Interdisciplinary Journal of Problem-Based Learning

IJPBL
http:// ijpbl.org

Published online: 5-6-2016

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Recommended Citation

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Challenges Experienced by Korean Medical Students and Tutors During Problem-Based Learning: A Cultural Perspective

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How people learn is influenced by the cultural contexts in which their learning occurs. This qualitative case study explored challenges Korean medical students and tutors experienced during their PBL sessions from a cultural perspective using Hofstede's cultural dimensions. Twelve preclinical medical students and nine tutors from a large Korean medical school participated in interviews. The interview data were analyzed using the constant comparative method and classified according to Hofstede's cultural dimensions. Twenty-two themes emerged within the following overarching categories: large power distance (6 themes), high uncertainty avoidance (6), individualism (3), collectivism (4), and masculinity/short-term orientation (3). This article discusses culturally responsive solutions with regard to each cultural dimension, which would help overcome these challenges and enhance the experiences of students and tutors with PBL.

Keywords: problem-based learning (PBL), cultural dimensions, medical education

Introduction

There is always a gap between theory and practice in education. This gap is often exaggerated when theory is not properly in tune with culturally bounded implementation contexts (Charlesworth, 2008; Hofstede, 1986; Parrish & Linder-VanBerschot, 2010; Phuong-Mai, Terlouw, & Pilot, 2005; Zhang, 2007, 2010). Problem-based learning is not an exception.

Since problem-based learning (PBL) was initially developed by Howard Barrows and his colleagues at McMaster University's medical school in the late 1960s, it has been widely used in higher education, including health professions education, in North America (Albanese & Mitchell, 1993; Hung, 2006; Khoo, 2003; Lim, 2012; Nendaz & Tekian, 1999; Neville, 2009; Savery, 2006; Savery & Duffy, 1995). The PBL method includes students' active participation in problem solving, student-led discussions, self-directed learning, and a tutor's facilitation of students' problem-solving activities (Barrows, 1996; Hung, 2011; Savery, 2006; Savery & Duffy, 1995). In theory, PBL is expected to enhance students' problem-solving abilities and surpass conventional didactic teaching methods. In practice, however, many students and tutors have encountered various challenges, such as inactive participation in student-led discussions (de Grave, Dolmans, & van der Vleuten, 2001; Kindler, Grant, Kulla, Poole, & Godolphin, 2009), students' concerns about their perceived lack of knowledge (Glew, 2003; Kindler et al., 2009), and tutors' lack of understanding about the roles of tutors (Azer, 2001; Moust, van Berkel, & Schmidt, 2005; Ward & Lee, 2002) during their PBL experiences. In addition, PBL often generates conflicts with the traditional approach to teaching and conventional expectations, such as "long-term effects versus immediate learning outcomes," "depth versus breadth of the curriculum," and "higher order thinking versus factual knowledge acquisition" (Hung, Bailey, & Jonassen, 2003, p. 13).

While suffering mixed perceptions and results in practice, PBL has been introduced in a number of medical schools in several Asian countries, including South Korea (Kim et al., 2004), Hong Kong, Taiwan, Singapore, and Japan (Servant, 2013), with the hope that PBL will enhance the quality of students' learning experiences. As expected, the medical students and tutors in Asian countries have experienced challenges (Chang et al., 2001; Hussain, Mamat, Salleh, Saat, & Harland, 2007; Tsou et al., 2009) similar to those reported in the American context (Hung, 2011). However, several

studies (e.g., Khoo, 2003) indicated that different challenges might be experienced by Asian medical students and tutors during their PBL sessions, such as a lack of collaboration and discussion among students and a passive attitude toward PBL, which may jeopardize the PBL curriculum.

We believe that it will be meaningful to analyze and explain the challenges experienced by Asian students and tutors during their PBL sessions from a cultural framework, because how people learn is influenced by the cultural contexts in which the learning occurs (Charlesworth, 2008; Chuang, 2012). The concept of PBL originally emerged in Western cultures, which is different from the cultures in Asian countries. To develop appropriate pedagogical and implementation strategies to accommodate these cultural differences, certain adjustments are needed for learners from different cultural backgrounds (Frambach, Driessen, Chan, & van der Vleuten, 2012; Gwee, 2008; Parrish & Linder-VanBerschot, 2010; Phuong-Mai et al., 2005).

We implemented the current study in South Korea as one of the Asian countries. Thus, the purpose of this study was first to explore the challenges Korean medical students and tutors experienced during their PBL sessions through a cultural framework, and second to find culturally responsive suggestions to enhance the PBL experiences of the Korean students and their tutors.

Research Questions

The following research questions guided this study:
1. What challenges have Korean medical students and tutors encountered during their PBL sessions?
2. How are these challenges explained by their cultural framework?
3. What are culturally responsive suggestions to enhance students' and tutors' PBL experiences?

Theoretical Framework: Hofstede's Cultural Dimensions

We applied Hofstede's cultural dimensions to our study, because Hofstede's cultural dimensions have been widely used as a cultural framework in the social sciences and in cross-cultural studies (Cronjé, 2011; Soares, Farhangmehr, & Shoham, 2007; Yoo, Donthu, & Lenartowicz, 2011). There are other models for analyzing culture, as well. For example, Clark (1990) proposed cultural dimensions such as relation to self, relation to authority, and relation to risk; Schwartz's (1994) model includes hierarchy vs. egalitarianism, autonomy vs. conservatism, and mastery vs. harmony. Compared to these models, Hofstede's cultural dimensions offer more comprehensive conceptualizations of culture among them (Soares et al., 2007; Yoo et al., 2011).

Hofstede (2001) defined culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (p. 9). Through his empirical studies across 70 different countries, Hofstede identified and validated five dimensions of culture—power distance, uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity, and long-term vs. short-term orientation (Hofstede, 2001). Based on the five dimensions of culture, cultural profiles of communities can be developed and compared with one another. For example, according to Hofstede's research measuring the degree of each cultural dimension among IBM employees in different countries (Hofstede, Hofstede, & Minkov, 2010), South Korea has a larger power distance and higher uncertainty avoidance than the United States. On the other hand, the United States is considered a highly individualistic and masculine society compared to South Korea. Regarding the long-term orientation dimension, South Korea is one of the most long-term oriented countries, whereas the United States is on the low side.

Hofstede's cultural profile can be applied to differentiate classroom cultures and to understand their associated learning and teaching approaches. For example, the dimension of power distance can determine the extent to which students depend on their teacher(s) (Hofstede, 1986; Phuong-Mai et al., 2005). In a large power distance situation, teachers are more likely to be treated with respect by students both inside and outside of class. Students tend to express their opinions only when invited, and without a leader in a learning group, students may experience a stagnant group process (Hofstede, 2001; Hofstede et al., 2010; Phuong-Mai et al., 2005). A larger power distance may promote teacher-centered educational approaches (Hofstede, 2001; Hofstede et al., 2010). On the other hand, in a small power distance classroom, student-centered learning environments are most likely promoted (Hofstede, 2001; Hofstede et al., 2010). Teachers may treat students as equals and vice versa, students are more likely to be allowed to debate with their teachers and to express criticism in front of teachers, and students share leadership in a peer group (Hofstede, 2001; Hofstede et al., 2010). Thus, as summarized in Table 1, PBL, a student-centered educational approach, is likely to be better facilitated in a small power distance culture.

Second, for the uncertainty avoidance dimension, students from a high uncertainty avoidance culture tend to regard their teachers as experts who have all the answers, seek the right answers, and feel comfortable through well-structured learning (Hofstede, 2001; Hofstede et al., 2010). In a low uncertainty avoidance culture, teachers may say, "I do not know" in front of their students, which is acceptable to the students; the students may believe that the truth or theories might be relative (Hofstede, 2001; Hofstede et al., 2010); and they are willing to seek critical analyses of theories for

Table 1. A profile of the five cultural dimensions of PBL.

Cultural dimension (Hofstede, 2001)	Culture profile promoting PBL
Power distance (Small vs. Large)	**Small**
The extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally.	• The educational process is student-centered • Students treat teachers as equals • Teachers expect students to initiate communication
Uncertainty avoidance (Low vs. High)	**Low**
The extent to which the members of a culture feel threatened by ambiguous or unknown situations.	• Students expect open-ended learning situations and good discussions • Teachers are allowed to say "I don't know"
Individualism vs. Collectivism	**Individualism with Collectivism**
The extent to which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family only.	• Teachers deal with individual students • Students are expected to speak up in class in response to a general invitation by the teacher • Confrontation or conflicts can be salutary • Formal harmony should be maintained (collectivism)
Masculinity vs. Femininity	**Femininity**
The extent to which emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, gentle, and concerned with the quality of life.	• Students' social adaptation is regarded as important • Failing in school is a minor problem • The quality of learning and intrinsic interests are stressed
Long-term vs. Short-term orientation	**Long-term orientation**
The extent to which the fostering of virtues is oriented toward future rewards—in particular, perseverance and thrift.	• Long-term virtues (e.g., future oriented, perseverance) are regarded as important • Students may be patient with the results of their learning

problem solving (Hofstede, 1986). Students with high uncertainty avoidance may have difficulty engaging in discussion or group learning with ill-structured tasks, because group work tends to require them to be more open to new ideas and willing to take risks (Phuong-Mai et al., 2005; Strijbos, 2000; van Rijn, Bahk, Stappers, & Lee, 2006). For PBL using ill-structured problems, students' engagement in problem solving is more likely to be encouraged in low uncertainty avoidance cultures. Interestingly, the uncertainty avoidance dimension is highly related to epistemological beliefs that are defined as "beliefs about the nature of knowledge and the nature of learning" (Schommer, 1994, p. 25), which can

affect how individuals understand the nature of intellectual tasks and decide on what kind of strategies are appropriate for dealing with them (Hofer, 2004; Kitchener, 1983; Schommer, 1990, 1994). For example, Schommer's (1990) study showed that students who viewed knowledge as certain were likely to generate absolute conclusions in a writing task and to interpret tentative findings to be unchanging, fixed facts. Epistemological beliefs can also be considered as socially and culturally shaped mental constructs, which are acquired in educational settings with different historical traditions or values (Jehng, Johnson, & Anderson, 1993; Schoenfeld, 1998). This can suggest that differences in the individual

construct may be reflected at the cultural level such as the uncertainty avoidance dimension (Charlesworth, 2008; Parrish & Linder-VanBerschot, 2010; Hofstede, 2001).

Third, for the individualism/collectivism dimension, teachers in a collectivist culture are more likely to deal with students as part of a group, not as isolated individuals (Hofstede, 2001; Hofstede et al., 2010). This cultural dimension may have a particular effect on group interactions or discussions (Hall, de Jong, & Steehouder, 2004). For example, while students in an individualistic culture tend not to be afraid of speaking up, students in a collectivistic culture tend to avoid sharing their personal ideas for fear of being thought silly or to avoid arguing so that they will maintain the virtue of harmony (Hall et al., 2004; Hofstede, 2001; Hofstede et al., 2010). Carson and Nelson's (1996) study showed that learners who pursued group harmony were reluctant to initiate comments and avoided challenging each other's work during group discussions. Central to PBL would be an individualistic culture that can encourage students to actively participate in group discussions, but a collectivistic culture with the emphasis on group harmony is also necessary for collaborative learning.

Fourth, for the masculinity/femininity dimension, students in a feminine culture may practice mutual solidarity, and they may value the quality of learning and intrinsic motivation for learning (Hofstede, 2001; Hofstede et al., 2010). In contrast, students in a masculine culture may try to compete with others to be the best, and because they value the extrinsic rewards of learning, they may find it disastrous to fail in school (Hofstede, 2001; Hofstede et al., 2010). This cultural dimension will result in different learning styles of students across different cultures; for example, Park's (2002) study found that students in cultures that value competition more than cooperation have a preference for working individually over group learning. Moreover, how students evaluate teaching is affected by this cultural dimension—teachers' academic reputations, brilliance, and performance are considered significant in a masculine culture, whereas teachers' friendliness is appreciated in a feminine culture (Hofstede, 2001; Hofstede et al., 2010). For PBL, feminine cultures will motivate students to take initiatives in the problem-solving process as well as the learning process with a cooperative social mind rather than a competitive one.

Finally, for the short-term orientation (STO)/long-term orientation (LTO) dimension, individuals in a STO culture tend to focus on clock time or schedules and do one thing at a time, whereas those in a LTO culture believe that they can change plans and schedules flexibly to suit their needs (Phuong-Mai et al., 2005). In terms of learning, this dimension can also be related to how patient learners are with the results of their learning; for example, while learners from a STO culture believe that their efforts should produce immediate results, others from a LTO culture may take time to digest the materials

(Hofstede, 2001; Hofstede et al., 2010). PBL aims for long-term oriented learning outcomes, focusing on self-directed learning, real-world problem solving, collaboration, and communication, instead of memorization and understanding that can be achieved over a short term (Hung et al., 2003). Thus, PBL can be effectively promoted in a long-term orientation culture.

As we reviewed Hofstede's cultural dimensions focusing on learning contexts in particular, we realized that the masculine culture can be associated with the short-term orientation culture, because students in the masculine culture tend to be more concerned about their learning outcomes (e.g., grades) that produce immediate results, rather than concerning themselves with their continuous learning process as students would in a long-term orientation culture. Along with this, the feminine culture can be closely related to the long-term orientation culture, since the students in the two cultures may be more process-oriented for their learning. Thus, we considered combining the masculine and short-term orientation dimension together as well as combining the feminine and long-term orientation for our study.

Andrews (2010) pointed out that "Hofstede's dimensions may help explain not only how educational practices evolved in different countries but also differences between countries" (p. 4). In terms of educational settings where cultures differ, Hofstede (1986) suggested using his cultural dimensions to investigate the following areas: differences in the social positions of teachers and students; the relevance of the curriculum, cognitive abilities, and processes of teacher/student and student/student interactions. Hofstede's cultural dimensions can be employed to discover what cultural factors exist and the extent to which each cultural dimension affects people's methods of and experiences with teaching and learning.

Methods

Research Design and Context

A case study design can be used to gain an understanding of the meaning individuals make through contexts over which researchers have little or no control, and to cover the contextual conditions that are relevant to a phenomenon under investigation (Merriam, 1998; Yin, 2008). This study employed a qualitative case study design to explore Korean medical students' and tutors' challenges with PBL from a cultural perspective at one of the largest six-year medical colleges in South Korea. The six-year medical education system, which is the dominant model in Korea, consists of a two-year premedical, two-year preclinical, and two-year clinical curriculum. The majority of students in these medical schools are admitted right after completing their high school education, based on high school grades and nationwide college exams.

The preclinical curriculum at this school includes 14 organ system block courses (e.g., cardiovascular, pulmonary system, etc.), and each block course consists of one week of PBL followed by three or four weeks of lectures. This school has adopted Barrow's model of PBL (Barrows, 1985; Barrows & Tamblyn, 1980). Thus, one-fourth of this school's first- and second-year preclinical curriculum consists of PBL, which was the primary reason for selecting this school as the research site. One hundred first-year and 103 second-year medical students participated in the PBL sessions according to the college's schedule during the fall of 2012. For each PBL module, a total of 30 small groups of six to seven students (15 groups of first-year and 15 groups of second-year students) had three tutorial sessions facilitated by 30 medical professors, one per group, who had experience with PBL tutoring.

Small groups of six to seven students and one tutor met for two-hour blocks three times a week (Monday, Wednesday, and Friday) to work on a clinical case for each PBL module. In the first tutorial session, as demonstrated in Figure 1, the students were presented with a clinical case in the format of a videotaped real or simulated patient and were asked to perceive cues, formulate an initial concept of the patient's problem, generate multiple hypotheses responsible for the patient's problem, conduct inquiry strategies (such as history taking and physical examinations), and then reformulate the patient's problem. Next, the students engaged in furthering their inquiry strategies, such as determining laboratory tests, analyzing and synthesizing data, and making diagnostic decisions, during the second tutorial session. In the third tutorial session, the students made therapeutic decisions, discussing acute and long-term management plans for the patient's problem. During the tutorial sessions, small groups identified and listed learning goals that they needed to study additionally. Also, each small group was required to produce two versions of their group concept map: an initial concept map representing categories of ideas about the possible causes of a patient's problem, including diseases or mechanisms based on the group's brainstorming; and a revised concept map representing a more hierarchical classification of the possible causal diseases, focusing more on pathophysiological mechanisms of the diseases.

Participants and Data Collection

The participants for this study were four first-year and eight second-year preclinical students who had finished two years of premedical coursework and had participated in PBL courses. Initially, we recruited one volunteer in every other group of 15 groups from each year, expecting a total of eight students from each year, using a stratified purposeful strategy (Patton, 1990), but four of the eight first-year students could not be interviewed due to schedule conflicts.

Also, nine tutors participated in this study. By applying a criterion strategy (Patton, 1990), we identified and recruited faculty members who have had experience with PBL tutoring for more than two years. All participants were informed about the study and consented to be part of it.

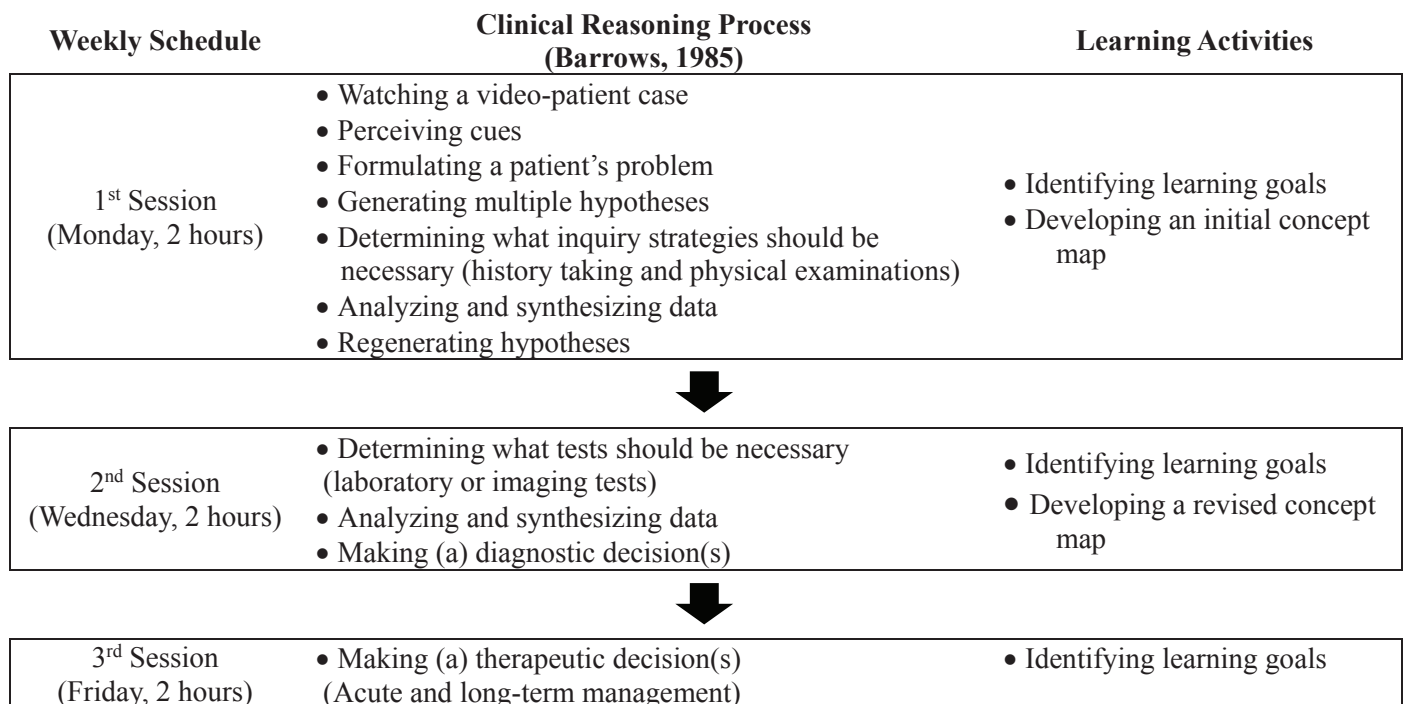| Weekly Schedule	Clinical Reasoning Process (Barrows, 1985)	Learning Activities
1st Session (Monday, 2 hours)	• Watching a video-patient case • Perceiving cues • Formulating a patient's problem • Generating multiple hypotheses • Determining what inquiry strategies should be necessary (history taking and physical examinations) • Analyzing and synthesizing data • Regenerating hypotheses	• Identifying learning goals • Developing an initial concept map
2nd Session (Wednesday, 2 hours)	• Determining what tests should be necessary (laboratory or imaging tests) • Analyzing and synthesizing data • Making (a) diagnostic decision(s)	• Identifying learning goals • Developing a revised concept map
3rd Session (Friday, 2 hours)	• Making (a) therapeutic decision(s) (Acute and long-term management)	• Identifying learning goals

Figure 1. The problem-based learning process used in the medical school.

The data sources included individual or focus-group interviews. Each interview lasted for 30 to 60 minutes. During the interviews, the participating students and tutors were asked about challenges they had experienced during their previous PBL sessions (e.g., "Would you articulate particular challenges you have experienced during the PBL sessions?" "Would you share your thoughts about the possible reasons for the challenges you have experienced during the PBL sessions?").

Data Analysis

All of the interviews were audio-recorded and transcribed verbatim. For the analysis of the interview data, the constant comparative method (Glaser & Strauss, 1967) was adopted to construct categories and themes that captured recurring patterns that emerged from the data through coding and categorizing (Anfara, Brown, & Mangione, 2002; Ragin, 1987). Initially, the first two authors independently read and analyzed each transcript using open coding (Strauss & Corbin, 1990). During the open coding phase, the transcripts were analyzed by segmenting and labeling the text to identify units that expressed meaningful and unique ideas and forming initial codes (Charmaz, 2006; Strauss & Corbin, 1990), and the comparisons of data with other data and data with codes were conducted within each interview (Boeije, 2002; Charmaz, 2006). Next, the two authors independently utilized axial coding to organize, synthesize, and sort the initial set of codes into categories for discovering patterns or themes (Boeije, 2002; Charmaz, 2006; Strauss & Corbin, 1990). Once relevant codes were identified, they were grouped together into meaningful categories as potential themes according to principles of convergence, looking for recurring regularities in the data (Boeije, 2002; Creswell, 2007). In this process, constant comparisons were made between the initial codes from the open coding process within and between students' and tutors' interview data. Comparisons were also made between the categories (potential themes) that emerged from the grouping of the codes (Anfara et al., 2002; Charmaz, 2006; Glaser & Strauss, 1967). The first two authors then came together to compare, discuss, and negotiate the occurrence and interpretation of their categories until a consensus was reached, and to develop and refine themes, deciding on an informative name for each theme. As a result, a total of 38 themes initially emerged. These themes, along with the supporting data, were reviewed and confirmed by the two remaining authors who are medical educators. Finally, the themes were classified and combined into categories according to Hofstede's five cultural dimensions—power distance, uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity, and long-term vs. short-term orientation—using the constant comparative method. Some themes that did not fit into the five cultural dimension categories

were classified as non-cultural factors. Agreement on the classification and interpretation of the themes was reached through discussions between the first two authors.

Results

As a result of the data analysis, a total of 32 themes finally emerged. In terms of Hofstede's cultural dimensions, 22 challenges were identified: large power distance (6 themes), high uncertainty avoidance (6), individualism (3), collectivism (4), and masculinity/short-term orientation (3). The ten remaining challenges (e.g., students' individual differences in personality and tutors' overload in clinical work and research) were classified into a non-cultural factor category and were not included for further analysis.

The appendix demonstrates how challenges experienced by the students and the tutors during PBL tutorial sessions were related to Hofstede's five cultural dimensions and includes corresponding excerpts from the interviews.

Large Power Distance

The results of the interview analysis revealed that the students and the tutors were in a culture with a larger power distance. For example, the students had a strong tendency to avoid speaking in front of their tutors. A first-year female student said, "It is hard to voice my opinion in front of a [tutor]. Without a tutor, I feel comfortable discussing things with my classmates, but with a tutor, I'm worried about whether I might look silly to the tutor [if I don't answer correctly]." This indicates that the teacher-student relationship was formal and that the students expected the teachers to always take the initiative. Along the lines of the power distance, we also found that both the students and the tutors had been exposed to teacher-centered learning environments, which promoted a large power distance between students and teachers in classrooms. For example, a second-year male student responded, "Korean educational systems include many conventional teaching methods. We're familiar with the methods [lectures], and in college, we don't have opportunities to improve our creativity and reasoning abilities . . . ." This student conveyed that he did not have an opportunity to express himself and talk in class. Rather, he seemed to be trained to sit down and listen to his teacher, which is considered good classroom behavior in Korea. Accordingly, the students tended to be unwilling to engage in activities related to self-directed learning, such as identifying and listing learning goals (issues) and preparing for PBL tutorial sessions, because of Korean students' tendencies to be dependent on lectures or teachers. The tutors in the study had a lack of understanding about the tutor's role in PBL, which was caused by their unfamiliarity with

student-centered learning methods, reflecting what one tutor said in the interview, "We [tutors] are used to delivering knowledge to students." In addition, the tutors reportedly did not receive any feedback on their tutoring performance from their students. This is another indicator of a large power distance culture in which teachers should always be treated with deference (Hofstede 2001; Hofstede et al., 2010).

High Uncertainty Avoidance

The students and the tutors tended to avoid uncertainty/ambiguity. The students were anxious about their uncertain opinions or ideas and their lack of prior knowledge. A first-year male student said in his interview, "They [my group members] seem to hesitate to share their opinions in front of others, because they are afraid that their ideas might be wrong. In PBL, because there are a lot of things that we don't know, the discussion often gets stuck. I'd like to provide exact evidence to support my opinion, but I always wonder if what I say is right." This shows his tendency toward avoiding uncertainty, which is related to students' expectations to be rewarded for correct answers and accuracy. Also, the students felt uncomfortable having discussions with peers; a second-year student addressed, "We waste time having a groundless discussion. I feel that we're not acquiring accurate knowledge by ourselves." This student was anxious about multiple interpretations from his peers and hesitant about trusting his peers' statements, because he believed that accurate knowledge is expected to come from teachers or experts. The tutors were concerned about their lack of domain-specific knowledge when they were assigned to facilitate students' discussions about a topic with which they were unfamiliar. A male tutor said, "We, as [tutors], think that we should know everything. But, when we don't have a thorough knowledge of the topic being discussed by the students during the PBL session, we feel uneasy." This indicates the tutor's belief that teachers should be authorities who have all of the answers; if a teacher's answer was "I do not know," this would not be acceptable (Hofstede 2001; Hofstede et al., 2010). In addition, the students tended to follow the exact processes or structures for PBL activities the way they were trained in the orientation for the PBL sessions. One female student said, "When I don't understand what others say, I'd like to feel free to ask them. But, formal discussion makes it difficult, because we should follow the given structures and should not break the flow of discussion." Sticking to certain formats or structures of PBL may reflect a culture of high uncertainty avoidance, and this challenge may limit students' engagement in active discussions, such as sharing ideas, asking each other questions, or providing each other with feedback. Moreover, according to the tutors' interviews, the students focused less on learning how to learn than they did on memorization and rote learning in acquiring knowledge. This led them to lack self-directed learning skills,

including identification of their learning needs and information-seeking skills, which can reflect aspects of a high uncertainty avoidance culture in which students tend to be receptive to rote memorization rather than learning through exploration and discovery (Hofstede, 2001; Hofstede et al., 2010; Phuong-Mai et al., 2005).

Individualism and Collectivism

Interestingly, a predominant culture between the individualistic and collectivistic cultures was not specifically determined in this study. Some challenges experienced by students and tutors can be related to both engaging in an individualistic culture, such as a preference for self-study over collaborative learning, and engaging in a collectivistic culture, such as a reluctance to cause discord in the group. Thus, the following sections discuss these findings involving the complexities in the individualism and collectivism dimensions respectively.

Individualism

The students had difficulty sharing information or knowledge from their self-study with others in a group. One female tutor responded in an interview, "The student-generated learning goals [contents for future study], discussed during the small group discussion, were assigned to each student, but after each student studied the contents assigned, these contents weren't shared with the other students." Also, some students perceived collaborative learning as ineffective compared with individual learning. A tutor explained, "One of students' dissatisfaction with PBL was that discussion is not effective for their study . . . . They [the students] find collaborative learning a waste of time, because it is slower than self-study. There is a difference in the degree of participation in collaborative learning among students, so students complain about this method." The students seemed to prefer working individually to working in groups so that they can have full control over their learning. In addition, one of the critical challenges for collaborative learning was the students' unequal participation during their discussions. A second-year female student reported, "Some students think that somebody may participate in the discussion if I [they] don't," and a tutor pointed out, "During discussion, there are one or two students who actively participate in the discussion, but the others are reluctant to participate in the discussion." Many students seemed to be very passive during the PBL sessions. These students did not appear to share mutual goals with their group members and to assume individual accountability to actively work in groups. These phenomena can be interpreted as the characteristics of an individualistic culture in which individuals are more independent from their groups and individual interests take priority over the group's interests (Hofstede 2001; Hofstede et al., 2010).

Collectivism

In addition to individualism, there are certain challenges observed that can be interpreted as indicative of a collectivistic culture. The students complained about peer evaluations. According to one student's response, "I think peer evaluation creates tension and makes us feel uncomfortable and dissatisfied." Many students also tended to avoid conflicting opinions during discussions; even though they had questions about others' ideas or disagreed with others, they would not express disagreement or criticism. These students seemed to value maintaining group harmony and not hurting anyone. In addition, some students hesitated to share their personal ideas; a tutor said, "There were no students who didn't speak at all [during the discussion], but most of the students seemed to respond very briefly—in a word or two—only when invited or when required to speak." This may be interpreted as indicating that many students might conceive of themselves as part of a group, believing that it is immodest to speak up without being allowed by the group to do so.

In terms of the tutors' challenges, the tutors had a lack of information about the individual students' learning processes. A tutor reported, "I'm not sure how much the students understand what they have learned in PBL. Because each student does the assigned work, no big problems occur in the following PBL session. Whether each student understands the contents well, or there are other reasons, I am not sure." This tutor seemed to think that individual students contributed to the group work, but she did not seem to have a clear understanding about how much progress the individual students have made or what challenges or problems they have during the group learning. This might be related to a collectivistic culture in which tutors tend to regard students as part of a group, rather than as isolated individuals. This phenomenon may make it difficult for the tutors to see each student's progress apart from the group's so that they can help the students reach their individual potentials.

Masculinity and Short-Term Orientation

The students tended to care more about the immediate results of learning rather than the process of learning for long-term benefits, which represents a culture of masculinity and short-term orientation. The students' biggest concern was their exam scores, the short-term learning outcomes that influenced the students' learning experiences. For example, one second-year female student said, "While studying, drawing a concept map may result in failing the exams. There are too many things to study in a limited time. Simply summarizing what I learned is a more effective strategy to prepare for tests, including practice with multiple choice and short-answer questions, rather than concept mapping." This student asserted that the mandatory concept map developed during the PBL sessions was ineffective for their examination preparation. In fact, the group concept

mapping exercise was required to supposedly promote better systematic clinical reasoning based on deeper pathophysiological knowledge; however, most students tended to jump to an illness diagnosis (the answer for the given problem) without engaging in the systematic clinical reasoning process during the PBL sessions. One tutor reported, "Students tend to overlook the mechanism of illness and jump to a certain diagnosis with only shallow knowledge." The tendency of these students to focus on finding a quick solution could be regarded as a typical pattern observed in novices (Houlden, Collier, Frid, John, & Pross, 2001; Moust et al., 2005). But it could also be viewed as an indicator of the short-term oriented masculine culture where a majority of the students value immediately visible results, such as their concept of getting good grades by finding the answer instead of enhancing their clinical reasoning for the benefit of the patients they will be treating in the future. In this culture, students would consider participation in discussion as a means of obtaining better scores, rather than as a means of developing their active knowledge, clinical reasoning, and collaborative communication skills, which are the primary educational objectives of PBL. This result is reflected in a tutor's response, "If we [tutors] don't evaluate students' participation in discussions, they [students] won't participate in the discussions at all . . . ." Ironically, while agreeing to evaluate students' participation in discussions, some tutors stated that they felt uncomfortable conducting relative evaluations by comparing each student's extent of participation in discussions against other students in the same group and assigning students individual grades based on these comparisons, because this type of evaluation might interfere with the collaborative learning aspects of PBL activities by unintentionally increasing the competitive learning environment, which is another indicator of a masculine culture. In this culture, students strive for success and to be the best, because a lower grade means failure for them and creates a sense of inferiority (Hofstede 2001; Hofstede et al., 2010).

Discussion and Recommendations

This study aimed to explore challenges experienced by Korean medical students and tutors during their PBL sessions from a cultural framework using Hofstede's cultural dimensions. We found that they had a particular learning culture that can be characterized as having a large power distance, high uncertainty avoidance, collectivism with minor individualism, masculinity, and short-term orientation. Interestingly, these cultural profiles are exactly the opposite profiles of the type of culture that may facilitate PBL, as summarized in Table 2. These findings allow us to understand why both the students and the tutors experienced such challenges during their PBL sessions. The challenges experienced certainly reflect the unnecessary

tensions and conflicts that were caused by the misalignment between the dominant culture to which the students and the tutors belonged and the desirable culture in which the original goals of PBL can successfully be promoted. Without addressing this issue of the cultural mismatch, it seems obvious that the PBL sessions implemented might not achieve the primary objectives of PBL. To ease both the students' and tutors' frustrations and to promote the quality of their learning experiences during the PBL sessions, it is important to cultivate a learning culture that characterizes a small power distance, low uncertainty avoidance, individualism with minor collectivism, femininity, and long-term orientation. It is also necessary to consider adapting the original strategies of PBL, or designing culturally responsive instructional strategies, in order to compensate for the different cultural characteristics. Further discussion for each cultural dimension and related recommendations are presented in the following sections.

Large Power Distance to Small Power Distance

The student-centered inquiry process is an essential activity for PBL (Barrows, 1996; Hung, 2011; Savery, 2006; Savery & Duffy, 1995). This student-centered inquiry can best be promoted in an environment where the power distance is small between students and teachers (Hofstede, 2001; Hofstede et al., 2010; Phuong-Mai et al., 2005). However, the results revealed that the students and the tutors had a large power distance (e.g., the students' tendency was to avoid expressing their ideas in front of the tutors).

To enhance the Korean students' experiences with PBL, reducing the power distance during the PBL sessions through multiple efforts could be considered. An effort could be made to establish a good rapport between students and tutors and to provide students with the authority to take part in critical discourse (Hussain et al., 2007). Another effort could be to promote a student-centered learning culture. To accomplish this, students should be guided as members of a group to assume individual accountability for actively working toward identifying learning issues and learning the contents independently (Barrows & Tamblyn, 1980; Johnson, Johnson, & Smith, 2007; Savery, 2006). For tutors, a proper tutor training program is needed to help tutors understand the philosophy of PBL and the rationale for employing PBL so that they can change their current teacher-centered learning mindset to a student-centered learning mindset (Barrows & Tamblyn, 1980; Hung, 2011). These changes would help tutors act primarily as facilitators, rather than as primary sources of information, to avoid their dominating students' problem-solving activities. Finally, appropriate guidance is necessary for students to be able to develop constructive feedback on their tutors' tutoring and to communicate the feedback with their tutors in a culturally appropriate manner. Likewise, tutors should be guided to have open minds to accept and use students' feedback on their tutoring to enhance their tutorial skills.

High Uncertainty Avoidance to Low Uncertainty Avoidance

Unlike traditional lectures, PBL requires students to explore unknown contents while solving given ill-defined problems (Barrows, 1996; Barrows & Tamblyn, 1980). Students are expected to learn how to learn in order to deal with ongoing uncertainty in problem situations. Thus, PBL can be ideally empowered in a culture where uncertainty can be acceptable. However, the current study revealed that the Korean students

Table 2. Classroom culture for PBL.

Cultural dimension	Predominant classroom culture in the Korean medical school	Ideal classroom culture for PBL
Power distance	Large	Small
Uncertainty avoidance	High	Low
Individualism/Collectivism	Collectivism with individualism	Individualism with collectivism
Masculinity/Femininity	Masculinity	Femininity
Long-term/Short-term orientation	Short-term orientation	Long-term orientation

and tutors showed a high level of avoidance of uncertainty (e.g., students' anxiety for sharing their uncertain ideas in discussion).

In an attempt to encourage the Korean students to actively participate in discussions, a low uncertainty avoidance culture should be cultivated, such as being non-judgmental of other participants' ideas and continuing to remind students that "all ideas have value." (Azer, 2004; Barrows & Tamblyn, 1980; Gwee, 2008). Moreover, it is necessary to develop or maintain a positive, supportive learning environment in which students are free to identify what they do not know (Azer, 2005; Barrows, 1985; Barrows & Tamblyn, 1980; Savery & Duffy, 1995). If tutors are able to carefully listen to students' concerns and empathically respond to them, the students will feel comfortable expressing opinions or emotions and be willing to take risks.

The current study also found that the tutors believed that they should have well-developed domain knowledge related to the problems covered in the PBL sessions in order to successfully facilitate student-led discussions. This challenge suggested that tutors should be clearly guided to understand that their responsibility is not to provide domain knowledge, but rather to guide students in small group discussions (Barrows & Tamblyn, 1980; Hung, 2011). In addition, tutors should be provided with an opportunity to develop their facilitation skills (Azer, 2005; Barrows, 1985, 1994).

Individualism with Minor Collectivism

PBL places emphasis not only on students' participation in expressing their own ideas and challenging each other's reasoning, but also on the virtue of harmony among members of the groups for collaborative learning (Springer, Stanne, & Donovan, 1999). In this study, however, we found that the students experienced difficulty engaging in discussions and collaborative learning, and we believe that it is important to integrate and counterbalance both the individualistic and collectivistic cultures in order to overcome these challenges.

The individualistic culture will allow students to be aware that disagreement and challenge can be acceptable and beneficial in critical discussions (Hussain et al., 2007). Indeed, cognitive conflicts encountered while interacting with peers with different perspectives can trigger students to articulate conflicting ideas, to seek more information, to explain and justify their ideas, and to negotiate possible solutions (Aarnio, Lindblom-Ylanne, Nieminen, & Pyorala, 2013; de Grave, Schmidt, & Boshuizen, 2001; Hmelo-Silver & Barrows, 2008; Nieminen, Sauri, & Lonka, 2006). On the other hand, a collectivistic culture needs to be cultivated in a way that students, as members of a group, will take responsibility for maintaining an effective group process for negotiated goals, mutual rewards, and shared resources (Azer, 2005; Barrows & Tamblyn, 1980; Johnson et al., 2007). For a group to be collaborative in PBL, students will need to perceive that

they are positively interdependent on the others in the group to reach their common goals (Johnson et al., 2007).

The role of well-trained tutors is also essential to overcome students' lack of engagement in discussion and collaborative learning. The tutors can guide and monitor an individual student's learning process by questioning, asking for opinions or clarification, giving well-timed and reinforcing feedback, and challenging individual students' thinking (Azer, 2005; Barrows, 1985, 1994; Barrows & Tamblyn, 1980; Ende, 1983; Savery & Duffy, 1995). They can also promote the balanced participation of everyone in a group—inviting quiet students into the discussions by asking for their opinions or ideas and managing dominant students by making suggestions that the group should hear other members' ideas (Barrows, 1985).

Masculinity/Short-Term Orientation to Femininity/Long-Term Orientation

PBL underlines process-oriented learning for long-term benefits. Through the process of solving clinical problems in PBL, medical students are gradually able to integrate basic scientific knowledge and clinical knowledge into their clinical reasoning skills for the benefit of their future patients (Barrows, 1985, 1994; Barrows & Tamblyn, 1980). In this study, however, we found that the students tended to be results-oriented in their learning for short-term benefits (e.g., focusing on exams and grades, seeking a specific diagnosis rather than taking the time to understand the mechanism of a patient's problem).

It is important to note that the learning culture characterized by the two cultural dimensions here (masculinity and short-term orientation) might be inherited by the surrounding cultures, such as the Korean medical community and the Korean society (e.g., a results-oriented society concerned with successful career development). Understanding the complexity of the cultural layers, we recommend limited solutions in order to cultivate a local culture promoting process-oriented learning for long-term benefits. One solution would be to enhance process-oriented evaluation in PBL (Anderson, Peterson, Tonkin, & Cleary, 2008). For example, the evaluation criteria and multiple instruments can be developed in a way that can gauge the process and/or the progress of students' learning and clinical reasoning as well as the contribution of each student to the group learning and problem-solving process (Anderson et al., 2008; Barrows, 1994; Barrows & Tamblyn, 1980; Valle et al., 1999). Enhanced evaluation needs to be accompanied with appropriate tutoring strategies that can enable students to participate in process-oriented learning. Tutors' modeling and scaffolding by questioning and providing students with constructive and formative feedback on students' learning processes could be possible examples (Barrows, 1985; Barrows & Tamblyn, 1980; Hewson & Little, 1998) that can be achieved through instituting proper tutor training

programs (Brukner, Altkorn, Cook, Quinn, & McNabb, 1999; Kaufman & Holmes, 1996).

Conclusion

The overarching goals of medical education are to produce doctors capable of (1) evaluating and managing patients with medical problems in an effective, efficient, and humane manner; and (2) evaluating their own abilities, determining when new knowledge and/or skills are needed, and continuing learning throughout their professional lives (Barrows, 1985, 1994; Barrows & Tamblyn, 1980). PBL has been known as one of the most effective methods for achieving these goals, supposedly by empowering medical students to actively engage in real-world problem solving, self-directed learning, and collaborative learning (Barrows, 1985, 1996; Barrows & Tamblyn, 1980).

To maximize the promised benefits of PBL, the findings of the current study suggest that it is essential to take into consideration the culture of the learning environment to which students and tutors belong, to cultivate a desirable culture for PBL, and to implement culturally responsive learning strategies in order to counterbalance the inherited cultural characteristics of the learning community. We conclude that if PBL is implemented without proper adaptations to improve compatibility with the cultural context of learners and tutors, cultural conflicts and challenges are likely to occur (Frambach et al., 2012; Phuong-Mai et al., 2005).

It is important to note that the findings of this study are limited by its focus on a single medical school in one region of Korea with a small sample size. Accordingly, the suggestions made in this study are bound to the local research site. Nevertheless, we believe that the findings offer a general understanding of the importance of cultural factors influencing students' and tutors' experiences with PBL. Also, while the suggestions proposed are by no means ultimate solutions, they provide implications toward the notion of culturally responsive pedagogy. For further studies, they should include more medical schools across different regions collecting data from multiple sources, including both qualitative (e.g., interviews, observations, discussion analysis) and quantitative (e.g., surveys, learning grades) data.

For further research, it is important to indicate that some challenges for the Korean medical students and their tutors in this study exist which are similar to those studies examining the challenges of medical students or PBL tutors in Western cultures. For example, according to Skinner, Braunack-Mayer, and Winning's (2015) study, Australian medical students perceived that group discussions during PBL involving uncertainty caused confusion, and they tended to prefer learning from texts rather than learning from group and PBL processes. Also, the Korean students' tendency to jump to a diagnosis of the patient's case in this study was similarly found in medical students in Western countries (e.g., de Grave et al., 2001). For tutors' challenges, some studies (e.g., Azer, 2001; Kaufman & Holmes, 1996) reported that tutors in Western medical schools had similar difficulty facilitating PBL tutorials (e.g., they were unsure about their roles and confused about when and to what extent to intervene) as did the tutors in this Korean medical school. These challenges shared by students and tutors in both Korean and Western cultures may be explained not only by the cultural factors but also by other individual or psychological factors. Therefore, further research should investigate and determine what factors attribute to the common and/or different challenges that medical students and their tutors in both Korean and Western cultures experience during PBL, and then different strategies should be developed to resolve their challenges or frustrations in order to enhance the quality of their experiences in PBL.

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Appendix

Challenges categorized according to Hofstede's five cultural dimensions

Category	*Characteristics of a classroom culture described by Hofstede et al. (2010)*	
	Challenges	**Excerpts from interviews**

Power distance (Large)

The educational process is teacher centered.

1. Students' tendency to avoid speaking in front of tutors

<Student 6> "It is hard to voice my opinion in front of a [tutor]. Without a tutor, I feel comfortable discussing things with my classmates, but with a tutor, I'm worried about whether I might look silly to the tutor [if I don't answer correctly]."

2. Students' prior experience with teacher-centered education

<Student 1> "Korean educational systems include many conventional teaching methods. We're familiar with the methods, and in college, we don't have opportunities to improve our creativity and reasoning abilities. We have been educated in such a way in the premedical courses, so we have a hard time engaging in PBL."

<Student 5> "I felt confused about the PBL process. We had to have discussions about given problems without any prior knowledge, and the method was unfamiliar to us."

3. Students' reluctance to set learning goals

<Student 1> "Generating and studying learning goals is bothersome."

<Tutor 4> "Students are unwilling to generate learning goals, because it means they will have more assignments. They think that they don't need to study learning goals immediately, because they will be able to learn them later in lectures . . . ."

4. Students' lack of preparation for PBL tutorial sessions

<Tutor 1> "Yesterday, a group had a discussion without any books or other materials. Some students discussed using evidence based on pathogenesis, whereas others didn't seem prepared for the discussion, because they had been busy."

5. Tutors' lack of understanding of the tutor's role

<Tutor 2> ". . . I'm not sure when and how to intervene in their [students'] discussions."

<Tutor 7> "There is a hierarchical culture, and we are used to 'delivering' knowledge to students . . . ."

<Tutor 8> "Most tutors have no experience with the PBL method."

<Student 2> "Clinical [tutors] attend PBL sessions as tutors. They have different styles of tutoring. While some only watched as we discussed, others led us to the answers they wanted when we didn't come up with the answers. When we followed the tutors' instructions, they sometimes told us, "You are passive in PBL." Because the tutors have different tutoring styles, we figured them out and tried to give them what they wanted."

Teachers are treated with respect, not criticized.

6. Lack of student feedback on the tutors' performance
    <Student 1> "We don't know how items for tutor evaluations are used, and we think that evaluating the tutors is not very important."
    <Tutor 1> "I always wonder how I'm doing as a tutor."

Uncertainty avoidance (High)

Students seek right answers.

7. Students' anxiety/fear of uncertain opinions
    <Student 5> ". . . They [my group members] seem to hesitate to share their opinions in front of others, because they are afraid that their ideas might be wrong. In PBL, because there are a lot of things that we don't know, the discussion often gets stuck. I'd like to provide exact evidence to support my opinion, but I always wonder if what I say is right."
8. Students' discomfort about the lack of prior knowledge
    <Student 1> "It was difficult to solve the problem in terms of pathophysiological mechanisms, because we haven't learned about that and we had a lack of knowledge about that."
    <Student 11> "I have a hard time engaging in discussion without prior knowledge."
9. Students' anxiety about discussions with peers to search for "knowledge"
    <Student 8> ". . . We waste time having a groundless discussion. I feel that we're not acquiring accurate knowledge by ourselves . . . . I wondered if our discussion was on the right track, but when we asked a tutor, he answered, 'You should find the answers on your own.'"

Students expect structured learning situations.

10. Lack of flexibility/informality during PBL discussions
    <Student 8> "When I don't understand what others say, I'd like to feel free to ask them. But formal discussion makes it difficult, because we should follow the given structures and should not break the flow of discussion."

Students learn truths are absolute.

11. Students' focus less on learning how to learn than on acquiring knowledge
    <Tutor 2> "Students have some knowledge, but they accumulate knowledge without knowing how to acquire knowledge in a general way. I think that they lack the ability to learn."
    <Tutor 9> "I'd like students to find and do what they need to study by themselves, but the problem is that they don't do so."

Teachers are supposed to have all the answers.

12. Tutors' discomfort about their lack of domain-specific knowledge
    <Tutor 1> "We, as [tutors], think that we should know everything. But, when we don't have thorough knowledge of the topic being discussed by the students during a PBL session, we feel uneasy."
    <Tutor 6> "There is specific-domain knowledge that we don't know at all."

<Tutor 8> "I don't know some of the medical terms necessary for the session."

| Individualism | *Individual interests prevail over collective interests.* |

13. Students' lack of ability to share individually studied content with their group members

> <Student 3> "I think that it is helpful when students share what they are studying with one another. Some classmates seem to understand exactly what they are studying, but they don't explain it to others in a way that can be easily understood. Depending on who the group members are, sharing ideas with others may or may not be useful."
> <Tutor 7> "The student-generated learning goals [contents for future study] discussed during the small group discussion were assigned to each student, but after each student studied the contents assigned, these contents weren't shared with the other students."

14. Students' perceptions on collaborative learning as ineffective

> <Tutor 7> "One of students' dissatisfaction with PBL was that discussion is not effective for their study . . . . Students aren't familiar with the notion of sharing knowledge with others. They find collaborative learning a waste of time, because it is slower than self-study. There is a difference in the degree of participation among students in collaborative learning, so students complain about this method."

15. Students' unequal participation in discussion

> <Student 8> "Some students think that somebody may participate in the discussion if I [they] don't. Those who are enthusiastic in class tend not to do group work but to work by themselves. Because they're unsatisfied with other people's work, they want to keep working on their own, which in turn makes them get stressed out . . . ."
> <Tutor 9> "During discussion, there are one or two students who actively participate in the discussion, but the others are reluctant to participate in the discussion."

| Collectivism | *The virtue of harmony and saving face reign supreme.* |

16. Students' discomfort with peer evaluation

> <Student 5> "I think it is wrong that we, ourselves, assess who actively or passively participated in class, because I may give better [peer] scores to close friends. For example, some days, one of my close friends doesn't speak out sharing his ideas, because he feels bad, but I will give him a good score, because he usually does a good job. But I won't do that with friends who are not as close. I seem to evaluate peers by giving them preferential treatment."
> <Student 7> "I think peer evaluation creates tension and makes us feel uncomfortable and dissatisfied."
> <Student 9> "Peer evaluation, itself, is subjective. I feel uncomfortable about peer evaluation, because we have to rate our classmates."

<Tutor 9> "There are students who have complained about peer evaluation saying, 'Why should we evaluate our peers?' . . . They regard peer evaluation as a means to be monitored by peers, rather than to be acknowledged by peers."

17. Students' avoidance of conflicting opinions
<Student 3> "We feel free in the discussion session [without a tutor]. I'm inclined to do as others do. When there were many students who are quiet or introverted, we didn't have a discussion . . . ."
<Student 4> "When we had a discussion by ourselves [without a tutor], our group members wanted to rest rather than discuss. I didn't want to go against the flow, even though I really wanted to share my ideas and discuss them with the group."
<Student 8> "I've never had any experience with a heated discussion with conflicts of opinions before."

Students speak up in class only when sanctioned by the group.

18. Students' unwillingness to voice their opinions, because being outspoken is regarded as immodest
<Tutor 1> "In discussion, some students who are very active or selfish tend to talk a lot, but other students who consider modesty an important virtue are unwilling to speak."
<Tutor 6> "There were no students who didn't speak at all [during the discussion], but most of the students seemed to respond very briefly—in a word or two—only when invited or when required to speak."

Teachers deal with students as a group.

19. Tutors' lack of information about individual students' learning processes
<Tutor 2> "We don't know what students do after all the PBL sessions. And we have few opportunities to check the concept maps that the students have made after they finish the PBL sessions."
<Tutor 7> "I'm not sure how much the students understand what they have learned in PBL. Because each student does the assigned work, no big problems occur in the following PBL session. Whether each student understands the contents well, or there are other reasons, I am not sure."

| Masculinity/ Short-term Orientation | *Students are more concerned with immediate learning outcomes (e.g., exam scores) than they are with the learning process.* |

20. Students' achievement orientation
<Student 2> "While studying, drawing a concept map may result in failing the exams. There are too many things to study in a limited time. Simply summarizing what I learned is a more effective strategy to prepare for tests, including practice with multiple choice and short-answer questions, rather than concept mapping."

<Student 10> "We don't know how we are evaluated in PBL. The portion of PBL in the curriculum is very small, so some students aren't concerned with PBL."
<Tutor 6> "If we [tutors] don't evaluate students' participation in discussions, they [students] won't participate in the discussions at all . . . ."
<Tutor 7> "They want to get good grades, but they lack the ability to study in groups."

21. Tutors' discomfort in performing relative evaluations
<Tutor 8> "When evaluating students, we can't help but use a relative scale, because the school requires this. Giving a student a 'low' grade is uncomfortable for me. Also, dividing the medium from the high is uncomfortable."

22. Students' tendency to jump to an illness diagnosis without going through a systemic clinical reasoning process
<Tutor 2> "Students tend to overlook the mechanism of illness and jump to a certain diagnosis with only shallow knowledge."
<Tutor 3> "The reason why students don't do well with discussion is that they jump to conclusions without going through the intermediate steps, so there is not much to discuss."
<Tutor 5> "When making a concept map, students begin with the illness rather than come up with the mechanisms of the illness, or some students superficially point out one or two illnesses."