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The Influence of Culture on Collaborative Learning Practices in Higher Education

ABSTRACT

Objective: This study systematically identifies the various pertinent cultural dimensions and the group processes involved in collaborative peer learning before empirically exploring their associations among a sample of university students.

Methodology: Twenty statements encompassing various cultural dimensions that could possibly influence students' preferences towards collaborative peer learning practices were incorporated into a survey. The data were collected from 147 multicultural students studying applied sciences in Finland. Chi-squared test

of independence was used to test the association between the cultural dimension scores for students and their stated preferences for collaborative learning practices.

Findings: A major finding of this study is that learners from diverse cultural backgrounds have differing modes of engaging in the eight separate collaborative learning processes. The findings clearly reveal that students from cultures that are hierarchical, collectivist, less bound by rules, and traditional are less likely to have any prior familiarity with peer-learning methods. It seems relatively clear that the power distance and collectivism dimensions have the greatest impact on shaping the preferences of students for collaborative peer-learning methods.

Value Added: Very few studies have looked at how the cultural backgrounds of students can influence their use of, and preferences towards, collaborative peer-learning methods. This study identifies key processes in collaborative learning practices, which are shaped by culture as communication, decision-making, leadership, evaluation, trust building, the expression of disagreement, scheduling, and persuasion within a peer group.

Recommendations: This study found that Hofstede's framework might be too constraining when understanding how culture shapes a student's preferences towards collaborative peer learning in the educational context. It would be even more fruitful to develop an altogether endogenous framework that is more suitable for exploring the influence of culture on learning and education. Such a model should identify the various dimensions of culture beyond those of national identity and consider how they jointly influence attitudes towards collaborative learning rather than considering them in isolation. This model should also take a more dynamic approach towards both culture and learning.

Key words: culture, collaborative learning, peer learning, higher education, Hofstede, group processes

JEL codes: I23, M16, M30, A22, A23

Introduction

There is no doubt that higher education is increasingly internationalising alongside globalisation (Healey, 2008; Teichler, 2009), and

the resulting student migration has increased the presence of intercultural contacts among international students (Dunne, 2013). On the other hand, collaborative peer-learning methods, which involve various structures where students work in small groups, have become increasingly common practices in higher education. However, previous research (Popov et al., 2012; Dennehy, 2015; Cagiltay, Bichelmeyer, & Akilli, 2015) has provided conflicting evidence about the influence of culture on shaping a student's preferences towards collaborative learning practices.

Some studies suggest that intercultural contact can be potentially beneficial to students participating in collaborative peer learning through enhanced academic and social adjustment (Wang, 2012), intercultural development, and reciprocal tolerance (Volet, 2004). Others, meanwhile, suggest that cultural diversity in collaborative peer-learning groups fosters positive learning outcomes, such as a well-developed social awareness, divergent perspectives, and problem-solving skills (Cantor, 2004).

There are also several challenges involved in arranging multicultural collaborative learning, and these can lead to negative learning outcomes (Dunne, 2013). These include prejudices and stereotypical attitudes towards culturally distant students, among others. Unresolved cultural conflicts can have an adverse effect on collaborative learning, because they arouse negative emotions and divert the peer group's attention away from achievable tasks (Ayoko, Callan, & Härtel, 2008). Troubled interpersonal group dynamics, differences in the working and interactional styles of group members, and dysfunctional communication can all result in negative emotions emerging in a collaborative learning group (Barron 2003).

To ensure positive learning outcomes for the students and the host institution, it is vital to understand the factors that shape the preferences of multicultural students towards collaborative peer learning. This study seeks to explore how the cultural backgrounds of students influence their orientation towards collaborative peer-learning arrangements. This study focusses on group dynamics and

learning processes and how they are shaped by the participants' cultural backgrounds, because it is important to understand these issues (Cohen, 1994; Cagiltay, Bichelmeyer, & Akilli, 2015; Rozkwitalska, Sułkowski, & Magala, 2017; Rozkwitalska et al., 2017). Although some previous studies have already dealt with aspects of group dynamics in a multicultural group (Popov, et al., 2012), very few studies specifically deal with how cultural dimensions can influence the preferences of participants with regards to collaborative peer learning and the processes therein.

This study aims to contribute to this area by first identifying the cultural dimensions that are likely to influence collaborative peer-learning preferences and practices. Existing studies in this area focus excessively on business management issues (Zhou & Shi, 2011; Rozkwitalska et al., 2017) and disregard the collaborative learning perspective in the context of higher education. This study systematically identifies the various pertinent cultural dimensions and the group processes involved in collaborative peer learning before empirically exploring their associations among a sample of university students. A wide range of similar studies have tended to apply Hofstede's largely accepted 6D model of culture (Hofstede, Hofstede, & Minkov, 2010) while trying to understand the relationship between culture and group processes, albeit without sufficient critical reflection. This study also establishes how empirically valid Hofstede's 6D model is within the educational context. Given the widespread adoption of Hofstede's 6D model in contexts ranging from management to education, this issue also clearly warrants further investigation.

Literature review

Key concepts

Collaborative peer learning is defined as "learning which occurs through social interaction between peers, directed towards the

accomplishment of a common task" (Magin, 1982, p. 108), and this definition has remained largely unchanged in the years since. For example, Cronise (2016) considers it as an approach where the experiences of individual learners are shared to collectively construct solutions. Collaborative peer learning can therefore be considered an interaction between each student and his or her peers through structured protocols to achieve a common goal by developing a shared mental model and a system of accountability (Newell & Bain, 2018).

Culture, meanwhile, is defined as "the collective programming of the mind that distinguishes the members of one category of people from those of another" (Hofstede, Hofstede, & Minkov, 2010, p. 6). Although there are several other significant frameworks for analysing the different dimensions of culture, this study uses Hofstede's 6D model to understand collaborative peer learning processes for several reasons. Indeed, Hofstede himself pointed out the important implications of his framework within the context of teaching and learning (Hofstede, Hofstede, & Minkov, 2010), and it is probably the most-applied model in comparative cross-cultural research (Stahl, Maznevski, Voigt, & Jonsen, 2010). The six dimensions in Hofstede's model cover the dimensions used in other comparable frameworks, such as Schwartz's seven value types (Schwartz, 1992), Hall's classification of culture (Hall, 1959), and the GlOBE project (House, Javidan, Hanges, & Dorfmand, 2002). More importantly, Hofstede's model is used as the basis for identifying several group processes in Erin Meyer's 'cultural map' (Meyer, 2014), which is used in this study. What is more, a further aim of this study is to evaluate the applicability of Hofstede's 6D model within the context of various collaborative learning processes.

Cross-cultural differences can be understood using the six different dimensions within Hofstede's 6D model. The 'Individualism vs. Collectivism' (IDV) dimension refers to the degree of interdependence that a society maintains among its members. The 'Power Distance Index' (PDI) is defined as the degree to which power imbalances and inequality are accepted as normal in a society.

'Masculinity' (MAS) refers to the degree to which individuals in a society prefer to be the best (masculine) or do what they like best (feminine). The 'Uncertainty Avoidance Index' (UAI) relates to the extent to which a society feels uncomfortable with unpredictable situations and thus tries to avoid such situations. 'Time orientation' (LTO) is the degree to which a culture maintains its link with the past when dealing with the present and the future. The final dimension, 'Indulgence vs. Restraint' (IVR), deals with whether a society places importance on curbing desire to achieve long-term gains (restraint) or regards immediate gratification as a cultural norm (indulgence) (Hofstede, Hofstede, & Minkov, 2010).

Despite the success and applicability of Hofstede's 6D model, there are also ample critiques available. The most obvious one is the assumption that human values are explained solely by the national culture (Chiang, 2005) or that all members of a culture exhibit the same cultural values (Williamson, 2002). Even if we allow for the existence and importance of national culture, the model does not adequately demonstrate that national culture determines individual actions. The impact on individual behaviour is dependent upon several other contextual factors and situational variability (McSweeney, 2002). The most dominant critique of the model further suggests that the model conflates country and cultural effects, provides indication of existence but not the magnitude of cultural effects and ultimately, is not comprehensive in its inclusion of cultural values (Kirkman, Lowe, & Gibson, 2006; Beugelsdijk, Kostova, & Roth, 2017). Moreover, from a more critical perspective, it has been claimed that this model – instead of being representative of societal cultures – privileges the western masculine managerial viewpoint (Ailon, 2008). Despite these well-known flaws of Hofstede's 6D model, several empirical studies, including this, use the model as it provides quantitative and approximate measures of rich cultural variety (Williamson, 2002).

Cultural influences on collaborative learning preferences

If learning occurs through social interaction, it must also depend on the cultural context in which it occurs (Lattuca, 2016; Manikutty, Anuradha, & Hansen, 2007). Although peer collaboration is becoming increasingly common in higher education, it may not be equally preferred across various cultures. For example, collaborative peer learning is a diffused form of learning with minimal hierarchical imposition from the instructor, so it may not be commonly found in hierarchical cultures where there is a greater power distance between the teacher and students (Manikutty, Anuradha, & Hansen, 2007). On the other hand, in collectivist cultures, didactic methods with a focus on cooperative learning are more common (Kennedy, 2002; Ngwainmbi, 2004).

Previous research (Stahl, Maznevski, Voigt, & Jonsen, 2010) has broadly dealt with the impact of heterogeneous group members on group dynamics, but few studies have dealt specifically with the aspects of group dynamics in a multicultural group (Popov, Brinkman, Biemans, Mulder, & Kuznetsov, 2012). Based on these studies, important collaborative group learning processes, which are influenced by culture, can be separated into eight distinct processes within a group: communicating, evaluating, leading, persuading, deciding, trusting, disagreeing, and scheduling (Meyer, 2014). According to Meyer (2014), these eight processes can comprehensively describe the cultural orientations of individuals towards group processes (Meyer, 2014). Thus far, however, group processes have been largely studied within the context of global business. In contrast, this study shows how Hofstede's cultural dimensions affect the orientation of participants towards these processes within the context of collaborative peer learning.

The literature suggests that in low-context cultures (Hall, 1959), people are trained to communicate literally and explicitly (Meyer, 2014), while in the high-context cultures, communication is subtler

and relies upon subconscious assumptions of common reference points and shared knowledge (Hall, 1959). This suggests that students from low-context cultures may prefer very explicit, written, and codified forms of communication modes when compared to students from high-context cultures.

Individualistic cultures, meanwhile, are more direct, and they emphasize task-related information in their communication (House, Javidan, Hanges, & Dorfmand, 2002). Task-focused individualistic people also tend to prefer the explicit documentation of group processes and outcomes, so they want precise objectives, structured learning, detailed assignments, strict timetables, and an unambiguous assessment (Hofstede, Hofstede, & Minkov, 2010). In collectivist cultures, meanwhile, the focus on preserving group harmony suggests that individuals from these cultures are less prone to strongly communicating their individual viewpoints.

It has also been suggested that individualists engage in peer collaboration largely for calculative reasons, and they seek an equitable division of tasks, assessments, and learning outcomes (Hofstede, Hofstede, & Minkov, 2010). In collaborative peer groups, individualists may also not contribute fully, or they may even actively undermine group progress, which is a phenomenon known as 'social loafing' (Latane, Williams, & Harkins, 1979), when there is no appropriate system for individual reward. In collectivist cultures, in contrast, the outcome is considered a collective effort.

One of the fundamental tenets of collaborative peer learning is consensual decision-making (Cronise, 2016). It is common in some cultures for authoritative figures to make decisions unilaterally (Meyer, 2014). In an educational context, this means that instructors are expected to exert greater influence (Smith & Dugan, 1998). In more egalitarian cultures that prefer consensual decision-making, students are more inclined to resolve group issues among themselves.

The approaches to building trust and relationships also differ across cultures. In collaborative learning groups, relationship-building approaches among peers can either be

task- or relationship-focused (Meyer, 2014). Individuals from hierarchical cultures are more likely to be task-oriented than relationship-oriented (Hofstede, Hofstede, & Minkov, 2010) because they are more concerned with establishing structures than seeking the opinions of subordinates (Bochner & Hesketh, 1994). In contrast, collectivist individuals value stable relationships, so they consequently invest more time and effort in developing them. Moreover, in cultures with a long-term mindset, the selection of peers in collaborative groups is motivated by a desire to develop long-lasting relationships that will help achieve professional ambitions (Manikutty, Anuradha, & Hansen, 2007).

Cultural background can also influence individual tendencies to confront others and display disagreements emotionally (Meyer, 2014). Indeed, in the cognitivist view of knowledge, learning occurs through conflict (Lattuca, 2016). How these disagreements are expressed, however, varies between cultures. In individualistic cultures, disagreements are expressed directly, and this is viewed as being productive and having no direct consequences for personal relationships. In contrast, due to the emphasis on group harmony in collectivist cultures, highly collectivist individuals prefer to avoid direct confrontation and adopt mediation approaches instead (Stahl, Maznevski, Voigt, & Jonsen, 2010).

Different cultures can also have different senses of time (Hall, 1959). For example, those with a monochronic perception of time perform tasks sequentially and without interruption, so sticking to routines and completing tasks on time are important scheduling principles. In contrast, in cultures with a polychromic perception of time, tasks are performed in a fluid manner, with many activities being undertaken at once (Meyer, 2014). Hence, there are variations in how the strictness of schedules may be perceived by peer group members with different cultural backgrounds.

Additionally, Nisbett, Choi, Peng, and Norenzayan (2001) suggest that there is a relationship between cultural background and cognition. Based on 'linguistic determinism', they separate 'Western' and 'Eastern' ways of processing knowledge and information.

The 'Western' way consists of categorising objects and applying formal reasoning processes, whereas the 'Eastern' way thinks more in terms of informal relationships. In collectivistic, high-context societies, knowledge is intuitively decoded from a holistic context using multiple sources (Von Queis, 2005). The 'Eastern' method of cognition is therefore largely a consequence of collectivism (Manikutty, Anuradha, & Hansen, 2007). In summary, 'Western' individuals tend to favour analytic cognition, while people from 'Eastern' cultures tend to engage in holistic cognition. As a result, the culture can directly influence which argument is considered more persuasive. In some cultures, deductive reasoning is prioritized, so principles will be discussed before application. In other cultures, inductive reasoning is prioritized, and so application will be discussed before principles (Meyer, 2014).

Method

A range of possible preferences towards collaborative peer-learning practices were discussed in the previous section based on students' cultural dimensions. These preferences were incorporated into a survey as statements. The identified processes related to communicating, evaluating, leading, persuading, deciding, trusting, disagreeing, and scheduling within a collaborative group (Meyer, 2014). Altogether, twenty statements encompassed various cultural dimensions that could possibly influence students' preferences towards collaborative peer learning practices. These statements are summarized in table 1.

All the statements were Likert scale items with three choices: 'disagree', 'neither agree nor disagree', and 'agree'. In addition to these, the survey also solicited demographic information about the respondents, including their familiarity with collaborative learning practices. The questionnaire was set up using the Webropol system (Taimitarha, 2011), and a public link was sent to

students attending various universities in Finland. There are currently 25 universities of applied sciences in Finland. The data were collected from students during the winter of 2020 and the early spring of 2021. Some 147 respondents completed the survey.

Table 1. Preference statements included in the survey

Use and experience of collaborative peer learning	I prefer to collaborate with peers rather than work alone (pref_group) Peer learning is not common in my culture (pref_notcommon) I have to depend upon others too much to complete group tasks (pref_toodependence)
Communicating	It is important to write down agreements to prevent future misunderstanding (com_recap) I only speak when I am invited to speak (com_speakinvited)
Evaluating	There is more free-riding in a multicultural group (pref_freeriding) I prefer to be told bluntly if I have done poor work (evaluate_blunt) I feel uncomfortable when I am praised in front of others (evalatte_singledout)
Deciding & Leading	Problems should be resolved among peers without involving the instructor (decide_resolvewithin) A single person should make decisions for the group (decide_leader)
Trusting	I invite people to collaborate only if they can do their job well (trust_taskjob) I do not trust anyone until I know them personally (trust_spendtime) I help other peers even if it is not related to the tasks (trust_giveassistance) I am suspicious of people from unfamiliar cultures (trust_suscpiciousculture)
Disagreeing	Challenging opinions of peers ruin personal relationships (disagree_challengeengender) I am visibly emotional when I disagree with someone (disagree_emotional) When somebody disagrees with me, I take it personally (disagree_personally)
Scheduling	Schedules should not change often (schedule_fixed) I usually complete my work just before the deadline (schedule_justbeforedeadline)
Persuading	I need to see the big picture before I understand my task roles (cognition_bigpicture)

Source: author's own elaboration.

The nationalities of the students were used to assign scores to them based on various cultural dimensions using the 'Hofstede Insights' database(Hofstede Insights, 2020) . This database provides an extensive list of scores, ranged 1 to 100, over six different cultural dimensions for many different countries. Higher scores represent stronger characteristics. For this research, these numerical scores were converted to categorical scores by using the median as a cut-off point for each dimension. These categorical scores, namely 'low' or 'high', were then assigned to respondents according to their nationalities.

Subsequently, the chi-squared test of independence was used to test the association between the cultural dimension scores for students and their stated preferences for collaborative learning practices (table 1). This statistical method was appropriate for use because the variables are ordinal and non-normally distributed (Huberty & Morris, 1989). Further association tests were also conducted for the various other demographic characteristics of the students and their preferences regarding collaborative learning practices. The IBM SPSS Statistics version 24.0 software for Windows was used to analyse the data.

Results

There were 147 (N = 147) respondents from different countries, with Finland, Russia, China, India, and Nepal being most represented. The number of respondents were split roughly equally in terms of gender (49.7% male and 50.3% female). Most respondents (57.1%) were between 21 and 25 years of age, with 42.9% of the respondents being in their second year of study and 30.6% being in their first year.

Some 41.89% of the student sample came from egalitarian cultures, compared to 58.11% from hierarchical cultures. Students who were identified as collectivist comprised 56.67% of the sample, with 43.24% coming from more individualistic countries. Those students considered as coming from feminine cultures made up 78.38% of the sample,

while 21.62% of the sample were deemed as originating from masculine cultures. Students from cultures with a long-term orientation constituted 58.10% of the sample, compared to 41.90% from cultures with a short-term orientation. Finally, 62.20% of the respondents came from cultures leaning more towards instant gratification, while 37.80% of the students came from more restrained cultures. The general characteristics of the respondents are summarised in more detail in table 2.

Table 2. The characteristics of the sample

Respondents Demographics		N	%
Gender	Male	73.00	49.66
	Female	74.00	50.34
Age	< 20	21.00	14.29
	21–25	84.00	57.14
	26–30	23.00	15.65
	31–40	15.00	10.20
	41–50	4.00	2.72
	> 51	0.00	0.00
University year	1	45.00	30.61
	2	63.00	42.86
	3	26.00	17.69
	> 3	13.00	8.84
Power Distance Index (PDI)	Low	62.00	41.89
	High	86.00	58.11
Individualism versus Collectivism (IDV)	Low	84.00	56.76
	High	64.00	43.24
Masculinity versus Femininity (MAS)	Low	116.00	78.38
	High	32.00	21.62
Uncertainty Avoidance Index (UAI)	Low	66.00	44.59
	High	82.00	55.41
Long term orientation (LTO)	Low	62.00	41.90
	High	86.00	58.10
Indulgence versus restraint (IVR)	Low	56.00	37.80
	High	92.00	62.20

Note: The scores for PDI, IDV, MAS, UAI, LTO and IVR were obtained from Hofstede Insights .
Source: author's own elaboration.

The chi-squared test of independence was used to determine the strength and direction of any associations between the respondents' scores for the six cultural dimensions and their statements about collaborative learning processes (see table 1). The results of this are provided in table 3.

Table 3. Associations between cultural scores and collaborative learning preferences

Cross tabulation of selected variables	Cultural dimension (N = 147)	Disagree	Neutral	Agree	Chi-squared test of independence
PDI * pref_notcommon	PDI1	74.2%	16.1%	9.7%	$\chi^2(2)$ = 40.83**
	PDI2	25.9%	15.3%	58.8%	p = .00
PDI * pref_freeriding	PDI1	46.8%	32.3%	21.0%	$\chi^2(2)$ = 12.86**
	PDI2	20.0%	40.0%	40.0%	p = .00
PDI * com_recap	PDI1	21.0%	21.0%	58.1%	$\chi^2(2)$ = 11.29**
	PDI2	4.7%	15.3%	80.0%	p = .00
PDI * trust_suspiciousculture	PDI1	77.4%	14.5%	8.1%	$\chi^2(2)$ =11.84** p=.00
	PDI2	50.6%	23.5%	25.9%	
IDV * pref_notcommon	IDV1	26.2%	14.3%	59.5%	$\chi^2(2)$ = 40.92**
	IDV2	73.0%	17.5%	9.5%	p = .00
IDV * pref_freeriding	IDV1	20.2%	39.3%	40.5%	$\chi^2(2)$ = 12.43**
	IDV2	46.0%	33.3%	20.6%	p = .00
IDV * com_recap	IDV1	4.8%	14.3%	81.0%	$\chi^2(2)$ = 12.01**
	IDV2	20.6%	22.2%	57.1%	p = .00
IDV * trust_suspiciousculture	IDV1	51.2%	22.6%	26.2%	$\chi^2(2)$ = 10.99**
	IDV2	76.2%	15.9%	7.9%	p = .00
MAS * trust_suspiciousculture	MAS1	66.4%	13.8%	19.8%	$\chi^2(2)$ = 12.24**
	MAS2	45.2%	41.9%	12.9%	p = .00
UAI * pref_notcommon	UAI1	27.3%	19.7%	53.0%	$\chi^2(2)$ = 17.60**
	UAI2	61.7%	12.3%	25.9%	p = .00
UAI * pref_freeriding	UAI1	18.2%	39.4%	42.4%	$\chi^2(2)$ = 10.90**
	UAI2	42.0%	34.6%	23.5%	p = .00
LTO * pref_notcommon	LTO1	75.8%	14.5%	9.7%	$\chi^2(2)$ =43.06** p=.00
	LTO2	24.7%	16.5%	58.8%	
LTO * pref_freeriding	LTO1	48.4%	32.3%	19.4%	$\chi^2(2)$ = 15.94**
	LTO2	18.8%	40.0%	41.2%	p = .00
LTO * disagree_emotional	LTO1	12.9%	54.8%	32.3%	$\chi^2(2)$ = 12.77**
	LTO2	20.0%	25.9%	54.1%	p = .00
Gender * trust_spendtime	1	31.5%	16.4%	52.1%	$\chi^2(2)$ = 13.28**
	2	50.0%	27.0%	23.0%	p = .00

Note: PDI1 = Low PDI, PDI2 = High PDI (Other scales similarly expressed for IDV, MAS, UAI, LTO, IVR)
**p < 0.01, * p < 0.05, two tailed. (Only **p < 0.01 in the table)
Source: author's own elaboration.

The results presented in table 3 only include the highly significant associations. They reveal that students from power-distanced and collectivist cultures both exhibit similar preferences towards collaborative learning methods. Such students have less prior experience with collaborative peer-learning methods, and they also prefer to not work in multicultural teams, with them suspecting that more free-riding occurs in such teams. They also tend to be suspicious of cultures other than their own and require time to develop trust in others, and they prefer that agreements be formalised whenever they are made among peers.

Some other cultural dimensions also exert significant influences on the students' preferences for collaborative learning practices. For example, students from feminine cultures are less suspicious of individuals from other cultures, so they need less time to develop trusting relationships with them. Students from both conservative cultures and those with a high degree of uncertainty avoidance tend to be less familiar with collaborative learning methods. They also prefer to work alone instead of collaborating with peers, with them fearing free-riding practices within a multicultural collaborative group. What is more, students from more conservative cultures express strong emotions when disagreeing with their peers. In terms of demographic characteristics, only the gender of the respondents had any impact on shaping their preferences for collaborative peer-learning practices, with the results suggesting that males need more time than females to develop trusting relationships with their peers.

Discussion

The results clearly reveal that students from cultures that are hierarchical, collectivist, less bound by rules, and traditional are less likely to have any prior familiarity with peer-learning methods.

These four cultural dimensions are characteristic of most South Asian countries – such as India, China, Nepal, and Bangladesh – which were strongly represented in the sample. This clearly indicates that students from this region may not have sufficient previous experience of working in collaborative peer groups. They may therefore require an additional orientation when beginning studies in a very different culture, as is the case with most 'Western' nations. This result is significant, because in theory, highly collectivist cultures should be familiar with collaborative learning. However, the results suggest that educational systems in South Asian countries tend to use it less frequently. This may be because there can be disjuncture between the culture and the education system in a society (Signorini, Wiesemes, & Murphy, 2009). Nevertheless, given that these cultures represent the largest and fastest growing source of education consumers, while collaborative learning methods are designed elsewhere, this seems to be important issue to consider (Edmundson, 2007).

It seems relatively clear that the power distance and collectivism dimensions have the greatest impact on shaping the preferences of students for collaborative peer-learning methods. It may, however, be a misguided endeavour to consider the influence of individual cultural dimensions on shaping students' preferences towards collaborative learning. For example, when we consider South Asian students, their high degree of collectivism suggests that they should be inclined towards collaborative approaches for learning, but their high degree of power distance suggests the opposite. In a culture with a strong power distance dimension, teachers assume an authoritative role in education at the expense of collaborative learning. Hence, the interaction between the dimensions of individualism vs. collectivism (IDV) and power distance index (PDI) warrants further investigation. More broadly, however, this strongly suggests that we should consider the com-

bined influence of the different cultural dimensions on attitudes towards peer-learning processes rather than trying to isolate them individually.

Whereas most of the theoretical expectations derived from Hofstede's 6D model were confirmed in this study, some findings were contradictory. For instance, it suggests that students from collectivist cultures should be more familiar with peer-learning methods, but the results indicate otherwise. Hofstede's model also suggests that individuals from collectivist cultures tend to prioritize group goals over individual gains, yet the results of this study suggest that students from collectivist cultures often prefer to collaborate less with peers, with them suspecting unequal individual gains in learning outcomes and evaluations. In addition, and contrary to expectations, those who scored lower according to the uncertainty avoidance index (UAI) preferred to have fixed schedules. Some of these contradictory findings suggest that individual scores for cultural dimensions based on nationalities are not as static as Hofstede's 6D model implies. This further indicates that certain aspects of collaborative learning are adopted within the new environment, even though they may not be compatible with the preferences of the students' original culture.

Conclusions

This study was undertaken to comprehend how cultural dimensions influence the preferences of students for collaborative peer learning. A major contribution of this study was showing how Hofstede's cultural dimensions affect the orientation of participants towards various group processes in the context of collaborative peer learning. A major finding of this study is that learners from diverse cultural backgrounds have differing modes of engaging in the eight separate collaborative learning processes. It is therefore

vital to consider the cultural aspects of learners and support individual learners in enabling them to interact efficiently and achieve their goals in collaborative learning. This is even more important when there is a high degree of intercultural contact. Culture matters in collaborative peer-learning arrangements, although not necessarily in the same way as suggested by previous research, most notably Hofstede's model.

The findings of this study also have several managerial implications. Given that several European higher school institutions have gradually expanded international programs targeted to multicultural students, it is essential to design them in such way that they are compatible or tailored towards the cultural orientations of foreign students. This study also reveals that a particular group of students with a certain kind of cultural orientation have less familiarity and preferences towards collaborative learning methods. Given the ubiquity of collaborative learning as a pedagogy tool in several higher education institutions, incoming students with such preferences or level of familiarity may need additional training or orientation regarding collaborative learning methods. When forming groups to complete course tasks, administrators and instructors need to be aware of the possible conflicts emanating from differences in cultural orientation, preferences, and familiarity with collaborative learning methods. Instructors most definitely need to consider tailoring evaluating schemes to assess individual performances in a collaborative learning team. Higher education marketers also should think about marketing their programs in a culturally compatible methods with associated marketing materials, advertisements, and communication channels.

This study has several limitations, however. Firstly, the sample of respondents comprised only foreign students who were studying at Finnish universities of applied sciences, so the findings may not be generalizable to other contexts. The sample also over-repres-

ents South Asian students, although this may reflect a general global trend where South Asian students are increasingly becoming the primary consumers of global education services (Edmundson, 2007; Van Bouwel & Veugelers, 2013; OECD, 2021). Despite the availability of several alternative frameworks for understanding cultural dimensions, this study focused on Hofstede's 6D model, so any shortcomings of Hofstede's model also apply to this study. Indeed, this is one of the more crucial findings of this study. However, as discussed earlier, Hofstede's 6D model also covers the dimensions identified in the other common alternative frameworks. Finally, although this study highlights many cultural preferences regarding collaborative learning practices, it does not discuss how to evaluate the effectiveness of collaborative learning, so future research should investigate this issue.

Previous research has already cast some doubt on the empirical validity of Hofstede's cultural dimensions in the educational context . Likewise, many of this study's findings also contradict the theoretical expectations, further supporting this doubt. What is more, the application of Hofstede's framework within the educational context has been accused of oversimplifying cultural differences, using inconsistent categories, and viewing culture as a static construct . It is strongly debatable as to whether nationality can, or should be, used as a proxy for individual scores for cultural dimensions. This study also supports the notion that Hofstede's 6D model oversimplifies a culture by reducing it to standalone factors rather than considering their combined simultaneous effects. Furthermore, the model also conceptualizes culture in a rather static way because it disregards the fact that several aspects of culture can be adapted to a new learning environment.

However, previous researchers have stopped short of suggesting steps towards building a new framework for cultural dimensions, one that is more attuned with learning and education.

Future research should therefore consider building a more appropriate framework for understanding the dimensions related to cross-cultural learning. It would be even more fruitful to develop an altogether endogenous framework that is more suitable for exploring the influence of culture on learning and education. Such a model should identify the various dimensions of culture beyond those of national identity and consider how they jointly influence attitudes towards collaborative learning rather than considering them in isolation. This model should also take a more dynamic approach by accepting that many cultural aspects of collaborative learning can be learned within a new learning environment.

References

Ailon, G. (2008). Mirror, mirror on the wall: Culture's consequences in a value test of its own design. *Academy of Management Review*, *33*(4), 885–904.

Ayoko, O., Callan, V., & Härtel, C. (2008). The Influence of Team Emotional Intelligence Climate on Conflict and Team Members' Reactions to Conflict. *Small Group Research*, *39*(2), 121–149.

Barron, B. (2003). When Smart Groups Fail. *Journal of the Learning Sciences*, *12*(3), 307–359.

Beugelsdijk, S., Kostova, T., & Roth, K. (2017). An overview of Hofstede-inspired country-level culture research in international business since 2006. *Journal of International Business Studies*, *48*, 30–47.

Bochner, S., & Hesketh, B. (1994). Power Distance, Individualism/Collectivism, and Job-Related Attitudes in a Culturally Diverse Work Group. *Journal of Cross-Cultural Psychology*, *25*(233).

Cagiltay, K., Bichelmeyer, B., & Akilli, G. K. (2015). Working with multicultural virtual teams: critical factors for facilitation, satisfaction and success. *Smart Learning Environments*, *2*(11), 1–16.

Cantor, N. (2004). Introduction. In P. Gurin, J.S. Lehman, E. Lewis, E. L. Dey, S. Hurtado, & G. Gurin*, Defending diversity. Affirmative action at the University of Michigan* (pp. 1–16). Michigan: University of Michigan Press.

Chiang, F. (2005). A critical examination of Hofstede's thesis and its application to international reward management. *The International Journal of Human Resource Management*, *16*(9), 1545–1563.

Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research*, *64*(1), 1–35.

Cronise, R. (2016). Collaborative Learning: A Next Step in the Training of Peer Support Providers. *Psychiatric Rehabilitation Journal*, *39*(3), 292–294.

Dennehy, E. (2015). Hofstede and learning in higher level education: an empirical study. *International Journal of Management in Education*, *9*(3), 323–339.

Dunne, C. (2013). Exploring motivations for intercultural contact among host-country university students: An Irish case study. *International Journal of Intercultural Relations*, *37*(5), 567–577.

Edmundson, A. (2007). *Globalized E-Learnig Cultural Challenges.* Hershey: Information Science Publishing.

Hall, E. T. (1959). *The silent language.* New York: Doubleday and Company, Inc.

Healey, N. M. (2008). Is higher education in really 'internationalising'? *Higher Education*, *55*, 333–355.

Hofstede Insights (2020). *Hofstede Insights.* Retrieved from https://www.hofstede-insights.com/product/compare-countries/. Access:17.08.2020.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organizations: Intercultural Cooperation and Its Importance for Survival.* New York: McGraw Hill.

House, R., Javidan, M., Hanges, P., & Dorfmand, P. (2002). Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE. *Journal of World Business*, *37*(1), 3–10.

Huberty, C. J., & Morris, J. D. (1989). Multivariate analysis versus multiple univariate analysis. *Psychological Bulletin*, *105*, 302–308.

Kennedy, P. (2002). Learning cultures and learning styles: myth-understandings about adult (Hong Kong) Chinese learners. *International Journal of Lifelong Education*, *21*(5), 430–455.

Kirkman, B. L., Lowe, K. B., & Gibson, C. B. (2006). A quarter century of ''Culture's Consequences'': A review of empirical research incorporating Hofstede's cultural values framework. *Journal of International Business Studies*, *37*(3), 285–320.

Latane, B., Williams, K., & Harkins, S. (1979). Many Hands Make Light The Work: The Causes and Consequences of Social Loafing. *Journal of Personality and Social Psychology*, *37*(6), 822–832.

Lattuca, L. R. (2016). Learning Interdisciplinarity: Sociocultural Perspectives on Academic Work. *The Journal of Higher Education*, *73*(6), 711–739.

Magin, D. J. (1982). Collaborative peer learning in the laboratory. *Studies in Higher Education*, *7*(2), 105–117.

Manikutty, S., Anuradha, N., & Hansen, K. (2007). Does culture influence learning styles in higher education? *International Journal of Learning and Change*, *2*(1), 70–87.

McSweeney, B. (2002). Hofstede's Model of National Cultural Differences and their Consequences: A Triumph of Faith–a Failure of Analysis. *Human Relations*, *55*(1), 89–118.

Meyer, E. (2014). *The culture map: breaking through the invisible boundaries of global business.* New York: PublicAffairs.

Newell, C., & Bain, A. (2018). *Team-Based Collaboration in Higher Education Learning and Teaching: A Review of the Literature.* Singapore: Springer.

Ngwainmbi, E. K. (2004). Communication in the Chinese Classroom. *Education*, *125*(1), 63–76.

Nisbett, R. E., Choi, I., Peng, K., & Norenzayan, A. (2001). Culture and systems of thought: Holist versus analytic cognition. *Psychological Review*, *108*(2), 291–310.

OECD(2021). Retrieved from Foreign / International Students Enrolled: https:// stats.oecd.org/Index.aspx?DataSetCode=RFOREIGN. Access: 4.06.2021.

Popov, V., Brinkman, D., Biemans, H. J., Mulder, M., & Kuznetsov, O. N. (2012). Multicultural Student Group Work in Higher Education: An Explorative Case Study on Challenges as Perceived by Students. *International Journal of Intercultural Relations*, *36*(2), 302–317.

Rozkwitalska, M., Chmielecki, M., Przytuła, S., Sulkowski, L., & Basinska, B. A. (2017). Intercultural interactions in multinational subsidiaries: employee accounts of 'the dark side' and 'the bright side' of intercultural contacts. *Baltic Journal of Management*, *12*(2), 214–239.

Rozkwitalska, M., Sułkowski, Ł., & Magala, S. (Eds.) (2017). *Intercultural Interactions in the Multicultural Workplace: Traditional and Positive Organizational Scholarship.* Geneva: Springer International Publishing Switzerland.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, *25*(1), 1–65.

Signorini, P., Wiesemes, R., & Murphy, R. (2009). Developing alternative frameworks for exploring intercultural learning: a critique of Hofstede's cultural difference model. *Teaching in Higher Education*, *14*(3), 253–264.

Smith, P. B., & Dugan, S. (1998). Individualism, Collectivism and the Handling of Disagreements: A 23 Country Study. *International Journal of Intercultural Relations*, *22*(3), 351–367.

Stahl, G. K., Maznevski, M. L., Voigt, A., & Jonsen, K. (2010). Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups**.** *Journal of International Business Studies*, *41*(4), 690–709.

Taimitarha, S. (2011). Web questionnaires with Webropol: a guide for Hanken-users. *Hanken School of Economics*. Retrieved from https://www.hanken.fi/sites/ default/files/atoms/files/webquestionnaireswithwebropol20.pdf. Access: 21.07.2021.

Teichler, U. (2009). Internationalisation of higher education: European experiences. *Asia Pacific Education Review*, *10*, 93–106.

Van Bouwel, L., & Veugelers, R. (2013). The Determinants of Student Mobility in Europe: The Quality Dimension. *European Journal of Higher Education*, *3*(2), 172–190.

Wang, Y. (2012). Mainland Chinese students' group work adaptation in a UK business school. *Teaching in Higher Education*, *17*(5), 523–535.

Williamson, D. (2002). Forward from a critique of Hofstede's model of national culture. *Human Relations*, *55*(11), 1373–1395.

Volet, S. (2004). Challenges of internationalisation: Enhancing intercultural competence and skills for critical reflection on the situated and non-neutral nature of knowledge. In P. P. Zeegers, K. K. Dellar-Evans, *Language & academic skills in higher education* (pp. 1–10). Adelaide: Flinders University.

Von Queis, D. (2005). *Teaching and learning in different cultures: requirements for culturally sensitive instruction.* Paper presented in the Proceedings of the First International Conference. Singapore, October 5–7: CD ISBN 981-05-4450-2.

Zhou, W., & Shi, X. (2011). Culture in groups and teams: A review of three decades of research. *International Journal of Cross Cultural Management*, *11*(1), 5–34.