communication/week	Korea	1.53	.79	-2.88*	63.745
	UAE	1.96	.98		

** denotes that the t value is significant at .01.*

Communication Tools for OCL with Peers

The students were asked to choose up to three tools that their instructors required them to use for online communication. Course messages (e.g., emails) and discussion boards were frequently used in both countries. Korean courses rarely used synchronous meeting tools, blogs, and wikis, whereas the UAE courses used them more frequently. The chat tool is the most frequently used in Korea and course messages were the most frequently used in the UAE.

Table 3. Communication tools for online collaboration

Communication Tools	**Korea**		**UAE**	
	n	%	N	%
Synchronous meetings (e.g. Google Hangout, Skype)	11	3.09	11	12.79
Blogs	14	3.93	8	9.30
Wikis	5	1.40	2	2.33
Course messages (email)	101	28.37	27	31.40
Discussion boards of LMS	43	12.08	26	30.23
Chats (e.g. Whatsapp in the UAE, Kakaotalk in Korea)	182	51.12	12	13.95
TOTAL	356	100	86	100

Barriers to Online Collaborative Learning

As the major barrier to OCL, UAE students chose language whilst Korean students selected students' attitude toward working with peers. In terms of privacy issues, UAE students showed much more concern than Koreans. Regarding gender, most Koreans did not care at all, while UAE students mentioned it as a barrier (12%). Both countries pointed out that students' attitude and lack of collaboration skills can negatively influence online collaboration. Compared to Korea, UAE students showed more concern over the technology skills of students and instructors as well as infrastructure.

Table 4. Barriers to online collaborative learning

Barriers	Korea		UAE	
	n	%	n	%
Language	33	16.6	26	63.4
Gender issues	1	0.5	5	12.2
Privacy	30	15.1	11	26.8
Attitude toward working with peers	151	75.9	18	43.9
Collaboration skills	80	40.2	19	46.3
Student technology skills	28	14.1	24	58.5
Instructor technology skills	19	9.5	13	31.7
Infrastructure (e.g., Internet speed, computer specs)	38	19.1	15	28.3

Assessment and Support of Online Collaborative Learning

Korean students experienced more courses that do not tie performance in collaboration to grades or that combine group scores with individual scores, if the courses tie collaborative activities to grade. It seems that instructors in the UAE are more likely to give a group grade but not an individual grade for the OCL. OCL in both countries is not being implemented with well-designed assessments that encourage individual responsibility as well as positive interdependence in groups. Also, assessments of OCL activities are largely focused on outcomes, and not on process.

Table 5. Assessment of online collaborative learning

Items	Korea		UAE			
	m	*sd*	*m*	*sd*	*t*	*df*
Performance on collaborative activities is tied to course grades.	2.32	.89	2.70	.84	-2.75*	257
The instructor evaluates the product of online activities and not the process.	2.49	.85	2.50	.80	-.07	257
The instructor gives a group grade but not an individual one.	2.47	.89	3.00	.69	-4.64*	94.84

**Note: Those questions were asked with a 4-point Likert scale ranging from 4=True for all courses to 1=True of no course.*

In all the items related to the instructor and technical support, there were statistically significant differences, with more support provided in the UAE than in Korea. UAE students showed more concern over lack of technology skills. Regarding team conflicts, UAE instructors seemed more likely to address them than did their Korean counterparts.

Table 6. Support of online collaborative learning

	Items	Korea		UAE			
		m	*sd*	*m*	*sd*	*T*	*df*
Instructor Support	The instructor provides support to students that face conflicts within teams.	2.09	.91	3.05	.66	-8.55*	101.77
	We are given training on how to work as a group.	2.19	.85	2.59	.84	-3.05*	257
Tech Support	We are provided with the necessary technology training to use online collaboration tools.	2.02	.87	2.70	.84	-5.04*	257
	Technical support is available whenever needed.	2.00	.88	2.49	.86	-3.60*	257

**Note: Those questions were asked with a 4-point Likert scale ranging from 4=True for all courses to 1=True of no course.*

Attitude toward Online Collaborative Learning

The most noticeable difference is in the item, "I'd rather meet up with colleagues…than meet online." Korean students strongly prefer meeting in-person to meeting online. Also, they more strongly agree with "Online communication leads to misunderstandings" and "It bothers me when my teammates do not respond…" than UAE students. Another big difference appeared in the item, "I feel comfortable to express … online." Taken these results together, it seems UAE students feel much more comfortable in communicating and working online than Korean students. Regarding feedback from instructor and peers in OCL, Korean students appreciated it more than UAE students did. However, UAE students expressed a more positive stance about assessment in OCL.

Table 7. Perceptions toward online collaborative learning

	Items	Korea		UAE		
		m	*sd*	*m*	*Sd*	*t*
Communication	I would rather meet up with colleagues to work on a project than meet online.	3.22	.81	2.07	.88	8.94*
	I feel comfortable to express different ideas and question others online.	2.48	.82	3.30	.68	-7.39*
	Online communication leads to misunderstandings.	3.00	.72	2.48	.93	3.76*
	Not everyone knows how to communicate their ideas clearly online.	3.14	.59	3.41	.73	-2.77*
	It bothers me when my teammates do not respond to my online communications.	3.35	.71	2.62	.75	6.57*
	It is easier to reach consensus online.	2.27	.71	2.93	.76	-5.83*
Assessment	Working online allows the instructor to better judge individual contributions of team members since the system archives all the activities.	2.52	.76	2.95	.82	-3.58*
	Grades on online collaborative activities are fairer.	2.15	.76	2.28	.97	-0.86
Feedback	Instructor feedback on our online collaborative groupwork performance is important.	3.14	.65	2.89	.96	1.78*
	Reading the online contributions/comments of others helps me understand the content better.	2.90	.63	2.80	.81	0.84

**Note: The questions were asked with a 4-point Likert scale ranging from 4=strongly agree to 1=strongly disagree.*

Differences between Frequency and Importance of Online Collaborative Learning Experiences

Frequency of Use of OCL Activities

There are significant differences in the frequency of use of group discussion, understanding course content through group discussion, group practice exercise, collaborative writing, and knowledge sharing (see Table 8). Except for peer review and collaborative data collection and analysis, most of the other collaborative learning activities were used more frequently in the UAE than in Korea. Largely it seems that UAE students experienced all the other collaborative learning activities more frequently than Korean students.
Only two activities, peer feedback and collaborative data collection, were used more frequently in Korea than in the UAE. Group exams and collaborative writing were the least used in both contexts.

Table 8. t-Test of use & importance of OCL activities between Korean and the UAE

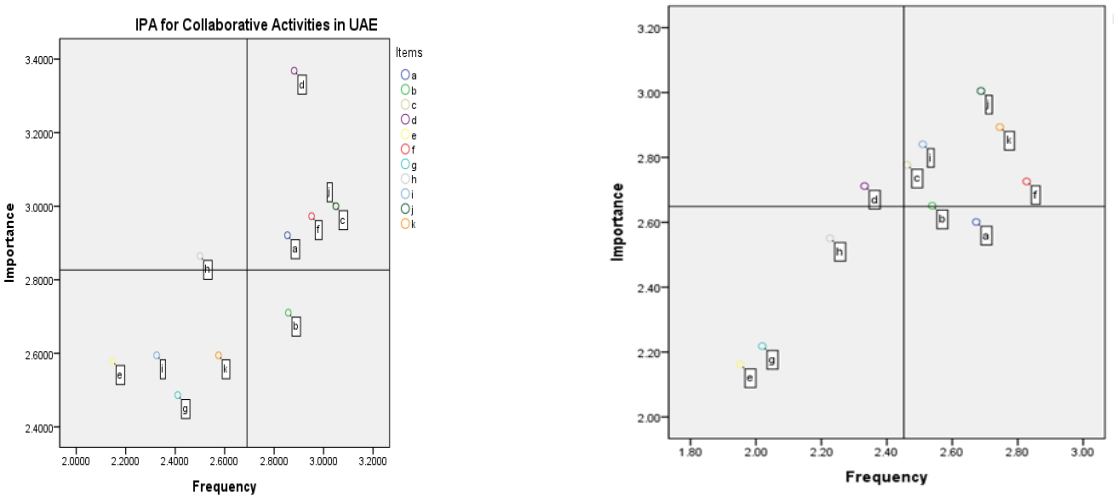
		Use			*Importance*		
OCL activities	**Country**	***M***	***Sd***	***t***	***M***	***Sd***	***t***
a. Group project	Korea	2.67	.85	-1.67	2.60	.83	-2.65*
	UAE	2.85	.65		2.92	.76	
b. Group discussion	Korea	2.54	.83	-2.87*	2.65	.82	-.47
	UAE	2.86	.68		2.71	.85	
c. Understanding course content	Korea	2.46	.79	-5.65*	2.78	.79	-2.00
	UAE	3.05	.63		3.00	.69	
d. Practice exercise	Korea	2.33	.81	-5.03*	2.71	.81	-6.39*
	UAE	2.88	.67		3.37	.61	
e. Group exam	Korea	1.95	.88	-1.50	2.16	.91	-2.93*
	UAE	2.16	.84		2.58	.95	
f. Group presentation	Korea	2.83	.83	-.95	2.73	.95	-1.88
	UAE	2.95	.85		2.97	.81	
g. Collaborative writing	Korea	2.02	.87	-3.18*	2.22	.91	-1.91
	UAE	2.41	.77		2.49	.86	
h. Group reflection	Korea	2.23	.81	-2.17	2.55	.87	-2.35*
	UAE	2.50	.80		2.86	.85	
i. Peer review	Korea	2.51	.85	1.36	2.84	.87	1.81
	UAE	2.33	.93		2.59	.86	
j. Knowledge sharing	Korea	2.69	.81	-3.35*	3.00	.79	.04
	UAE	3.05	.66		3.00	.69	
k. Collaborative data collection	Korea	2.75	.87	1.27	2.89	.82	2.33*
	UAE	2.58	.80		2.59	.84	

Importance of Use of OCL Activities

It seems that UAE students perceive most of the collaborative learning activities as more important than Korean students except for peer review, knowledge sharing, and collaborative data collection. Practice exercises was the activity that was perceived as the most important by UAE students, followed by understanding course content through group discussion and knowledge sharing. Group reflection in the UAE needs to be focused while it was not regarded as important in Korea. Group discussion in both countries was more frequently used than its importance. The activities that need to be more focused on are practice exercises in Korea and group reflection in the UAE.

Importance-Practice Analysis of OCL Activities in Korea and the UAE

The participants thought that practice exercises in Korea and group reflection in the UAE should be implemented with more frequency. Group exams and collaborative writing were regarded as a low priority and rarely implemented in both countries. These activities belong to the 'Low priority' quadrant. Group discussion is commonly regarded as a 'too-much-used-but-with low-importance' activity in both countries. The activities such as 'understanding course content,' 'group presentation,' and 'knowledge sharing' were those that were currently implemented appropriately and also need to be maintained in Korea and the UAE.



Korea UAE

Figure 2. IPA quadrants of online collaborative activities in Korea and the UAE

Table 9. Online collaborative learning activities by IP analysis

I-P area	Online Collaborative Activities		
	Korea	**Common**	**UAE**
I. Concentrate here (Low P, High I)	d (practice exercise)	-	h (group reflection)
II. Keep up the good work (High P, High, I)	c, f, i, j, k (understanding course content, presentation, peer review, knowledge sharing, coll. data collection)	c, f, j	a, c, d, f, j (group project, understanding course content, practice, presentation, knowledge sharing)
III. Low priority (Low P, Low I)	e, g, h (group exam, coll. writing, group reflection)	e, g	e, g, i, k (group exam, coll. writing, peer review, coll. data collection)
IV. Possible overkill (High P, Low I)	a, b (group project, group discussion)	b	b (group discussion)

CONCLUSION AND DISCUSSION

The importance of inquiry into students' perception and experiences with online collaboration lies in that collaborative learning will be more successful when learners value it (Swan et al., 2006). This study investigated college students' perceptions and experiences of OCL in Korea and the UAE and also analysed each country's current practice and the perceived importance of several OCL activities.

The results of this study show that OCL is implemented in a considerable number of courses offered by the campus-based universities in both countries. Although the proportion of courses that should contain online

collaboration would vary by context and the overall program outcomes, the picture presented by this study shows landscapes not entirely dominated by lecturing, which is a shift from the stereotypical depiction of traditional Eastern contexts, dominated by the persona of the all-knowing instructor (Al-Adwan & Smedley, 2012). Regarding the communication tools for OCL, it is not surprising that e-mail and discussion boards are frequently used since these are the more traditional and older forms of online communication that both students and instructors are well familiar with. However, noteworthy of observation is the dominance of synchronous tools in both contexts, where informal chatting apps constitute more than 50% of communication in the Korean context, and to a lesser extent among UAE students, thereby underscoring the potential of social media for online collaborative work for the new generations (Abdul Khalek, 2014). Kakaotalk, an SNS communication app, is widely used in Korea at every age level of population and is being utilized for educational purposes, such as a learning environment for the writing of second language (Lee et al., 2016). With its pervasiveness and enjoyable leisure activities for young people (Erstad, Gilje, & de Lange, 2007), the SNS app is being considered and actively explored as an innovative educational platform.

However, there are several points that show significant differences. Overall, UAE students had a more positive attitude toward OCL than Korean students in terms of communication, assessment, and feedback despite its shorter history of online learning. Regardless of cumulative research affirming educational effects of collaborative learning (Slavin, 1991), it is not appreciated by many Korean college students (Lee, 2014), who try not to enroll in courses with collaborative tasks. Korean students reported that not many courses that they experience tied OCL performance with course grades. Considering group work naturally entails substantial team work (Kirschner, Paas & Kirschner, 2009) in addition to the cognitive load generated by learning, students appreciate and persist with group learning only when they are appropriately compensated for their effort. What is assessed tends to be more valued by students (Swan, Shen, & Hiltz, 2006). UAE students perceived assessment online as much fairer than Korean students. This might be grounded in that Korean instructors are likely to give a group grade but not an individual one in OCL and to assess largely group outcomes, rather than the process (see Table 5), which can implicitly allow free riders in group work (Lee, 2014). This is also true to other countries. Some learners may experience a various range of unpleasant emotions and feelings such as anxiety and frustration when they work with unknown others (Hilliard et al., 2020). However, the fairness of grades of online performance was not positively evaluated by the participants in both countries. Clear and detailed criteria of online performance would lessen students' worries over fairness of grades (Swan, Shen, & Hiltz, 2006). Therefore, a well-designed assessment scheme that encourages individual responsibility and positive interdependence among teammates (Johnson & Johnson, 1986; Child & Shaw, 2016) should be adopted for sustainable online collaborative learning.

In addition, UAE students regarded OCL as more important and experienced it more frequently than Korean students. Since the UAE is more multicultural in student composition in tertiary education, and has gender segregation in face to face classes, OCL may be more welcomed (Al-Fadhli, 2008) than in Korea, a quite homogeneous country. UAE students felt much more comfortable than Korean students did with online communication. This may be related to a relatively wider use of synchronous meeting tools in the UAE than in Korea. Korean students rarely used them for educational purposes. Online communication using synchronous meeting tools may dramatically reduce misunderstandings and discomfort from the time lag caused by text-based asynchronous communication.

Previous studies revealed that students commonly experience anxiety from relying on 'unknown others', fear of negative evaluation and worries about other group members' negligence (Hilliard et al., 2020). Concerns over privacy and gender are unique to the UAE, while there is the lack of such anxieties in Korea, depicting the unique barriers to online learning and collaboration inherent to more conservative Middle Eastern countries in the Gulf (Osman, 2018). Al-Fadhli (2008) reported that gender is a critical factor to satisfaction of e-learning in Kuwait since online learning could help overcome these cultural limitations, barriers, and challenges by providing alternative means of collaboration without radically changing the social norms. The more positive attitude toward OCL of UAE students could be understood in the same line. While the previous studies indicate that digital access and capabilities is more favorable to male on a global scale (Alaleeli, & Alnajjar, 2020), the participating college students in Korea and the UAE are not this case. For digital divide, gender would not be a critical factor compared to economic and societal status.

Language constituted the most important barrier for students in UAE settings and previous research (Hall, 2011; Osman, 2018; Wong, 2004) supports this finding. The UAE is a multicultural expatriate society with diverse language backgrounds. In many cases, the language of pre-university instruction is one other than English. At university, however, students are expected to communicate in English – an expectation that many students fail to meet (Hall, 2011). The use of technology in educational settings is also new to the region (Osman, 2018); thus, it could be expected that students are concerned about the technology skills of peers and the instructor as well as the infrastructure. Interestingly, about 16% of Korean students indicated that the language is also a barrier for them, even though they use Korean, the mother tongue for most of the students. Perhaps for Korean students, the language problem is not caused by the use of other languages, but may be related to difficulty with text-based asynchronous communication (Lee, 2004). Online interaction is very different from face-to-face interaction in that it does not permit non-verbal communication (Berge & Collins, 1993) and is also likely to lead misunderstandings (Tu, 2000). To overcome these negative aspects, participants articulate their thoughts, and opinions by using the elaborated expression that requires deep cognitive processing causing cognitive load (Lee, 2004). Two common barriers in Korea and the UAE were concerns about collaboration skills and peers' attitudes; possibly implying the novelty of OCL. Student's attitudes toward OCL can be formed from a complex combination of individual learning motivation, prior OCL experiences, team culture, and team dynamics. Also, social loafing or sucker effect can be present in any group work (Lee, 2014). The instructional design of OCL to reduce those phenomena helps establish a positive team culture.

The assessment of OCL seems to lie in between emphasis on the product versus the process, mirroring the dichotomy in approach found in previous international literature (Child & Shaw, 2016). Although UAE students regarded assessment of OCL as fairer than did students in Korea, the reasons for that discrepancy are not clear. However, across both contexts, there seems to be room for improvement of assessment. Swan et al. (2006) underscored the importance of utilizing assessment strategies that enhance active participation and address individual accountability (Child & Shaw, 2016), which can cope with students' discomfort of member's negligence.

Both countries show a similar representation of usage and perceived importance regarding online collaborative activities, although there were slight differences. Among OCL activities, collaborative writing and group exams are the least valued activities and rarely experienced by both countries' students. However, with the forced shift to online learning in the current global pandemic situation, online exams will be indispensable and demands of more diverse online collaborative activities should be addressed even in the campus-based universities. The group presentation and knowledge sharing were the most frequently used and the most important perceived activities. Collaborative writing was expected to be actively implemented with the aid of technology such as Wikis and Google Docs. However, it has not been widely adopted yet because of low awareness of how to use those tools and how to facilitate it (Zhou, Simpson, & Domizi, 2012). In addition, students are unwilling to make changes or modifications of others' work (Britcliffe & Walker, 2007) and visibility of all the actions online may create discomfort among users (Lee, 2010). Although most current LMSs include the exam or quiz function, they are not used broadly due to concerns such as security and academic integrity without proctoring (Cluskey, Ehlen, & Raiborn, 2011). In addition, group online exams apparently involve much more concerns regarding operation and grading. Exams are usually associated with individual accountability and the group-focused version is still considered to be an oxymoron to the majority of students (Hodges, 2004).

> *While Korean students put more pedagogical value on peer review than UAE students, it seems that the latter prefers and trusts instructors' feedback more, a tendency that is quite prevalent in high power distance societies (Hofstede, 1986; Sayed, 2010). Liu and Carless (2006) reported that the majority of students in Hong Kong showed resistance to peer assessment. There were several reasons behind the phenomena, such as concern for reliability and belief that assessment is the sole responsibility of instructors. Considering that most online courses have more students enrolled than traditional courses, peer feedback can be a practical alternative in higher education to instructor's feedback if students are well trained to provide a quality critique on peer's work. From the pedagogical value, students' ability to evaluate outcomes can be a high cognitive learning objective and peer feedback*

allows students to take an active management role in their own learning (Liu & Carless, 2006). According to Boud (1995), peer feedback mirrors self-assessment and requires the articulation of what they know about a subject. To promote students' learning, peer feedback can be encouraged. Once students trust peers' capability and observe their feedback equivalent to instructors', peer feedback would be diffused even in a large power distance society.

UAE students also perceive getting more technical and social support than do students in Korea. This might explain the more positive attitude of UAE learners. UAE learners also seem to feel comfortable with being and functioning effectively online as well as having more generous expectations regarding communicating in this way, reflecting the general belief in the important potential of the Internet for formal and informal learning in the region (Vein, 2014). Korean students exhibit higher anxiety towards communication online and have higher expectations regarding the outcomes of these interactions. It can be explained by Koreans' unique Pali-pali (meaning quickly, quickly) culture that appears in all aspects of Korean culture and lifestyle, even in online communication (Lau, Kim, & Atkin, 2005). Since most current OCL is mediated by asynchronous technology, the time lag between questions and replies is inevitable. By using synchronous technology that enables many-to-many communication, such a concern over misleading communication and inefficiency that many Korean students showed, could be diminished.

IP analysis gives a concise picture of participants' experience by their perceived importance regarding each OCL activity. Korean students want practice exercise to be more frequently used, while UAE students expect group reflection to be implemented more often online. The students in both countries commonly valued understanding course content, presentation, and knowledge sharing, and experienced those activities frequently. They did not appreciate group exams and collaborative writing, which might be due to their limited experience of these activities and concerns over integrity issues of group exams (Cluskey, Ehlen, & Raiborn, 2011), and reluctance issues of revising others' writing (Britcliffe & Walker, 2007).

Since group discussion activity is, in fact, a basis of all the other collaborative activities, it is surprising that the students in both countries did not value its educational benefits and wanted to lower its frequency. This indicates that online group discussion was not filled with quality interaction, lacking rationale or evidence that support opinions (Ju, Choi, & Yoon.,2017; Kim & Lee, 2019). However, online discussion has been regarded as an effective vehicle for collaborative learning (Swan et al., 2006). Substantial research (Hawisher & Pemberton, 1997; Jiang & Ting, 2000) found that successful online collaborative discussion is directly related to its assessment. Undervalued group discussion might be grounded in that it is not properly assessed or appropriately designed and facilitated. In addition, without sufficient training of online discussion or intervention of instructors, and preparation for the discussion, online discussion is hard to bring to an expected outcome.

OCL is being actively adopted in the tertiary classrooms of Korea and UAE's campus-based universities regardless of region and culture. Different cultures bring different expectations about OCL and also some common concerns. Based on the understanding of students' culture, OCL with systemic design that considers barriers, valid and fair assessment of process as well as product, and appropriate support, will offer students with pedagogically sound quality learning experiences with better academic outcomes.

Limitations of Study

The difficulty in finding an equivalent number of participants caused a limitation of the study. IP analysis of this study was based on the perceptions of students that might be far from the pedagogical values of the activities according to instructional objectives and needs. The results should be interpreted carefully in the context of campus-based university.

Suggestions or Future Research

The results suggest a huge variation in attitude across cultures, implying the need for supporting this evidence-based theory grounded instructional approach based on a deeper understanding of the issues through qualitative research with both students and professors. Further research is needed to practically investigate the role of language choice in OCL settings. This is particularly important, as we increasingly communicate across cultures and languages. In addition, with the forced shift to fully online learning in all the campus-based universities due to the recent pandemic situation, the landscape of OCL would be dramatically different from the past. The study of the OCL in diverse countries needs to be implemented in the near future.

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