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**COOPERATIVE LEARNING:
INSTRUCTIONAL DESIGN PRINCIPLES for ASIAN LEARNERS**

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COOPERATIVE LEARNING INSTRUCTIONAL DESIGN PRINCIPLES for ASIAN learners

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***Abstract:** Cooperative Learning is one of the most widespread and fruitful areas of theory, research and practice in education. However, most of these researches have been conducted mainly by and on Westerners with fundamental assumptions based on Western values. Since people cooperate with each other differently across cultures, non-Western learners may need CL models that are culturally appropriate. Particular focus of this paper is on Asian learners coming from Confucian Heritage Cultures (China, Vietnam, Japan, Korea, Taiwan, Hong Kong, Singapore, Malaysia). We propose a series of CL instructional design principles to apply for Asian Confucian Heritage Cultures (CHC) learners, taking into account their distinguished cultural norms and values. Our major research question is: 'What are the CL instructional design principles which are culturally appropriate to apply for Asian CHC learners?'. The paper also reports initial research finding of experiments conducted in a upper secondary school in Vietnam. The control group was given CL tasks using Western CL principles whilst the experimental group was given CL tasks using culturally adapted principles. Initial result shows significant positive impact on student achievement and social support in the experimental group.*

1. Introduction

Two educational environments that are directly under the influence of cultural-bias and ignorance are the multicultural classroom and the non-Western schools. In environments with high levels of cultural diversity, everyday teachers face the challenge of educating children who come from a multiplicity of cultural backgrounds. The transformative multiculturalism in education emphasizes that each (majority/minority) culture interacts and participates equally, while cultural identities are maintained within the community and honoured by the whole society (Coelho, 1998). It is therefore appropriate to reconsider the curriculum in order to give place for non-Western cultures and let them play a significant role in every specific and concrete CL strategy development. In a multicultural classroom, it would be unfair and inappropriate to have students of diverse cultural backgrounds all practice according to CL models that were developed by and for the Western. Acknowledging that CL is a cultural-bounded learning approach also means admitting that this way of practice is cultural-bias, or even worse, eurocentric, but ironically under the good name of multiculturalism.

Non-Western schools is the second environment that suffer from cultural-ignorance inherent in CL application. In many parts of the world, together with the wave of importing modern technologies, the current trend of importing educational policies, theories and practices from the West has resulted in the neglect of one's cultural heritage. The issue is to what extent culture can render Western approaches ineffective and perhaps even counterproductive. In case of CL, recently, Phuong-Mai *et al.* (2006) revealed a series of cultural conflicts and mismatches with respect to: (a) the general characteristics/consequences of Western models of CL and; (b) norms, values and practices associated with the Asian Confucian Heritage Cultures (CHC). The authors concluded that, although CL may be appropriate in Asian CHC nations, Western models of CL may NOT be appropriate. Another study of Messier (2003) reported an unpleasant result that may upset and confuse many Asian educational leaders when showed that the Chinese participants in the *traditional lecture-based learning* obtained higher achievement scores than the participants in the *cooperative learning*. The author argued that the choice to integrate Western CL into an Eastern educational program has it problems.

In this paper, we revealed a series of cultural conflicts and mismatches with respect to: (a) the general characteristics of Western models of CL and; (b) norms, values and practices associated with Asian CHC. Based on this confrontation, we proposed reformulations and adjustments for consideration when CL is applied for Asian CHC learners. Finally, we reported initial research findings derived from our formative experiment which showed that Asian learners gain significantly higher academic achievement and social competency in a CL setting which is culturally appropriate.

2. A cultural confrontation

With a plethora of research on CL, numerous characteristics associated with how CL should be understood and implemented have been formulated. In this paper, we only choose those that are directly related to the mismatch between East-West systems of thinking and doing in interpersonal relationship. Based on the confrontation and consideration, we also propose in this section alternative approaches that we argue to be more culturally appropriate for Asian CHC learners.

2.1 Goal-interdependence vs. Goal-sharing

Deutsch (1949) defined goal interdependence as a relationship in which the goals of each individual can be achieved only if those of the others also can be achieved. The first telnet of Johnson & Johnson's cooperation model (1994) is named *positive goal interdependence* in which individuals perceive that they can achieve their learning goals if and only if all the members of their group also attain their goals. The rationality behind this is individualism: others in the collectivity serve as instruments for achieving individual self-interest. To drive and motivate an individual, his/her own benefit is accentuated and the task is designed in a way that group work is also done as the *consequence* of the individual's task completion.

From the Asian CHC view, each individual since his/her birth considers him/herself and is considered by the others as a member of a closed-knit group (family, school, company...etc) and not as a separate unit. Historically, the crime of a person affects the nine family clans that are related to this person, including relationships by marriage and practically all those who are related by blood. Punishment could include execution for all and confiscation of all wealth. On the other hand, if one person gets reward, the whole extended family may benefit from it, as a Vietnamese proverb puts it: 'When a man is elected to be an official, his whole clan has someone to ask for a favour'. People tied together by *quanxi* (relationship) are obligated to fulfil mutual obligations even without personal relationships. An ex-classmate can legitimately ask for and expect to receive help from a successful someone who was in the same school with him/her a long time ago. For centuries Asian CHC intellectuals upheld the moral ideal of 'bearing the worries of the world before anyone else and enjoying the pleasures of life after all others'. Asian CHC people have a special and urgent need that go beyond the needs of themselves as individuals (Lodge & Vogel, 1987). During Cultural Revolution in China, citizens were asked to serve the big community without the slightest concern for self (Chen et al., 1998). Today, a Vietnamese motto to encourage individuals to join the national lottery is: "Good for *your country*- Good for yourself", with the benefit of the country being in the first place. To compare, such a call in the US and the West should be: "Pay one dollar to get one million! Turn *yourself* into a millionaire!"

Seeing the personal goal diffused in the big picture of collective goal (goal-sharing), Asian CHC learners are more likely to emphasize the common goal shared by all members, discouraging articulation of individual goals or the instrumentality of the collective to the individual. Being selfish, pursuing individual interest without considering the common goal is seen as a shame, a harmful and unethical act by some ardent Asian CHC collectivists since

cooperation that involves the sacrifice of oneself for the benefit of the common good is highly honoured. In short, the preoccupation in Asian CHC is the avoidance of being selfish whereas the preoccupation in individualistic cultures is the avoidance of acting irrationally and of being exploited by others in the group. Based on this discussion, we propose that when Asian CHC learner is present in group composition, not only *goal interdependence* but *goal-sharing* should be of consideration.

2.2 Individual Accountability vs. Group accountability

Accountability is an important element of cooperation and involves the degree to which others can observe and assess an individual's behaviour and productivity; in other words, the extent to which an individual's contribution to the group is identifiable (George, 1992; Harkin & Szymanski, 1988). Researches show that the ability to mask personal behaviour encourages social loafing (Weldon & Gargano, 1985). When one's work is transparent to other group members, there is little chance for free-riding or reduced workload. Western models of CL especially emphasize individual accountability which ensure minimal level of social loafing and free-riding. Individual contribution is required to be available and accessible to the rest of the group. Many CL strategies in Kagan (1994) and Slavin (1995) suggested how to expose individual contribution during task processing.

However, Earley (1989) and Wagner (1995) found out that social loafing is less likely to occur among Asian CHC learners, regardless of the level of accountability. Individual accountability has influence only on individualist group members. Earley also found evidence that performance is highest for Asian learners performing in high shared-responsibility settings.

These salient factors of Asian CHC suggested group-based accountability (Chen et al. 1998)- an extent to which an individual is responsible for the group outcome. While individual-based accountability enhances the individual's instrumental motives of working for his/her self-interest, group-based accountability uses sense of groupness and responsibility to trigger individuals to contribute. For Asian CHC learners, barely exposing individual contribution not only has limited effect on preventing social loafing but is likely to give counter-productive effect as learners may probably lose the feeling of being part of the collectivity, the feeling of being trusted, or even worse, feeling of self confidence. The last feeling is very closely related to the social self-worth named *face* which we will further discuss in section 2.8. Acknowledging the importance and sensitivity of this face-issue, one would understand why the Western transparent *intra-group evaluation* may not be culturally appropriate for Asian CHC learners, instead, self-evaluation or *inter-group evaluation* would be more likely to show positive effect. Self-evaluation triggers the individual sense of responsibility to the group as a whole and inter-group evaluation lays group accountability barely to both group members and other groups. Based on this reasoning, we suggest that with group composition in which Asian CHC learners are present, not only *individual-based accountability* but also *group-based accountability* should be taken into account.

2.3 Shared leadership vs. Formal leadership

In the individualistic West, the idea of co-leadership or joint-leadership has its historical antecedents of which can be traced back as far as the practice of co-consuls in republican Rome (Sally, 2002) and the tetrarchy (of four Caesars) instituted by the emperor Diocletian in the imperial Roman era (Freeman, 2003). According to Johnson & Johnson (1994), cooperation requires *shared leadership* in which each learner has a job to do, and the team has no formal leader.

In contrast, strong hierarchy rules among Asian CHC communities. Authoritarian leadership is present in every social institution. In Asian CHC families, the father is the leader. In an organization, the boss or the elder is the leader. If there is a group, there is a leader. Without a

leader, a group is not stable in this view (Phuong-Mai et al., 2005a,b). Confucius said the society is based on *unequal relationships*, ethics are mainly governed by hierarchy and all human relationships are defined in terms of superior versus subordinate, the ruler versus the ruled (Myungseon Oh, 2003). In a meeting with a culturally diverse group (Motivational Strategy Course, 2002), Dr. Mark Gellevij (Twente University, the Netherlands) asked the reasons for the group process's stagnancy. One Chinese student explained that they needed a leader, and that it should be the role of Dr. Gellevij to assign a leader to their group. Based on this discussion, we suggest that teachers should also consider using *formal group leadership* if Asian CHC learners are present in group composition.

2.4 Personal identity vs. Group identity

Group identity can radically affect cooperation rates (Aram, 1993; Dawes et al., 1990). However, the studies of group identity did not have consistent effects on cooperation, as expected by Dawes et al. (1990), because the experiments were conducted mostly in individualistic cultures (Chen & Triandis, 1996). Group identity is more meaningful and carries stronger psychological attachment for collectivists than for individualists. Gaining the group membership from a collectivity is likely to trigger identification to serve as condition for emerging cooperation. One cannot develop a self without having developed a social identity that is largely defined by the group in which one grows up (The Book of Songs). Asian social identity is more salient than personal identity whereas the reverse is true for individualists. In Japan, the self is formulated through groups and transforms into group-oriented self and group-defined self (Dore, 1987, Nakane, 1985).

Since Asian CHC learners tend to attach greater significance to their in-group, they tend to show more in-group favouritism. In a study of Carnevale & Pruitt (1992) compared to U.S. participant, Hong Kong students showed greater cooperation with a friend and less cooperation with a stranger. Chen et al., (1997) found out that when individuals perform well but the rest of the group do not, Americans show a more positive attitude toward other groups than their own group (out-group favouritism), whereas the Asian show a positive in-group attitude despite the group's poor performance. Hui and Graen (1997) argue that the Asian collectivism is: ingroup first, community second, they are collectivist toward ingroup and individualist towards outgroup. For Asian CHC learners, competition between different in-groups is therefore easier to trigger and also promised more commitment from group members. Furthermore, Asian CHC learners would quickly involve in groups that have connection with their existing ingroups. In an international program, a Japanese student showed significantly greater commitment to his CL group from the moment he knew that two of his group members studied Japanese literature (Personal Communication).

In short, individualists are likely to attach to group and develop strong group identity as long as the group is positively related to their self-enhancement whereas Asian CHC learners are likely to attach to group and develop strong group identity as long as the identity concerns their existing ingroup and new ingroup. Based on this discussion, we suggest that not the relationship between *personal* and *group identity* should be considered when Asian CHC learners are present in group composition.

2.5 Cognitive based trust vs. Affect based trust

Trust is an individual's confidence in the goodwill of others in a relationship and the expectation that others will reciprocate if one cooperates. Trust is recognized as an immediate antecedent to cooperation (Kramer & Tyler, 1996; Smith et al., 1995). McAllister (1995) differentiates two types of trust as cognition-based trust and affect-based trust. The former is built on the knowledge and role performance and the later is built on the emotional bonds between group members.

Cognition-based trust pertains to the fulfilment of one's prescribed responsibility and conveys competence (Brockner & Siegel, 1996; Tyler & DeGoey, 1996) and reliability. This type of trust involves professionalism, calculus and knowledge-based trust while group members attain confidence through this cognitive solid basis. Cognition-based trust is motivated by enlightened self-interest and is built by adhering to relatively universal rules and standard of transaction.

In another direction, affect-based trust indicates an interpersonal relation among group members which is not necessarily related to task or levels of competence. The goodwill is displayed for personal care and concern for others rather than for one's self-interest. In the study by Parks & Vu (1994), the Asian CHC norm contributes to a highly cooperative rate among Vietnamese participants even when confronting a social dilemma of All-D strategy (100% competitive). The cognition-based trust involves role expectation whereas for Asian CHC learners, role expectation is not confined to task performance, nor they all formally prescribe. Researcher Yamada (1997) found out that in her American company, only American employees have job descriptions whereas the Japanese do not. Similar situations can be found in many other Asian CHC countries where an employee's contract is seen more as a sign of dedication to the company and one would work up to what is expected based on different situations. Thus, the Asian CHC's notion of *trust* and *guanxi* assume some of the function of the legal system. An emphasis on *trust* and *guanxi* for Asian CHC is of ultimate importance whilst an emphasis on law and rules for the Western is of ultimate importance. Most of the Western CL methods suggest clear pre-described roles and expectations for each group member. Besides, cognitive-based trust also gives explanation for the strong emphasis on ability grouping. In the light of this discussion, one would argue that for Asian CHC learners: (a) pre-described role and expectation may not enhance trust but rather signal the individuality, give chance to confront this expectation with individual's interest and ability, limit the "value-added" contribution that one may give without being imposed in advance with the job description; (b) ability grouping may not enhance trust among Asian CHC group members as much as relationship grouping since the fact that all members are friends, live in the same neighbourhood or shared similar interest trigger more trust and commitment than excellent grade and good academic reputation. Based on this discussion, we suggest that affect-based trust should be considered when group composition has Asian CHC elements.

2.6 Mediated Partial Communication channel vs. Face-to-Face Communication

Hall (1976) differentiates cultures on the basis of the communication that predominates in the culture. A high-context communication is one in which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit, transmitted part of the communication. A low-context communication, in contrast, is one in which the mass of the information is vested in the explicit code (Hall, 1976). All cultures labelled as low-context are individualistic, and all cultures as high-context are collectivistic in the Hofstede's schema (2005).

Gudykunst & Ting-Toomey (1988) argued that members of high-context cultures to which Asian CHC belongs tend to prefer a *contextual, affective* style of verbal interaction. This style reflects the prescriptive nature of control that is inherent in the cultural patterning of speech and exhibits a receiver-oriented language usage. In contrast, individualists prefer a *personal, instrumental* style of verbal interaction. This style reflects the regulation of relational control and exhibits a sender-oriented language usage.

These cultural differences suggest two channels of communication that might be positively related to Asian CHC learners and Western learners. Since context plays a vital role and Asian CHC learners are indirect and receiver-centred, face-to-face (full-channel communication) is likely to be more essential. Through face-to-face (F2F), contextual interactions such as social

and emotional cues, back-channels language (uh-huh), non-verbal cues (face expression, body language)...etc enhance communication, help convey information and build on *particularistic* relationships. In contrast, Western learners who are more sender-centred, more concerned with efficient communication (e.g. saving time), can directly express and solicit information through mediated channels such as paper, telephone, electronics (partial communication). In fact, many Asians will not do business by phone until F2F contact has been made. To some extent, a meeting F2F constitutes a basis for a substantial degree of trust which again relates to the affect-based trust we have already discussed. The blossoming of Computer-supported CL in the West without much methodologies problems clearly illustrates Western capacity in mediated partial communication. For Asian CHC learners, not having F2F before and during (CS)CL project can be an obstacle that hinders the cooperative willingness. It is not unusual to catch in a international program some complaints from Western students that their Asian counterparts insist group meeting almost everyday. The problem is exacerbated with language proficiency since Asian students could obviously understand and make themselves understood much better in F2F conversation than through telephones or virtual meetings. We therefore argue that *F2F communication* should be considered when there are Asian CHC learners taking part in CL group.

2.7 Equity-based Reward vs. Equality-based Reward

The three basic rules of reward allocation are defined as the equity rule, the principle of equality and the principle of need (Earley & Erez, 1993). The individualistic equity principle is that reward should be given proportionally to share of functions performed. The equity theory claims that people gauge the fairness of their work outcomes in relation to others and perceived inequity occurs when there is an unfavourable social comparison of work outcomes.

Studies (Berman et al., 1985; Bond et al., 1982; Leung & Bond, 1982) generally found that Asians prefer *equality* reward distributions (rewards are distributed equally among group members) whereas U.S. Americans preferred *equity* reward distributions (rewards are proportional to individual contribution).

The principle of equality, which features uniformity and fairness would be better received in a clan culture. If the equity rule is applied in this culture, it would have the potential to cause disharmony in the collectivists' group setting (Earley & Erez, 1993; Leung, 1988) since the collective rationality supports non-differential principles (equal/need-based reward distribution) whereas the individual rationality supports equity principle which encourages differentiates. Director Steveson (Personal Communication, November, 2004) admitted that by rewarding differently based on individual contribution, he had destroyed the most efficient team in his company, one which consists entirely of Chinese.

Finally, researchers have found that ingroup and outgroup can influence how allocation preferences are applied (Leung & Bond, 1984). Asian CHC were more likely to use the equality norm with friends and relatives (indicates long-term relationship) and the equity norm with strangers (no expectation of long-term relationship). No such difference was found among U.S. Americans. The nature of social cooperation relationship does have significant impact on reward allocation among Asian CHC learners. We would expect such a complexity that an Asian student would be alright to receive shared grade with a group consisting of his/her personal friends (long-term relationship) but the very same student would find it unfair if (s)he has to share the same grade with group members with whom (s)he does not have good relationship. This discussion suggests teachers to carefully consider the choice of *equity* and *equality-based reward* when applying CL in diverse cultural groups.

2.8 F2F promotive interaction vs. Face confirmation interaction

Confucius said: “The gentleman agrees with others without being an echo. The small man echoes without being in agreement”. Asian CHC learners are expected to avoid conflicts, confrontation and aggressive ways of dealing with each other for the collectivist reasons of protecting social face and maintaining relationships (Hofstede, 2005; Leung, 1997; Ting-Toomey, 1988).). Losing face inflicts extremely serious personal damage, and one should try to avoid it at any price (Hofstede & Hofstede, 2005). Being frightened of losing face, many Asian CHC learners dare not volunteer personal ideas, either for fear of being considered silly or for fear of making others feel humiliated (Cocroft & Ting-Toomey, 1994; Ting-Toomey, 1988; Tsui, 1996). Allowing a person to save face is more important than telling the truth. In this way, both parties, for the sake of ‘giving face’, ‘saving face’ and ‘asserting face’, keep their mouths shut. In a group setting, Asian learners may suppress their personal desires, avoid conflicts and hence avoid criticizing their peers or claiming any authority (Carson and Nelson 1996, cited in Jones 1999. Researchers (Jehn & Weldon, 1992; Kirkbride *et al.*, 1991; Tse *et al.*, 1994) have shown that Asian CHC learners that are more concerned about these issues tend to use more indirect styles such as avoidance (not discussing the topic of conflict) and assuming an obliging style (greater concern for the other’s interest in the conflict than one’s own). Note also that Asian CHC learners do not perceive obliging and avoiding conflict styles as negative. Culturally, they are expected to do so. The Western approach of working in groups and dealing with conflict openly and freely may therefore seem to be culturally inappropriate when the second premise of Johnson & Johnson’s cooperative learning (1994), entitled ‘Face-to-Face Promotive Interaction’, is applied. Challenging each other’s conclusions and reasoning, advocating the exertion of effort, influencing each other’s efforts, striving for mutual benefit, and maintaining a moderate level of arousal need to be seen in a different light.

Based on this discussion, one would argue that only conflict discussion is not culturally appropriate for Asian CHC learners. The good news is, Tjosvold and his colleagues, through a number of studies, have proven that direct controversy and open discussion are possible among Asian as long as there is *face confirmation*, i.e. the learners are put in a conflict situation that all faces are secured, open and direct confrontation is appropriate and required (Tjosvold, Hui & Sun, 2004). An example of this approach is to create learning situations in which direct and open discussion is correlated with grades possibly earned. Another classic strategy is built-in conflict, putting group members in a good-will conflict in which each face is safely secured and no one is to be blamed. To conclude, we strongly suggest that teachers consider *face confirmation* when CL is applied in groups with Asian CHC learners.

3. Research experiment

3.1 Research question

Based on these discussions, we formulated a series of concrete instructional design principles to apply specifically for Asian CHC learners. Our major research question is: What are the instructional design principles for CL which are culturally appropriate to apply for Asian CHC learners? Our hypothesis is: If CL tasks are delivered using Asian CHC culturally appropriated instructional design principles, Asian CHC learners would have higher academic achievement and social competency than when CL tasks are delivered using Western principles. This paper reports the initial findings of our Formative phase (2006) in a upper secondary school in Vietnam. The Summative phase (2007) will deliver definite research findings.

3.2 Independent and dependent variables

We expect to observe three types of effects as dependent variables: (i) implementation effect deals with the application of the principles within an actual classroom context; (ii) Social effect deals with the behaviours of both Teacher and Students; and (iii) Cognitive effect deals with the learning outcome of students. Independent variables are a series of CL tasks in which the

formulated principles were instructionally embedded in actual learning activities and practically woven into the formal school curriculum.

3.3 Experiment design

For this intervention, we choose the reversed treatment equivalent group design with post test only. From one class of approximately 48 students, we randomize to form two small classes for experiments: Class A is the experimental group where the aforementioned design principles are applied (CoOL- principles), class B is the control group where the Western principles of CL are applied (West- Principles). Appendix 1 summarizes the principles applied in each class¹.

R Class A: X+ (CoOL)
 Class B: X- (West)

For strong triangulation, various methods for data gathering were employed. During the learning sections, the researcher was responsible for observation based on an extensive itemized observation schema. Questionnaire was given to students immediately after the learning sections (Cronbach alpha ranges from .65 to .87). In each class, 27-30% of students were summoned for interviews by random. Finally the last source of data comes from paper-recorded learning outcome.

3.4 Participants

The experiments took place during January-April 2006 at Nguyen Gia Thieu upper secondary school in Hanoi. Two classes of 11th grade, each consists of 48 students at 15-16 years old, participated in the intervention. Two teachers of English consequently involved. Students who took part in the experiment received a small amount of money and a present. Both teachers were paid for their extra working hours. School board supported the experiment by formal administration and also got paid to cover administration cost.

3.5 Initial answers for the research questions of formative phase

Initial results showed that 18 out of 23 experimented principles were successfully implemented and 14 out of 23 met the expected effects. The most successful achieved principles are:

- 1.2 Use Equality-based reward
- 3.1 Use built-in conflict with face confirmation
- 4.1 Use affect-based group forming
- 4.4 Use integrating conflict style
- 4.6 Use third-party help in solving conflict
- 4.7 Use between-group competition
- 5.1 Use Inter-group assessment
- 5.2 Use self-evaluation

Cognitive effect

Independent sample t-test shows that in task 1, the learning outcome of class A (applied CoOL-principles) is significantly higher than the learning outcome of class B (applied West principles). The mean score of Class A is M=7.5 whilst Class B got the mean score of M=5.3. The t-value is 2.4, compared with the t-critical=2.2 at df=9.2 ($p < 0.05$). The learning outcome of this task is recognized by the grade that each group received at the completion of the multiple choice test.

In task 2, the learning outcome of class A is significantly higher than class B. Class A got the mean score M=32.8 and Class B was with M=20.1. T-value comparing these two means is 5.4

¹ The list of applied principles is extended compared to what is discussed due to the scale of this paper.

compared with $t\text{-critical}=2.3$ at $df=7.2$ ($p<0.01$). The learning outcome of this task is recognized by the amount of arguments and counter-arguments each group produced at the completion of the task debate.

In task 3, we found no significant difference between the learning outcomes of the two classes ($p=0.4$) but the mean score of class A (7.1) is higher than Class B (6.5). The learning outcome of this task is recognised by the number of solutions each group successfully worked out.

Social effect

We briefly report here some of the effects that were best accessed.

In task 4, involved in a real-life conflict simulation with 4 options, half of the students chose the integrating conflict style solution, 41% opted for third-party help (teacher-parents). A mediator is proved to be an efficient solution in conflict solving → Principle 4.6: Use third-party help in solving conflict.

In class B-West, even though students were meant to be rewarded separately based on their individual achievement (equity-based rewards), 7 out of 12 groups showed the act of immediate rewards dividing among their group members. Despite the imposed learning mode of individual recognition, students exercised their belief in shared-possession and collective mentality in reward allocation → Principle 1.2: Use Equality-based reward.

In task 2, not only the learning outcome of class A-CoOL is significantly higher but the discussion atmosphere in the class is also more active. Students talked and argued more enthusiastically and there was no off-task talking. Most importantly, we recorded no face threatening act in class A which strongly proved that individual face was well secured. Built-in conflict in which the concept of face is well attended and meticulously confirmed has granted participants the right to involve in “good-will conflict”, made them feel free to encroach in a normally sensitive territory while having no mental obstacles blocking the flow of ideas. → Principle 3.1: Use Face confirmation with Built-in conflict.

Between-group competition and inter-group assessment in class A-CoOL created a strong motive for students to learn and compete. They watched out for other’s working process, urged their group member to try harder, compared the learning outcome after task completion and by doing so, evaluated and learnt from their mistakes. In class B-West where between-group competition was not applied, students did not express their enthusiasm in comparing the learning outcome but they did try to ask the grades of other groups, expressed their emotions and shared their feelings with their group members. In another word, the between-group competition did exist in class B-West but in a less explicit way → Principle 4.7: Use Between-group competition/Principle 5.1: Use inter-group assessment.

Researcher recorded in class B-West a great amount of awkward and uncomfortable behaviours during transparent peer evaluation. Students felt somewhat uneasy expressing their opinions on others’ performance. They uttered statements such as: “Let’s write down: Average!”, “I really don’t know what to say!”, “Whatever!”...etc. Many urged others to do the evaluation as quick as possible since they find it time-consuming/ tiring/ difficult/ not necessary/ superficial/ uncomfortable... In class A, self-evaluation was applied in which each individual had to do self appraisal, judging his/her own performance after each task. Most students found this way of evaluation effective since they could learn a lot from this procedure. Self-evaluation acts as a good chance as well as safe environment for deep reflection, honest assessment and learning from mistake → Principle 5.2: Use Self-evaluation.

Based on the data analysis, we plan to reformulate the instructional plan in which the tasks that did not show effectiveness will be removed whilst the tasks that successfully showed the difference will be improved. Additional tasks will be built up for the summative phase in 2007. Rigorous consideration will also be paid to the reformulation of the principles, especially the one that met difficulties during implementation of the formative phase.

4. Conclusion

By combining insights from various researches on Cooperation and Culture, we have derived a series of propositions not only revealing the nature of the cooperation in Asian Confucian Heritage Cultures but also proposing broad suggestions of how to foster cooperation in a culturally appropriate way.

Our experiments with two models of CL, one purely based on the Western principles, the other based on the particularly designed principles for Asian CHC learners, have shown evidence advocating this argument. Initial positive findings at formative phase has supported our hypothesis on particular CL instructional design principles for Asian learners.

In this paper, we address some issues that emerge as the result of integrating two well-researched areas: cooperation and culture. Regarding the connection of both, little work exists that directly addresses the issues we raise in this article. Further studies are needed to research and replicate these hypotheses, and hopefully quantitative as well as qualitative results will bring more insight into the issues and enable us to view cooperation more sophisticatedly in the cultural light.

Appendix 1: An overview of principles applied in Class A (CoOL-VN) and Class B (West)

Principles	Class A-CoOL	Class B-West
<i>Guidance</i>		
1.1 Teacher's (T) positive interaction with student (S)	Teacher with training (Positive interaction)	Teacher with training (standard interaction)
1.2 Use Equality-based reward	Equality-based reward	Equity-based reward
1.3 Use Effort-based motivation	Teacher promotes effort	Teacher promotes ability
<i>Leadership</i>		
2.1 Use Transitional leadership	Group with leaders	Group without leaders
2.2 Interpersonal competence as leader in CL project	The best socialized is Leader	The best in Subject is Leader
2.3 Subject competence as leader	The best in Subject is Leader	No leader
2.4 Training in interpersonal management for group leaders	Leaders with training	Without specific training
2.5 Training in Evaluation for group leaders	Leaders with training	Without specific training
<i>Task design</i>		
3.1 Face confirmation S-T & S-S	Built-in conflict	Direct confrontation
3.2 Well-structured task	Extended task instruction	Ill-structured task / Limited task instruction
3.3 Visual effect	Visual backup	Audio backup
3.4 Goal-sharing	Group goal is an end	Group goal is a mean Goal-interdependence
3.5 Group accountability	Group achievement is clear	Individual contribution is clear Individual accountability
<i>Group socialization</i>		
4.1 Group forming affect-based	Groups of friendship/affect-based	Heterogeneous group /Cognitive-based
4.2 F2F communication channel	F2F communication	Mediated partial communication channel
4.3 Ingroup identity	Praise group achievement	Praise individual gain/ Individual identity
4.4 Integrating conflict style	Simulation with designated roles of 4 conflict styles	
4.5 Face work strategies	Group with training /reminder	Without training/reminder
4.6 3rd-party help in conflict	simulation with 3 rd help is among multiple choices	
4.7 Between-group competition	Strong between G competition	No between G competition
4.8 Off-task activities to promote affect-based trust	Team building before CL	No team building
4.9 Involve social extended group	Families involved	No families involved
4.10 Promote gender equality	Use of gender promotion	No use of gender promotion
4.11 P-time working strategies	Regular check & reminder	No regular check & reminder
<i>Assessment</i>		
5.1 Inter-group assessment	Across-groups checking	Within group checking Intra-group assessment
5.2 Self evaluation	Self evaluation	Transparent Peer evaluation

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