

## **Cooperative Learning in a Hong Kong Primary School: Perceptions, Problems and Accommodation**

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Some educators may see cooperative learning as a Western pedagogy that is difficult to use in Eastern countries with a Confucian Heritage, while others argue that the philosophy of Confucius is parallel the elements of cooperative learning. This article reports the key findings of a 2-year longitudinal study that investigated the perceptions of cooperative learning and pupils' problems with cooperative learning in a Hong Kong primary school. A school-based teacher development program was conducted to help teachers prepare students for using cooperative learning in their classes. Pupils were interviewed at various stages of the study and classroom observations were conducted to see how they worked in cooperative groups in the core subjects. The results showed that pupils' perceptions of cooperative learning were generally positive though they encountered problems in working together. The results are discussed with reference to the influence of Confucian Heritage culture on pupils' perceptions, and recommendations are made for accommodating cooperative learning in Hong Kong.

**Keywords:** cooperative learning; pupils' perceptions; pupils' problems, accommodation, teacher as mediator; Confucian Heritage culture

### **Introduction**

Cooperative learning (CL) is a powerful teaching strategy that harnesses students' diversified abilities and cognitive and social skills to increase their success in learning. In CL students are interdependent and are held accountable for the learning of each of the group members (Johnson and Johnson 2009; Kagan 2009; Slavin 1995). Students also conduct frequent processing in their groups to "describe what member actions were helpful and unhelpful, and make decisions about what

actions to continue or change” (Johnson and Johnson 1990, 32). The collectivistic character of the Chinese and their Confucian Heritage seem to parallel the basic elements of CL: positive interdependence, individual accountability and group processing, as described below.

The Chinese are accustomed to working collaboratively; their social interaction is regarded as collectivistic (Bond and Hwang 1986; Earley 1989), which means that “the futures of individuals from the same in-group are inter-related and that each person’s well-being depends upon the results of collective effort” (Leung 1996, 258). In other words, each member of a group, whether a family, community or classroom group, is positively interdependent yet individually responsible to the group, even if his/her interests are not always in alignment with the group. Moreover, Chinese culture is definitely influenced by Confucian philosophy, which relates to how people behave and treat one another in society with, for example, *ren* (goodness), *yi* (rightness), *li* (ritual) and *zhi* (wisdom). Confucius was also a great teacher who taught his disciples to learn from one another, as quoted in the Sayings of Confucius: “When walking with other people, I will always find a teacher among them” (The Analects, VII 22). He also taught them to reflect, as Master Zeng said: “Every day I examine myself on three counts (i.e. times, *ckw*) in my dealings with others to see if I have failed to be dutiful” (The Analects, I 4). Today, a growing number of studies

suggest that Confucius used a constructivist approach to teach his disciples rather than a didactic one (Ng 2000; Smith 2012). Examples can be found throughout the Analects of encouraging diversity, constructing learning on prior experience and learning through reflection.

On the one hand the principles of Confucian teaching and CL are parallel; on the other hand, the importance of social inequality and face-giving stressed in Confucian philosophy may affect Chinese students working in cooperative learning groups. Confucius taught that inequality in human relationships contributes to a country's stability. The hierarchical position a person holds represents the level of power and responsibility that person possesses. The equality/inequality of people's power is interpreted by Hofstede (1994, 28) as "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally". In schools in countries with high degrees of power distance Confucius' thoughts on social inequality still have some effect on education; power rests with the teachers who are respected and regarded as the font of knowledge. Knowledge is spoon-fed and questions are not encouraged, as is the case in Hong Kong and Taiwan, where the power distance values of these societies are larger than those of Great Britain and the United States (Hofstede 1980).

The Chinese are often seen as cooperative and regard it as very important to give

face to each member of the in-group in order to maintain their relationship (Bond and Hwang 1986); conflict and confrontation tend to be avoided or compromised so as not to disrupt the harmony of the in-group (Bond 1991). If conflict is unavoidable, Chinese people will try to resolve it through mediation by a third party for impartiality and face maintenance (Ma 1992). At school, students are expected to accept their teachers' words unquestioningly, because challenging the teacher is regarded as a loss of the teacher's face (Cortazzi and Jin 1996). Challenging group members might cause the loss of friends.

Studies of CL conducted in the West point out the positive effect of cooperative learning on students' academic and social skills and on achievement (Awofala, Fatade and Ola-Oluwa 2012; Galton, Hargreaves and Pell 2009; Gupta 2004; Johnson and Johnson 1999; Matthews et al. 1995; Muraya and Kimano 2011; Nastasi and Clements 1991; Slavin 1995; Tsay and Brady 2010). In the East, the positive effects of CL are not as consistent as in the West. For example, Yang (2011) investigated the gap between cultural and institutional factors that influence American and Korean high school students' learning of mathematics. The results showed that Korean students preferred to study in a competitive learning environment. Woodrow and Sham (2001) investigated the views of Chinese students aged 11 and 18 on their learning preference and concluded that they preferred working individually rather than working with their

peers. Tan, Sharan, and Lee (2007) found that students did not like to learn together in groups because they were accustomed to learning passively from their teachers. Thanh-Pham (2010) found that both teachers and students in Vietnam had reservations about cooperative learning as their Confucian cultural heritage is not compatible with the principles of CL. Contrary to the findings of these studies, Chan and Galton (1999) found that pupils in Hong Kong preferred to work in cooperative groups. Similar positive attitudes of Asian students towards CL was supported by Yin, Lee, and Zhang (2009) who investigated the relationship between the effectiveness of cooperative learning, motivational beliefs of students and the strategies teachers used.

The benefits of CL do not come about automatically: the positive effects can be deflected when teachers are confused about CL methods, when teachers and students are inadequately prepared and when teachers' perceptions of CL are misleading (Sharan 2010). Pupils' perceptions of CL could also affect its implementation. This paper explores students' perceptions of CL when implemented in a primary school in Hong Kong, a city where East meets West under the umbrella of Confucian Heritage. Specifically, the study attempted to find out whether the high, medium and low achievers liked to work in cooperative learning groups, the problems they encountered in the implementation of cooperative learning, after their teachers had experienced a self-owned model of teacher development in cooperative learning.

## **Research Methods**

This 2-year case study of pupils' perceptions of cooperative learning and their problems with cooperative learning took place in a Hong Kong primary school. Like in many of the primary schools in Hong Kong, Chinese is the medium of instruction.

The first step was to provide teachers with school-based staff development to increase the effectiveness of the implementation of CL (Chan 2010), based on a model that consists of cycles of six phases each. The six phases are (1) setting objectives for what to learn about CL, (2) participating in workshops to learn CL methods, (3) collaborative lesson preparation, (4) peer observation, (5) post-lesson conferences and (6) reflection on the lessons. At the end of each cycle teachers were asked to provide feedback to the staff developer, which contributed to the revision of objectives and of the content of the workshops in the next cycle. Course content included CL procedures such as Kagan Structures (2009) Talking Chips, Three-Step Interview, Number Heads Together; Jigsaw II, Teams-Games-Tournaments (Slavin 1995); Group Investigation (Sharan and Sharan 1992), and the five principles of CL as formulated by Johnson and Johnson (1999).

The principal recommended that six classes of 198 pupils aged 6 to 13 participate in this study as their teachers were enthusiastic about using CL. The CL strategies used by the teachers were those they learnt in the workshops with reference

to their teaching objectives, contents and the class time available. The majority of students were of low social and economic status; groups were composed of students of different gender and levels of achievement.

Classroom observation was employed to collect the relevant data on how students helped each other learn, how they worked together to complete a group task and how they resolved conflicts that arose. The advantage of using observation for data collection is that 'it provides here-and-now experience (verbal and non-verbal actions observed) in-depth' (Guba and Lincoln 1985, 273). In the present study we observed a total of twelve lessons in the three core subjects, Chinese, Mathematics and General Studies in Primary 1, 3 and 6. In each of the lessons one four-member group of students recommended by the subject teacher was observed. The teachers who taught these groups were the same in both the first and second years of the study. The students' interaction in each of the 12 groups was videotaped and all videotapes were transcribed and coded for analysis. Themes were extracted and categorized. Then the principal investigator and a research assistant separately analyzed the data with respect to the basic CL elements of positive interdependence and individual accountability, after which they compared the two sets of results.

Semi-structured group interviews were conducted with half of the 198 pupils in the same week as their lesson observation. Each group consisted of five to six

students of different abilities and gender from the same class but not of the same home group. The new group composition was believed to be conducive to eliciting students' responses and avoiding embarrassment among them. Each group interview was conducted in Chinese, their mother tongue, and lasted for about 30 minutes. The purpose of the group interview was to follow up on the themes that emerged from the videotaped lessons. The interview questions included, for example, 'What do you do when your group-mates ask you for help?' 'How do you feel about your group-mates?' 'Do you like to learn together in a group and why?' The interviews were tape-recorded and transcribed verbatim.

A simple questionnaire survey was administered to all 198 pupils at the end of the 2-year study. They were asked whether they liked to learn in cooperative learning groups or not and to reply 'Yes' or 'No'.

## **Results**

### **Preference for cooperative learning groups**

The results suggest that the majority of pupils liked to work in cooperative learning groups. This can be seen from Table 1, which indicates that the preference of pupils for cooperative learning groups (68.2%) exceeded more than twice that of pupils (31.8%) who do not like to work in cooperative learning groups. When the result was examined across each group of achievement levels it was interesting to note that the

finding was just the opposite for the high achievers. Over two-thirds of this type of pupil (10.6%: 22.7%) did not like to work in cooperative learning groups. The overall finding applied only to the two other types of pupils, and was most significant in the low achievers (30.3%: 3.0%).

#### TABLE 1 HERE

Examining the three type levels of pupils who liked to work in cooperative learning groups, we saw that the percentage of high achievers who like to work in cooperative learning groups were much smaller than that of the low achievers. The low achievers had the biggest percentage (30.3%), which was almost three times as many as the high achievers (10.6%). The percentage of the medium achievers (27.3%) was close to the low achievers. This pattern of increase in percentage from high achievers to low achievers was reversed in the pupils who did not like to work in cooperative learning groups. The high achievers had the biggest percentage (22.7%) which was almost eight times as many as the low achievers (3.0%). The percentage of the medium achievers (6.1%) doubled that of the low achievers.

#### **Reasons for preference of cooperative learning groups**

During the interviews students expressed various reasons for preferring cooperative learning groups. These were triangulated by the video observation data. Some of the reasons were common among the high, medium and low achievers, whereas some

specific reasons applied only to one or another types of achievement levels. The relevant excerpts from the interview and video observation are reported below.

### **Common reasons among three types of achievers**

*A feeling of ownership of learning.* Pupils began to see a shift of ownership of classroom learning from their teachers to themselves. In the past, they thought that learning was ‘done’ to them by their teachers and they had little control over the learning process. Now they could have more control over how they deal with learning tasks as the following quotes illustrate.

“In the past, my teacher always treated us like puppets. For example, he told us not to look at the pictures before we had read the story, not to ask any questions before he had finished his teaching. Now we do not have a fixed order of steps to follow in our learning process. We can use our own approach to tackle a problem posed by the teacher” (a high achiever).

“I learn not just to please my teacher, but I can have something to share with the members of my group. I feel like a host, not a guest in my learning process” (a medium achiever).

“Our teacher does not dominate the lesson. She allows us to learn from our group-mates. I am not spoon-fed by my teacher now” (a low achiever).

*The right to talk.* Pupils felt they had been granted the right to talk in class. In the past, they would be punished for talking to each other and now they realized that talking to each other could result in fruitful learning.

“I remember that once when I answered the question of one of my classmates, I was punished by my teacher for talking in class. Now the same teacher encourages us to talk to each other while learning” (a high achiever).

“Sometimes I seek help from my group-mates; whereas sometimes I help them answer their questions. I learn more when we talk to one another” (a medium achiever).

“I love talking in class. Now my talkative behaviour is justified and I believe I have made progress in my learning in this kind of learning atmosphere” (a low achiever).

### **Specific reasons given by students at each level of achievement**

In addition to the similarity in the reasons for a preference for cooperative learning groups among the high, medium and low achievers, each group of achievement level had specific and distinct reasons.

*Feeling proud.* The high achievers liked to work in cooperative learning groups because they felt proud of being the ‘teacher’ of their peers.

“I am much honoured to be able to play the role of ‘a teacher’ in helping my groupmates learn.” (a high achiever)

“My group-mates looked at me in amazement when I have taught them something they cannot understand by themselves. I feel proud.” (a high achiever)

*More fun in sharing.* Medium achievers like to work in cooperative learning groups because they found learning by sharing with one another is interesting.

“It is more fun to be able to exchange our views in learning (a medium achiever).

“It is a kind of give and take. I help others and am helped in return” (a medium achiever).

*Contribution recognized.* The low achievers like to work in cooperative learning groups because they found they could contribute to helping others.

“I see my contribution to my group. I also see the interdependence of each other in order to succeed’ (a low achiever).

“I have a better self image now as my work is recognized” (a low achiever).

### **Reasons of no preference for cooperative learning groups**

Pupils expressed various reasons for not liking to work in cooperative learning groups.

Some of the reasons were common among the high, medium and low achievers, whereas some reasons were specific to each level. Below are some relevant excerpts from the interview and video observation.

### **Common reasons to students of all three levels of achievements**

*Quarrelling.* Quarrels mainly arose from the division of work in group tasks and in the process of peer teaching. Conversation 1 below is between two students in a Primary 3 mathematics lesson who were asked to work together to draw a square with 27 cm sides and then divide it into three equal parts in as many ways as possible. It was apparent that student A was of high ability and usually dominated the task. However student B, who was weak in mathematics but good at drawing, wished to take the lead in drawing. Student A did not agree and continued to treat student B as his assistant. They quarreled over the division of work and asked the teacher to resolve their conflict.

#### Conversation 1

A: Give me a pencil sharpener. A sharp pencil can draw the figure better.

B: I don't want to see you do the work. This time, I want to do it.

A: You'll ruin the work.

B: No, I'm good at drawing.

A: Don't waste time arguing. As usual, I do it and you help me when I need it. Now give me your ruler. I am going to measure 27 cm.

B: Use your own unless you let me draw it.

A: My ruler is only 12 cm long.

B: I'll tell the teacher if you don't let me do the drawing.

The problems of quarrelling over the division of work were also strongly expressed in the interview excerpts below:

“It makes sense to divide the group task among members according to their abilities. A more able member should take a leading role. If we rely on a low ability member to take charge of the work, the outcome will not be good and we cannot get a group reward” (a high achiever).

“We quarrel over the division of work in the group. I feel ill treated by my high ability peers who always take over the division of work and do not allow me to work on those I think I am good at” (a medium achiever).

“It is usual for the more able group members to take over the majority of the work, leaving only uninterested things for me to do” (a low achiever).

Quarrels were also encountered in the process of peer teaching. The quarrelling in Conversation 2 (below) between the three types of achievement levels in a Primary 6 Chinese lesson, extracted from the videos, demonstrates quarrels that begin when the low ability students cannot understand or follow what their high ability peers are teaching them. A is a high achiever, B and C are the medium achievers, D is a low achiever.

A: The athlete who had won many awards in cycling was once a problem child mixed up with the gangs in the street.

B: Oh really?

C: Difficult to believe.

D: What is a gang?

A: Come on. You know.

D: I honestly don't know. What does the word look like?

A: Don't waste time. Here you are. (Showing his notes to D)

B: Be quick. We can't finish our task on time.

A: The problem child had an opportunity to participate in a training course in cycling and from then on he gradually began his career as an athlete.

D: I can't hear it. Can you repeat that?

A: The problem child had an opportunity to participate in a training course in .....

D: Wait. Say it slowly.

A: You idiot! We are never going to finish. I'm fed up with repeating simple things again and again.

D: You are an idiot, too! I have tried hard to follow closely. The teacher has told us to respect each other.

### **Specific reasons given by students of each level of attainment**

*No benefit.* The high achievers thought that it was a burden to teach the low achievers.

They could not find any benefits in helping others. They would be willing to help only if the low achievers were their friends.

“During the expert group discussion, our teachers often remind us to share our views and give feedback to each other. However, some group-mates seldom have anything to share, not to mention giving feedback. I am not interested in this kind of peer learning” (a high achiever).

“I'm not interested in the lesson when I have to teach my low ability peers. I think it will be more interesting if you have someone of similar ability to interact with. They can comment on your views and you can also respond to their comments. We might not agree to each other's views, but it is challenging” (a high achiever).

“Honestly speaking, I do not like to work together with someone of low ability. The working pace will be slowed down. But if he is my friend, I will accept him because I don't want to lose a friend” (a high achiever).

*Feeling neglected.* The medium achievers felt neglected by their group-mates. Most of the peer teaching was done between high and low achievers.

“Sometimes I feel left out. The low ability group-mate usually gets the most attention” (a medium achiever).

“There is little time left for me to seek help from my group-mates when I have a problem. Most of the time is spent on teaching the low ability peers.” (a medium achiever)

*Feeling frustrated.* Some group assignment required that each group member to work

on a different part of the task, as in a Jigsaw procedure. Frustration developed in those students who had difficulty teaching their group members the part for which they were responsible; those who had to learn from their group-mates also felt frustrated.

“I find it difficult to understand what my home group members teach me. Very often, they just read from their notes and assumed you would be able to understand it. They said I was wasting their time if I asked them to explain the thing that only I did not know. I have tried my best, but I can learn very little from them” (a low achiever).

“I was not confident to teach my group mates the part of story I was assigned to read because I had difficulty understanding the story myself. I feel frustrated” (a low achiever).

## **Discussion**

The results from the lesson observations, group interviews and questionnaire survey reported above will be discussed with reference to the power status in a heterogeneous group and the use of social skills for working in a group. These two aspects are closely related to the principles of cooperative learning.

### ***Power Status***

As in most studies of CL the cooperative learning groups in the present study were heterogeneous largely in terms of the students' past achievement, or in more precise terms, their overall academic level, as determined by the sum of marks in all the subjects studied. Yet not all subjects carry the same weight; Chinese, English and Mathematics are the weightiest, nine times more than that of Music and Art. The unbalanced recognition of different subjects favours those students talented in

logical-mathematical ability or in linguistic ability, while relatively penalizing those who are talented in musical ability or spatial ability. In the Hong Kong context a student who has a high academic level is usually regarded as someone with more knowledge, and therefore has higher power status, as demonstrated in Conversation 1.

Unequal power status in groups should not necessarily be problematic. Just as according to Confucius philosophy inequality in human relationships contributes to a society's stability, inequality can help increase the cohesion among group members. Confucius proposes five cardinal relations that link the power and responsibility of a person with another at an upper or lower position on the hierarchy (Gabrenya and Hwang 1996). For example, cardinal relations can exist between emperor and minister, father and son. These relations tie the relevant parties together in harmony. The father has power over his son who has to obey his father's words, whereas the father has the responsibility to look after the welfare of his son. Therefore under normal circumstances inequality in power status can help to maintain a stable interdependent relationship among the members of a group, which may contribute to efficient cooperation. However, when the power structure of the group is suddenly in disequilibrium, quarrels and conflicts may arise that could lead to rebellion. The problems seen in Conversation 1 were probably due to disequilibrium in the power status between the two students. Student B had a low academic level, but he was

talented in spatial ability. The group work in question was a drawing task in which student B had more knowledge, hence more power. However, student A did not want to lose the power he took for granted and prevailed in the task.

Conflicts in schools are commonly resolved by using peer mediation in the western countries (Johnson and Johnson 2001; Smith et al. 2002). Peer mediation is a structured process in which students' conflicts are resolved with the help of a third party who is usually the students' trained peer (Cremin 2001). Under the influence of the Confucian Heritage culture in Hong Kong, teachers, instead of students' peers, are respected and regarded as an impartial party. It is therefore advisable for the teacher to restore harmony by acting in the traditional role of a mediator for impartiality and face maintenance as suggested by Ma (1992). Mediation process involves the skills of communication, problem solving and participatory decision-making which develop self-regulation and self-empowerment (Maxwell 1989). In mediating students' conflicts, teachers are suggested to (1) listen actively to students, (2) think critically about the conflicts, (3) empathizing with students' feelings, and (4) drawing students' attention to choices and consequences (Cremin 2007; Morgado and Oliveira 2010).

### ***Social Skills***

Pupils of different ability, attitude, gender and multiple intelligences who work in heterogeneous groups are more likely to have different views handling a problem than

pupils in homogeneous groups. If the pupils are not equipped with the necessary interpersonal and small group skills, they will probably disagree, quarrel and have conflicts. In Conversation 1 the quarrel began when pupil A dominated the task and treated his group-mate as his assistant. If pupil A had been trained in social skills the conflict might have been avoided. There is a need for students to acquire social skills prior to working together in a cooperative learning group so that these can be applied in group work (Kutnick 1994). Social skills are the key to the productivity of a group (Johnson and Johnson 2009), as these skills reduce interpersonal conflict and facilitate interaction (Cohen 1994). Students can behave effectively in groups after they have learned the appropriate social skills (Gillies 2002). If students are given a group reward for having used appropriate social skills, they will even become more sophisticated in using them and will use them more often, resulting in a higher achievement (Lew et al. 1986). There are those CL methods that advocate frequent repetition of exercises that improve students' social skills and the resulting smooth relationships in a group are reward enough (see Pescarmona, this issue).

Nevertheless, Chan (2004) found that Hong Kong teachers have often overlooked the importance of teaching their pupils the social skills necessary for engaging in cooperative group work. Chan's study showed that although teachers admitted that their pupils needed to learn the social skills required for effective

cooperative group work, a majority of the teachers did not teach their pupils the social skills. These teachers wrongly perceived that their pupils could learn social skills incidentally through their interaction in group activities. This perception runs contrary to all the studies that emphasise that social skills do not come automatically with cooperative learning (see for example Barnes and Todd 1995; Cohen 1994; Sharan 2010), but should be formally taught during the lesson in the same way as any curriculum subject is taught (Lew et al. 1986). The teachers in the present study had not taught their students the necessary social skills; they did not use the T-charts that they had learnt in the school-based professional development programme. Influenced by their Confucian Heritage, the teachers just told their students to respect each other as Confucius had told one of his disciples, Yan Hui, how to achieve goodness, “Restraining yourself and returning to *rites* constitutes goodness (The Analects XII, 1).” In Confucius’ philosophy, goodness means empathetic understanding or benevolence; whereas rites refer to gentlemanly behavior. It is a fundamental principle of CL that teachers identify the essential social skills for cooperative group work, and teach and practice these skills prior to asking students to engage in the task. According to Johnson and Johnson (1990), to learn a social skill, students must see the need and understand the skill before they practice it and process how well they have used the skill.

## **Conclusion**

CL is an innovative teaching strategy for Hong Kong teachers. It is questioned whether CL, as a Western pedagogy, can be adopted in the East in countries associated with a Confucian Heritage. However, some of the concepts of Confucius, such as the benefits of learning from one another and the emphasis on goodness and rites, as well as the collectivistic culture of the Chinese seem to support the implementation of CL.

The present Hong Kong study suggests that pupils' perceptions of cooperative learning were generally positive though they encountered problems in working together, such as quarrelling, feeling neglected and frustrated. The problems could be attributed to the disequilibrium of power structure due to heterogeneous grouping that is usually recommended for CL. Chinese people consider it important to give face to members of the in-group in order to maintain their relationships. Conflicts tend to be avoided and compromises reached so as not to disrupt the harmony of the group. When conflict is unavoidable, they will resolve it through mediation by a third party for impartiality and maintenance of face. It is suggested that teachers should act as a mediator to restore harmony. Teachers should also prepare their pupils to engage in CL by formally teaching them relevant social skills so that they know how to give face to each other. Though CL has been internationally researched and recognized as an effective strategy to enhance student learning, it is difficult to transport CL as a

whole to diverse cultures (Gobbo, Jacobs and Pescarmona 2010). In the implementation of CL in countries of diverse cultures and histories, it is important that adaptations should be made, as have been discussed in the present article on accommodating CL to Confucian tradition.

### **Biographical note**

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Table 1 Preference for cooperative learning groups

|                 | Like       | Don't like |
|-----------------|------------|------------|
|                 | No. (%)    | No. (%)    |
| High achiever   | 21 (10.6)  | 45 (22.7)  |
| Medium achiever | 54 (27.3)  | 12 (6.1)   |
| Low achiever    | 60 (30.3)  | 6 (3.0)    |
| Total           | 135 (68.2) | 63 (31.8)  |