Chinese Students' Perception of Out-of-class Groupwork in Australia

Dongmei Li Louisa Remedios David Clarke The University of Melbourne

Abstract

Despite increasing number of mainland Chinese students studying in western tertiary settings, there is limited information available on their learning experiences and responses to popular educational practices in these contexts. There is an assumption in the literature that Chinese students respond well to the collaborative demands of groupwork due to the collectivist nature of their culture, however there are few reports to substantiate this claim. This paper reports on mainland Chinese students' perception of groupwork in two Australian tertiary settings. Thirteen students from mainland China were interviewed on their groupwork experiences. All interviews were completed in either Mandarin or Cantonese. Two types of groupwork were identified: assignment groupwork (AGW) and student generated groupwork (SGGW). Three criteria for collaboration: level of interaction, construction of knowledge and a shared goal were used to search for signs of collaborative elements in the Chinese students' recall of their groupwork experience. Indicators of collaboration were identified in the reports of AGWs but were less consistent in SGGWs. The findings of this study suggest that Chinese students perceive out-of-class groupwork in an Australian context as a positive learning experience, reporting enhanced understanding of academic contents, application of knowledge and socializing with other Chinese students.

Background of This Study

Globalisation has brought a rapidly growing number of students from China to study overseas. Australian Education International (AEI) (2007) annual statistics indicate that in the last seven years, the number of Chinese international students enrolled in higher education in Australia has increased significantly each year. These students are

required to learn effectively in new tertiary settings, using teaching approaches that may be unfamiliar to them. Many of these approaches involve groupwork, however little is known about how students from China learn and respond to groupwork.

Student groupwork is a popular method of teaching at Australian universities and students are encouraged to engage in groupwork both within and outside the classroom. There is substantial literature investigating student groupwork in classroom contexts (Burdett, 2007; Kapp, 2009; Ramburuth & McCormick, 2001; Remedios, 2005; Yamanashi, 2008), and an acceptance that groupwork benefits learning (Harrison, 1999; Johnson, Johnson & Smith, 1991; Johnston, James, Lye, & McDonald, 2000; Johnston & Miles, 2004; Olivera & Strauss, 2004). Moreover, additional benefits for lecturers such as reduced need for one-on-one student assistance due to peer support and the reduced number of assignments that require marking have also been recognized (Livingstone & Lynch, 2000).

Collaborative groupwork has been identified as an important element in groupwork in higher education (Burdett, 2007; Strauss & U, 2007). Collaborative groupwork is believed to enhance individual capacity (Vygotsky, 1978), improve multiple team skills (Harrison, 1999; Olivera & Strauss, 2004), and prepare graduates for employability (Johnston & Miles, 2004).

To date, literature on Chinese students' experience and perceptions of collaborative groupwork has reported predominantly on ethnic Chinese students from Hong Kong, Singapore and Malaysia (Chan & Watkins, 1994; Ramburuth & McCormick, 2001; Tang, 1993, 1996; Volet & Renshaw, 1996). In studies conducted in Hong Kong and Malaysia, the students were found to welcome and favor "collaborative" environments and groupwork patterns (Chan & Watkins, 1994; Tiong & Yong, 2004). For example, Chan and Watkins (1994) used the Classroom Environment Scale (CES) and Learning Process Questionnaire (LPQ) to investigate Hong Kong secondary students' perceptions of classroom environments. They found that students preferred an environment in which collaboration was encouraged. The respondents in that study believed that collaborative groupwork would assist a deeper approach to learning and result in higher achievements. Moreover, students in Hong Kong were seen to spontaneously engage in high levels of collaborative groupwork out of class (Tang, 1993; Yan & Kember, 2004). While the studies above reported the Hong Kong and Malaysian Chinese students' perceptions and experiences of collaborative groupwork, they refer to collaboration without actually defining what they view to be collaborative behaviours.

There is currently no consensus in the literature as to what constitutes collaborative practice in groupwork. Various authors have stressed different motivations or behaviours

when describing collaborative groupwork. A decision was made to summarize the key criteria commonly reported in the literature as a way to examine collaborative practice in this cohort of students. Three criteria were identified as useful descriptors of collaborative activity and were subsequently used when analysing the data for evidence of collaborative activity in Chinese student groupwork. These three criteria are:

- Level of interaction between group members,
- The construction of new knowledge as a result of discussion; and
- A shared goal for all group members.

The level of interaction among group members has been viewed as a key to assessing the degree of collaboration in student groupwork (Barnes, 2003; Palincsar, Sullivan, & Herrenkohl, 2002). The degree of collaboration is measured by the "mutuality of interaction" between group members, which refers to mutually interactive activities, often accompanied by intensive verbal exchange with spontaneous and often simultaneous talking (Barnes, 2003; Granott, 1993). Remedios, Clarke and Hawthorne (2008) highlight both speaking and listening as essential features of collaboration.

The construction of knowledge beyond what was previously understood by the group members (e.g. Bruffee, 1999) has also been highlighted as a key element of collaborative practice. New knowledge is thought to be developed through collaborative conversations in small group settings (Bruffee, 1999, Remedios, et al., 2008).

The third criterion is that the group members work towards a shared product or a shared goal (Panitz, 1996; Remedios, et al., 2008). This is most commonly seen in tertiary settings as a product such as an assignment or a report that is to be graded, but can include working together to prepare for a presentation or an examination.

While we accept that there may be some similarities in learning preference and approaches between groups of students from Confucian heritage cultures, Asian regions such as mainland China, Japan, Korea, Taiwan, Hong Kong, Malaysia and Singapore where learners are viewed as sharing similar learning preferences and styles which are believed to be influenced by Confucianism (Biggs, 1996; Tang, 1996), we would argue that commonwealth background countries such as Hong Kong, Singapore and Malaysia cannot be assumed to carry the same educational culture as non-commonwealth background countries such as China, and there is evidence of very different classroom practices in different Confucian heritage countries (Clarke & Xu, 2008). Data from students from one educational culture cannot be seen as a direct reflection on the practices and preference of students from a completely different educational culture (Clarke, 2003). It is therefore important that further research is conducted on how Chinese students from mainland China engage with group work.

This study examines their reported experience of groupwork and the extent to which they perceive their participation to be collaborative.

Procedure

This paper is based on a larger research project that was conducted for a Masters thesis. The study project was approved by the Human Ethics Research Committee of

Name	Previous education in China	Intended study in Australia	Previous work experience in China	Main language used at home
Beck	4-year UG English Education	M.Ed.	None	Mandarin
Carl	4-year UG English Education	M.Cinema Mgt	1 year in Administration	Mandarin
Daphne	4-year UG in Business English	Dip.Ed. & M.Ed.	3 months of teaching	Cantonese & Mandarin
Eric	4-year UG in Marketing	M.Marketing	1 year in marketing	Mandarin
Fred	4-year UG in Auto. Eng.	M.Enviro. & Energy Eng.	1 year in engineering	Mandarin
Gloria	4-year UG in Comm. Eng.	Comm. Eng. & Proj. Mgt.	None	Mandarin
Helen	4-year UG in Telecommunication	M.Telecom.	2 years in telecommunication	Mandarin
lan	4-year UG in Elec. Eng.	M.Eng. & Telecom.	1.5 years in electrical engineering	Mandarin
Julia	1-year language foundation course & international business	B.Int. Bus.	None	Mandarin & Cantonese
Kelly	1-year language foundation course & international business	B.Int. Bus.	None	Mandarin
Luke	2-year language foundation course	B. Logistics Mgt.	None	Mandarin
Paula	1-year study in marketing	B. Logistics Mgt.	None	Mandarin
Nancy	1.5-year language foundation & property management	B.Int. Bus.	None	Mandarin & Cantonese

Table 1: Educational and linguistic information on the participants.

the University of Melbourne in 2006. The project was conducted from February 2006 to November 2007.

The participants

Thirteen mainland Chinese students who were enrolled in two universities in Melbourne volunteered to participate in this study. The sample comprised five undergraduate and eight postgraduate students from different faculties such as Business, Engineering, Education and Culture and Communication. Ages of the participants ranged from 21 to 27 years. Table 1 provides educational and linguistic information on the participants. Pseudonyms are used for all participants.

Volunteers were recruited via an invitation posted on faculty notice boards on campus. The invitation notice was written both in Chinese and in English to encourage participation by Chinese students. Further, the social network of the first author, who was a university student at the University of Melbourne at the time, was used.

The interviews

Each participant was interviewed with each interview taking from 45 to 60 minutes. All interviews were conducted in dialects of Chinese including Mandarin and Cantonese. Interviewees' use of native language can assist the speakers to convey complex issues more thoroughly and fluently (Deen, 1998). A shared language between the interviewer and the interviewee is also viewed as useful in sharpening clarity in interviews (Patton, 2002; Verhoeven, 2000). Before each interview, the interviewee was informed that he/she could speak either English or his/her native language, Chinese. All interviewees chose Chinese dialects, either Mandarin or Cantonese. All interviews were audiotaped with the participants' permission.

Data analysis

The interview data were analysed with a template analysis method (King, 2004). Before the initial stages of coding, a list of themes was produced from the research objectives and the interview questions. In the larger project that this paper was extracted from, the interview questions were designed around three areas. They were: learning experiences in China;

learning experiences in Australia; and groupwork experiences in Australia, including pre-groupwork activities, groupwork behaviours, and student perceptions of the groupwork experiences. To answer the research question of student perception of collaboration in groupwork, questions were asked about what the students were doing, thinking and feeling during groupwork.

At the first stage of analysis, the interviews were transcribed in Chinese. The first author identified the salient themes, drawing on specific words or phrases that were repeatedly used by one or more of the interviewees. The transcripts were next translated from Chinese to English. The translating also functioned as a procedure for reinforcing the identification of major themes in the previous transcribing as well as identifying more themes. The second and third authors reviewed the identification of themes on randomly selected English translations to confirm the truthfulness of these themes. Translation and independent back-translation were used to increase confidence in the accuracy of the transcriptions (Dearing, 1995). To validate the translation, quotes containing key themes were back-translated by another bilingual researcher. A third validator, a certified Chinese-English translator also checked the accuracy of translation of the quotes to English.

In a secondary analysis, a search for evidence related to the three key components of collaboration, the first author looked for words that linked specifically with working together, interaction, constructing knowledge and a shared goal.

The Miles and Hubeman (1994) matrices were used to display data. A mixture of fixed and open grid was used to categorize the themes. The fixed components were filled with the pre-developed themes. The open components were set for the open-ended questions.

Findings and Discussion

The students reported two types of out-of-class groupwork: assignment groupwork (AGW) and student-generated groupwork (SGGW). In AGW, the participants referred to working in both heterogeneous groups, in which group members were from different ethnic and cultural backgrounds, and homogeneous groups, in which group members were all Chinese speakers, with students from China or ethnic Chinese from other countries. There were no major differences identified between the experiences of undergraduate and postgraduate students.

In SGGW, the Chinese students reported engaging exclusively in homogenous groupwork. Group members were friends from the same course, some of whom they had met previously in China.

Using the three criteria for identifying collaborative groupwork, it was found that Chinese students did collaborate in out-of-class groupwork, although the degree of collaboration differed between AGW and SGGW.

Assignment groupwork

The interview data showed that in AGWs listening was an important component of collaboration and language had an impact on groupwork interaction. In all the AGWs a shared goal was identified. The differences between homogenous and heterogeneous groups were only evident in the level of interaction between group members.

Level of interaction

Collaborative interaction can be exhibited in dialogue, problem solving and listening. Collaboration has been defined as:

Actions that support the public linking/construction of information to other group members' contributions for the purpose of achieving a shared goal and to develop a shared understanding of a more integrated and complex picture than previously available to the group. (Remedios, 2005, p. 164)

Interviewees reported these events of interactions during the group meetings, emphasising a great deal of discussion to clarify the assignment requirements and work distribution. This was mentioned for both homogeneous and heterogeneous groups.

For example, Julia (a final year undergraduate of International Business) described her group with reference to the organisational aspects of the assignment as well as to the construction of the assignment itself.

We talked about how to do the assignment and how to divide the work into more details, like what I was going to do with my part. Then the others would add their opinions to make it better, as the assignment was assessed as a whole. (J 92)

Julia's report shows that there was an opportunity for everyone to present their ideas and contribute to the task. Most importantly, the student reported problem solving in group discussions. In collaboration, the students are expected to pool their knowledge and learn from each other (Remedios, 2005). During this kind of collaborative interaction as Julia described, the group members contributed their expertise, and built on each other's contribution to achieve enhanced understanding and assist problem solving. Other students described confirming with the group from time to time:

Sometimes I need to confirm with the group whether we have solved this question. Then you develop your ideas. (C38)

A distinct feature of collaborative interaction in student groupwork is confirmation check and negotiation of meaning (Storch, 2001). As English as second language (ESL) speakers, the interviewees in this paper demonstrated that they needed to negotiate meanings. The negotiations described in the student interviews included

such distinct features as clarification requests (see J92 above) and confirmation checks (see C38 above).

Listening as a way of engaging in groupwork was also mentioned by several students. Nancy (in her last year's undergraduate study of International Business), referring to working in a heterogeneous group stated:

Normally I listen to what they have done with their parts and I also share how I am doing with my part. Lastly, I would talk about the difficulties I have in my part. Maybe it has to do with their parts. (N58)

Carl linked listening as a cultural preference:

Most of the time I was listening. And most Chinese students listen a lot. . . . Very often I was thinking while listening, actively. You are not talking a lot but you are in an active thinking attitude. Also it is impossible to keep talking continuously. (C38)

As Remedios et al. (2008) argue, listening can be a strong collaborative act in multicultural student groupwork as silence can reflect active listening, support or a way of acknowledging group consensus. Carl's reflection on his listening behaviour in groupwork mirrors this claim. When other group members explained their parts, Nancy (see N58) reported to be listening. The silence in these events can be understood as attentive listening because after the silence Nancy would talk about the difficulties that she considered to be related to other members' work. She provides signs of active listening to analyse other members' input to produce relevant topics afterwards.

It was evident in AGW, that listening was more common relative to speaking in heterogeneous groups than in homogeneous groups, with more verbal exchanges reported in the latter. Several students referred to the advantages of homogeneous AGWs, noting the shared language and social and cultural comfort that come with working with other Chinese students:

We were all Chinese. Easier to communicate. What's more, we could even tell jokes. (L50)

The advantage was that it was more convenient to talk. We could even use our native language. (D104)

It is really easier to communicate, more interactive and the whole environment is more relaxed. (J40)

In contrast, the Chinese students appeared to be less talkative in heterogeneous groups, Daphne pointed to the risk of making mistakes because of her lack of fluency:

We are too embarrassed to talk, feeling that our English is not good enough and will be laughed at, so just sit there and say nothing. (D24)

Carl provides another perspective, as he refers to the need to interpret what he is hearing so that he can process before he responds appropriately:

One is the issue of language. It goes through input, digestion, process and then expression. (C38)

From the student reports above, language has an impact on the interaction among group members, thus affecting the degree of collaborative interaction in heterogeneous groups. This constraint to group participation has been previously identified (Biggs, 1991; Tani, 2005). Chinese students' lack of English proficiency might explain the phenomenon that Chinese students appear to be quiet participants in a heterogeneous setting. As is mentioned in the earlier section, the use of native language benefits the fluent expressions of complex issues (Deen, 1998) whereas using another language hinders students from expressing their opinions fluently and fully understanding the contribution of other group members. The process of exchange of information is slowed and the risk is that the information is lost in translation.

Construction of knowledge The interview data suggested that Chinese students constructed new knowledge and achieved enhanced understanding through groupwork independent from tutor instructions. The construction of knowledge was seen in the student-generated questions, along with applying their new knowledge in real or virtual projects so as to enhance their understanding to a higher level.

When recalling one of her group assignments, Paula said the group sought solutions through discussion with her group members:

We went to all kinds of details. In the end we didn't know the answers. We didn't dare to ask Elsa (tutor), as she was very strict. She would make you go to find the answers yourself. (P52)

According to reports by some students, working in a group independent from the tutor provided the students with an opportunity to produce more detailed responses to questions. These questions were finally resolved by the students themselves without receiving instruction from the tutor. In the end they worked out the answers to the questions and achieved a further step in their understanding. This process agrees with Remedios and associates' (2008, p. 10) argument that one aim of collaboration is "to develop a shared understanding of a more integrated and complex picture than previously available to the group".

Another aspect of construction of knowledge was identified when the students described applying the knowledge through group projects. The students reported furthering their learning through this process. Many participants reported positive attitudes towards group assignments, such as group projects, competitions or the development of virtual companies:

The most interesting was that competition and another calculation task, which was in a group. I prefer doing those meaningful projects or assignments. (G122)

Although this year was busy but it has been interesting, because I and the other people discussed the project as a team. (C54)

In contrast, the assessment system in China lacked such activities. It was described as boring, with a lot of memorization and reproduction expected:

It was quite boring at home, it freer here. You can make your group and find your group members freely. . . . The teachers won't give you a fixed format to write. You can write what you want. (L26)

In China normally one person finished the assignment and everybody else copied. (P106)

Although the students were not familiar with group assignments, they showed a positive attitude towards these assignments. The students were aware of the benefits of constructed understanding of new knowledge when the tutor was not available and that they could apply the knowledge in practical situations. Collaborative groupwork is a way of constructing knowledge by "marshalling the power of interdependence among peers" (Bruffee, 1999, p. xii) and the essence of collaborative groupwork is that the authority of knowledge is transferred from the instructor to the group members, that is, the students (Williams, 2000). The student group members are interdependent while independent from the tutor, thus maintaining the authority of knowledge within the group. The working procedures adopted by the group, such as work division, problem solving, and writing up, were initiated by the group members themselves. The tutor's role in this assignment was limited to the pregroupwork instructions, such as the size of the group, the due date of the assignment, and distribution of the tasks. This shows that the Chinese students are able to work in other ways such as problem solving, not only receiving knowledge passed on to them by their teachers.

A shar ed goal A shared product or goal is one of the main characteristics of collaborative learning (Panitz, 1996; Williams, 2000). Typically, each AGW group had a shared goal which was to complete a written or oral form of report. The shared goal was recognizable

either at each meeting or in the longer term. Before each meeting, it was common practice for the group leader to set an outline listing the jobs to be completed by each group member and each member was informed of the goals to be reached in preparing for the meeting. Electronic tools such as email and instant messaging tools were used for communication. This was seen in both heterogeneous and homogeneous AGWs. In the long term, either a written or verbal group product was to be completed by the group and submitted to the tutor for assessment:

We have an outline before every discussion for what needs to be done this time, the problems to be solved, and what our task is. (L104)

Whatever we do, our aim is to finish the project or to accomplish our objectives. (K88)

Keeping a shared goal for each AWG meeting and for the group in the long run demonstrated the collaborative component in the Chinese students' groupwork experience. This aspect also points to a cultural feature of the Chinese students. Working for the honour of a group is seen as an important feature of the collective culture (Jiang, 2006). The students clearly recognized the importance of a shared goal and were aware of their responsibility in a group. This awareness urged them to work not only for their own interests but also for the whole group. Collaborative learning in this aspect agrees with the collective culture.

In summary, AGW can be viewed to be collaborative in nature for Chinese students, however there are clearly some constraints to interaction in heterogeneous groups.

Student-generated groupwork

Student-generated groupwork was formed to resolve questions and study in a social setting. In contrast to AGW, student-generated groupwork was homogeneous with all Chinese members. Asymmetric collaboration is identified with one group member dominating the interaction. A shared goal was not seen in student-generated groupwork.

Level of interaction Student-generated out-of-class groupwork was initiated for varied academic purposes, which shaped the level of interaction among group members. There was also a social element to these groupwork sessions, which appeared to be as important as the learning agenda. A group was commonly formed when one of the group members wanted to ask questions. Nancy's and Paula's descriptions of their groups show that the students brought their own assignments and studied in the same physical location, so that they could ask questions, chat or go on with social activities together:

Everybody gets what he needs. You ask about what you don't understand and the others ask about what they don't understand. We can all discuss. (N158)

The three of us study together and we will go shopping. We go shopping after working for one or two hours in the library. Or we begin to chat or surf the Internet as we work. (P102)

This kind of groupwork is called parallel activity (Barnes, 2003; Granott, 1993). In parallel activities, students work in parallel with some degree of exchange that stimulates each other's activity. When the students interact with one another they watch, listen, talk and exchange information. During the independent time, they focus on their respective work. Members valued the company of each other as much as, if not more than the academic purposes. The motivation of SGGW can be seen as the need for friendship and social connection where the students are in a foreign country.

Another situation of SGGW was when the students attending the same subject grouped together to clarify understanding or to complete individual homework. Becky described one of the group meetings formed for a translating subject:

We discussed the questions we did not understand or those disputed ones. (B44)

She also described the interactions in one of the group meetings:

She (a group member) thought that paragraph was not correctly translated. She said what the teacher said was not quite right. She said in Chinese it was grammatically wrong, but the teacher had already done it that way. So we had to discuss it over and then confirm with the teacher or we solved it ourselves. (B64)

In this situation, collaborative interaction was evident. When Becky and her group analysed the teacher's translation and tried to decide if they should follow the teacher's way or make their own decision, they were assumed to be interacting with one another, trying to achieve a shared understanding. In this group, the student that initiated the challenge to the teacher's translation could be seen as the expert other in the discussions. The group members, with one more dominant, were engaged in a common activity, to solve the problem in this case. They also shared their knowledge to achieve enhanced understanding in this activity. These varied situations show that there is no consistency in the level of interaction with SGGW. Interaction was dependent on the specific purpose of each group meeting.

Construction of knowledge In SGGW, there were also reports of construction of knowledge, in the way of seeking solutions to questions that were not solved in class. When the students worked together to reach the right answers, they not only checked the answers with each other, but also shared their thinking about how they reached the solution. This procedure of reaching and confirming the correct answers solidifies the understanding of new knowledge. This was shown in Luke's comments on his SGGW experience:

Sometimes we discuss, as some accounting assignments have only one answer. We would sit down and discuss whether we do it the right way. I think accounting is related to figures and the answer is one and only, so discussions with others are necessary. (L92)

Fred's report indicates another perspective on how knowledge was constructed during SGGW:

By helping him finish the assignment I could also learn something relevant. Or when he was lost in researching for some resources, I can refer him to some database or articles. And I also provide some information or solutions to the questions. (F106)

Comments such as Luke's reveal that the students tried to confirm their results of questions with fixed answers. Fred's report exhibits scaffolding in group interaction. Vygotsky (1978) highlights the importance of working with an expert other, which facilitates the cognitive process. This kind of interaction represents "asymmetric collaboration" where knowledge is constructed by group members of asymmetric expertise (Granott, 1993, p. 189). Fred's report also suggested that new knowledge was gained not only by students consulting other group members, but also through students offering help. Students also had their own knowledge consolidated while explaining to other group members.

Compared to AGW, the students' learning emphasized different cognitive elements in SGGW. In AGW the students were required to further their understanding by applying knowledge to assignments, while in SGGW, the students initiated learning and knowledge consolidation. In comparison, student-generated out-of-class groupwork seemed to have more elements of knowledge construction independent from the tutor. In SGGW, discussions were conducted without any directions from the tutor. Problems were solved within the group through peer tutoring. There was evidence that students actually challenged the accuracy of the tutor's work (B64). New knowledge was produced through group members' discussions, and the authority for the generation of knowledge remained within the group.

A shar ed goal The findings showed that it was rare to have a shared goal in SGGW. Students formed groups mainly to fulfil their respective goals. This is a typical example of the SGGW purpose:

My purpose is to ask him questions, to ask him what I need to know and what I don't understand. He won't have expectation for me. During the study, I can learn. (K114)

The word "common" is better than "shared" to describe these goals here. For example, the group members could all have the aim of getting questions answered, but they did not necessarily have the same questions to discuss with each other. Therefore, the common goal of such groupwork was to have questions answered or problems solved, but they might not have shared the same problems.

A summary of comparing AGW and SGGW

It appears that the Chinese students in this study exhibited some characteristics of collaboration in both AGW and SGGW. However, there were more differences than similarities between the two groupwork settings.

Level of interaction In AGW, the students reported listening attentively and negotiations of meanings in their interaction, whereas in SGGW, the students described inconsistent collaborative interaction, with parallel activities and asymmetric collaborations.

Construction of knowledge In AGW, the students worked together to complete a group assignment finding the right answers and consolidating knowledge by applying to group projects, while in SGGW the students deepened their cognitive learning by constructing knowledge independent from the tutor's help.

A shar ed goal In assignment groupwork, a shared goal was clearly exhibited but the students normally did not share a common goal in SGGW.

Limitations of the Study and Recommended Research

In this study, only the students' perceptions of their groupwork experience were documented in the way of interviews. Ideally, more group meetings should have been observed to confirm student perception and to have independent data on the collaborative nature of groupwork. Further it would be of considerable value to observe the level of collaboration operating in both heterogeneous and homogeneous groups.

Due to the limited number of interviewees in this study, there was no difference identified between the postgraduate and undergraduate student experience. Given more time to conduct interviews with a larger number of students of both postgraduate and undergraduate levels, it may have been possible to gain more insights into the different learning experiences between the two groups.

The method of recruitment could have constrained the variety of information available. Volunteering might have limited the participants to atypically collaborative Chinese students. Students who had no experience of collaborative groupwork might not have participated in this project, providing a biased view of mainland Chinese student groupwork experiences.

Conclusion

Two types of out-of-class groupwork were discussed in relation to the degree of collaboration in Chinese students' groupwork. Assignment groupwork showed strong characteristics of collaboration in terms of the level of group interaction, construction of knowledge, and a shared goal. In SGGW, collaborative elements were found in the construction of knowledge and enhanced understanding through working in groups. However, the group members did not necessarily share the same goal when they worked together, and frequently the interactions between group members were rather low even when they shared the same physical locations. Overall, these students had positive attitudes towards out-of-class groupwork. The evidence of collaboration suggests that Chinese students respond to the educational context and develop skills in line with the agenda to learn through collaboration.

The findings of this study also indicate that out-of-class groupwork benefited Chinese students studying in a foreign country. There are several ways that universities and tutors could work to encourage and improve this practice. For example, tutorial sessions focusing on language could be held on a more frequent basis. This would consistently help improve Chinese students' English proficiency as well as their confidence. Chinese students would be able to speak more frequently and comfortably in a group with students from other backgrounds. The level of interaction might rise as a result.

Moreover, tutors are encouraged to give assignments that can engage students in constructing knowledge and enhancing their understanding of course material. Group projects appear to be effective and therefore should be encouraged as they increase students' application of knowledge.

Lastly, tutors should be aware that some Chinese students generate groupwork out of class. The tutors could offer assistance and support whie maintaining minimum

intervention so that Chinese (and other) students maintain their independence and comfort while using these collaborative learning opportunities to their advantage.

References

- Australian Education International (2007). 2007 Pivot Tables. Retrieved April 16th, 2007, from http://aei.dest.gov.au/AEI/MIP/Statistics/StudentEnrolmentAndVisaStatistics/2007/Default.htm#pivot
- Barnes, M. (2003). *Collaborative learning in senior mathematics classrooms: Issues of gender and power in student-student interactions.* Unpublished PhD thesis, University of Melbourne, Melbourne.
- Biggs, J. (1991). Approaches to learning in secondary and tertiary students in Hong Kong: Some comparative studies. In M. Krantzig (Ed.), *Eighth Australian learning and language conference* (pp. 1-51). Queensland, Australia: Queensland University of Technology Counselling Services.
- Biggs, J. (1996). Western misconceptions of the Confucian-heritage learning culture. In D. Watkins & J. Biggs (Eds.), *The Chinese learner: Cultural, psychological and contextual influences* (pp. 45-67). Hong Kong: The University of Hong Kong, Comparative Education Research Centre.
- Bruffee, K. A. (1999). *Collaborative learning: Higher education, interdependence, and the authority of knowledge* (2nd ed.). Baltimore: The Johns Hopkins University Press.
- Burdett, J. (2007). Degrees of separation Balancing intervention and independence in group work assignments. *The Australian Educational Researcher*, *34*(1), 55-71.
- Chan, Y-Y. G., & Watkins, D. (1994). Classroom environment and approaches to learning: An investigation of the actual and preferred perceptions of Hong Kong Secondary School Students [Electronic version]. *Instructional Science*, 22(3), 233-246.
- Clarke, D. (2003). International comparative studies in mathematics education. In A. J. Bishop, M. A. Clements, C. Keitel, J. Kilpatrick, & F. K. S. Leung (Eds.), *Second international handbook of mathematics education*. Dordrecht: Kluwer Academic Publishers.
- Clarke, D. J., & Xu, L.H. (2008). Distinguishing between mathematics classrooms in Australia, China, Japan, Korea and the USA through the lens of the distribution of responsibility for knowledge generation: Public oral interactivity versus mathematical orality. *ZDM The International Journal in Mathematics Education*, 40(6), 963-981.
- Deen, H. (1998). Broken Bangles. Sydney: Anchor.
- Dearing, J. W. (1995). Growing a Japanese science city: Communication in scientific research. London: Routledge.

- Granott, N. (1993). Patterns of interaction in the co-construction of knowledge: Separate minds, joint effort, and environments. In R. H. Wozniak & K. W. Fischer (Eds.), *Development in context: Acting and thinking in specific environments* (pp. 183-207). Hillsdale, NJ: Erlbaum.
- Harrison, E. F. (1999). *The managerial decision-making process* (5th ed.). Boston: Houghton Mifflin.
- Jiang, X. (2006). The concept of the relational self and its implications for education. *Journal of Chinese Philosophy*, *33*(4), 543-555.
- Johnson, D. W., Johnson, R. T., & Smith, K. A. (1991). *Cooperative learning: Increasing college faculty instructional productivity* (ASHE-ERIC Higher Education Report No. 4.). Washington, DC: George Washington University, School of Education and Human Development.
- Johnston, C. G., James, R.H., Lye, J. N., & McDonald, I. M. (2000). An Evaluation of collaborative problem solving for learning economics [Electronic version]. *The Journal of Economic Education*, *31*(1), 13-29.
- Johnston, L., & Miles, L. (2004). Assessing contributions to group assignments. *Assessment and Evaluation in Higher Education*, 29(6), 751-768.
- Kapp, E. (2009). Improving student teamwork in a collaborative project-based course. *College Teaching*, *57*(3), 139-143.
- King, N. (2004). Using templates in the thematic analysis of text. In C. Cassell and G. Symon (Eds.), *Essential guide to qualitative methods in organizational research*. London: Sage.
- Livingstone, D., & Lynch, K. (2000). Group project work and student-centred active learning: Two different experiences. *Studies in Higher education*, *25*(3), 325-345.
- Miles, M. B. & Hubeman, A. M., (1994). *An expanded sourcebook: Qualitative data analysis.* Thousand Oaks, CA, Sage.
- Olivera, F., & Strauss, S. (2004). Group-to-individual transfer of learning-cognitive and social factors. *Small Group Research*, *35*(4), 440-465.
- Palincsar, A. S., Sullivan, A., & Herrenkohl, L. R. (2002). Designing collaborative learning contexts [Electronic version]. *Theory into Practice*, *41*, 26-32.
- Panitz, T. (1996). *A definition of collaborative vs. cooperative learning*. Retrieved February 18, 2006, from http://www.city.londonmet.ac.uk/deliberations/collab.learning/panitz2.html
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). London: Thousand Oaks.
- Paulusz, W. (2004). *Identifying and providing culturally relevant support services to international students*. Retrieved March 9, 2007 from the Deakin University website: http://www.deakin.edu.au/studentlife/counselling
- Ramburuth, P., & McCormick, J. (2001). Learning diversity in higher education: A comparative study of Asian international and Australian students. *Higher Education*, 42(3), 333-350.

- Remedios, L. (2005). Experiences and responses of overseas-educated students to problem-based learning and its classroom culture in an Australian physiotherapy context. Unpublished PhD thesis, University of Melbourne, Australia.
- Remedios, L., Clarke, D., & Hawthorne, L. (2008). Framing collaborative behaviours: Listening and speaking in problem-based learning. *Interdisciplinary Journal of Problem-based Learning*, 1(2), article 3. Retrieved July 9, 2008, from http://docs.lib.purdue.edu/ijpbl/vol2/iss1/3
- Strauss, P., & U, A. (2007). Group assessment: Dilemmas facing lecturers in multicultural tertiary classrooms. *Higher Education Research and Development*, 26(2), 147-161.
- Storch, N. (2001). How collaborative is pair work? ESL tertiary students composing in pairs. *Language Research Forum*, *5*(1), 29-53.
- Tang, K. C. C. (1993). Spontaneous collaborative learning: A new dimension in student learning experience? *Higher Education Research & Development*, 12(1), 115-130.
- Tang, C. (1996). How Hong Kong students cope with assessment. In D. Watkins & J. Biggs (Eds.), *The Chinese learner: Cultural, psychological and contextual influences* (pp. 159-182). Hong Kong: The University of Hong Kong: Comparative Education Research Centre.
- Tani, M. (2005). *Quiet, but only in class: Reviewing the in-class participation of Asian students.* Retrieved December 29, 2007, from http://conference.herdsa.org.au/2005/pdf/non_refereed/030.pdf
- Tiong, K. M., & Yong, S. T. (2004). Confucian heritage culture learners' and instructors' expectations and preferences in collaborative learning: Convergence or divergence? [Non-referred paper]. Retrieved February 3, 2006, from http://herdsa2004.curtin.edu.my/ Contributions/NRPapers/A055-jt.pdf
- Verhoeven, J. C. (2000). Some reflections on cross-cultural interviewing. In C.J. Pole, & B. G. Burgess (Eds.), *Cross-cultural case study* (pp.1-20). Amsterdam: JAI.
- Volet, S., & Renshaw, P. (1996). Chinese students at an Australian university: Adaptability and continuity. In D. Watkins & J. Biggs (Eds.), *The Chinese Learner: Cultural, psychological and contextual influences* (pp. 205-220). Hong Kong: The University of Hong Kong: Comparative Education Research Centre.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Williams, G. (2000). *Collaborative problem solving in mathematics: the nature and function of task complexity*. Unpublished Masters thesis, University of Melbourne, Australia.
- Yamanashi, J (2008). Enhancing teachers' classroom strategies for inclusive group work: A small-scale exploratory study. *Special Education Perspectives*, 17(1), 11-32.
- Yan, L. & Kember, D. (2004). Engager and avoider behaviour in types of activities performed by out-of-class learning groups [Electronic version]. *Higher Education* 48(4), 419-438.