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Culturally-Mixed Group-Project: Comparison of Students' Experience and Perspective at Two Campus Locations

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INTRODUCTION

A culturally-mixed group-project has been embedded in a third-year undergraduate Heat Transfer subject in a Mechanical Engineering Program at Swinburne at Hawthorn (Australia) and Sarawak (Malaysia) campus. The ultimate goals of this practice are to provide students with experience of working with others of different cultural background and to raise their own cultural perspective, which hopefully build their intercultural communication skills and further expend their international perspective. This paper shares the experience and findings from the study from the first two years, particularly comparison of students' experience and perspective at the two locations.

PURPOSE

This study was carried out to investigate whether the students get the benefits from the culturally-mixed group project and also to identify challenges faced at the two locations.

DESIGN/METHOD

A culturally-mixed group project was run for 7 weeks within the semesters. The groups (of 3-4 students with at least one international expert) were required to study, research and compare sustainable energy sources to deliver energy for domestic purposes in remote locations in Australia (or Malaysia in the Sarawak campus) and overseas. Linking the overseas location with the international experts (which is expected to be the international students) in the group encouraged two-way dialogue between students within the group and provided an international context. The students' experience and perspective were explored by drawing data from two surveys (before and after the project) and a focus group (at the end of semester) carried out at both locations.

RESULTS

The students' perspective on the group project and its purpose was found to be positive. High percentage of students felt that the project had encouraged them to engage more deeply with students from different background. In particular, all the international students in the 2009 study thought that the project has made them more confident in working and studying with other students from different backgrounds. The responses from the Sarawak students were much more positive in almost all aspects investigated. The results maybe contributed by the smaller number of students in the class in the Sarawak campus with more homogeneous student demographic. Additional challenges were identified from the study which originated from diversity in a wider sense, e.g. different cohorts (which has different level of maturity, commitment and motivation), local *vs* non-local students of different cultural background (including those regional, interstate and international students); mature and pathway students.

CONCLUSIONS

A more effective group work with diverse students can be achieved provided that appropriate preparation and management of the project were carried out carefully. The students' experiences and perspectives in the Sarawak location appear to be more positive which attributed to the less number of students and the more homogeneous composition of the students. This was proportional to the level of support the students received for carrying out the activities (e.g. low student to mentor ratio).

KEYWORDS

Group work, cultural diversity, internationalisation of the curriculum

Introduction

The nature of engineering profession requires not just the ability to solve technical problems in their discipline but also the ability to co-operate with others from different disciplines and others with diverse backgrounds. Modern engineering practice relates to specific contexts and formulated in broader issues, for example, water supply problem, or renewable energy solution for newly developed region. This requires engineer to work and to communicate with other professionals and non-professionals including those from the local locations. The technological developments, transfers and solutions will always involve the local contexts in which the cultural issues can provide serious difficulties. This cultural dimensions need to be taken into account to develop an adequate understanding of the causes and consequences of specific technological developments. Micro (individual) and macro (regional, national and international) contexts need to be considered in the application and transfer of technology (McGinn, 1991). These matters are recognised by Engineers Australia (EA) which requiring the engineering graduates to be able to function in diverse engineering teams as a member or leader, including of multilevel, multi-disciplinary and multi-cultural teams. This put emphasise on the development of students' intercultural skills and international perspectives during their study in an engineering program, which in essence, is one of the purpose of internationalisation of the curriculum.

The growing numbers of international and diversity of domestic students in Australian universities provide opportunities for intercultural learning for both Australian and international students. However, it has been pointed out by many investigators (Volet & Ang 1998, Quintrell & Westwood, 1994) that there are minimal interactions between the culturally diverse students and that intercultural learning does not happen automatically. Volet and Ang (1998) identified four types of reason why students from different cultural backgrounds do not mix automatically, namely cultural-emotional connectedness, language, pragmatism, and negative stereotypes. Leask (2009) argued that improved interactions between home and international students are dependent on the way that the formal and the informal curricula are used to encourage and reward intercultural engagement.

One approach to promote intercultural contacts and engagement are through group learning activities. Group learning activities conducted in culturally mixed groups can potentially enhance the quality of student learning outcomes as well as create opportunities for positive intercultural learning (De Vita, 2001). The use of group learning activities can also address a number of aspects simultaneously, i.e. providing environment for the students to develop their team, communication and intercultural skills. There have been a number of studies in using group work as a tool to assist intercultural learning (Volet & Ang 1998, Andersen 2001, 2004, Byrge & Hansen 2009, Turner 2009, Kimmel & Volet 2012). In general, there are a number of advantages in using group work activities. The students are exposed to different experiences and values. They can discover more about each other and their individual and cultural attitudes to working together. They experience the benefits and challenges of group cooperation and are able to reflect on possible responses in spending time in culturally diverse learning groups (Chang 2006, Turner 2009). Nevertheless, there are also challenges and difficulties associated with intercultural group work. For example, problems related to free riding (i.e. when one or several members of a group contribute so little to a group project but receive the same grade given to all members), management of multiple relationships, navigation of unfamiliar communication and working styles can occur. According to Leask (2009) there are a number of aspects that need to be considered for intercultural group work to be successful, namley curriculum alignment, comprehensive support, authentic tasks, and staff awareness.

In our study, a formal curriculum using a learning infrastructure of group work is used to assist with the intercultural contact and engagement between the students. A unique culturally-mixed group project is embedded in a core subject of Heat Transfer in Mechanical Engineering program, considering the framework suggested by Leask (2009). The ultimate

goals are to provide students with the experience of working with others of different cultural backgrounds and to raise their own cultural perspectives. These are hoped to build their intercultural communication skills and further expand their international perspective. The group project was run in parallel in an identical subject at two campus locations, Hawthorn-Australia and Sarawak-Malaysia. It should be mentioned that the subject and curriculum in the program in Sarawak are mirrored to those in Hawthorn. The group project was first embedded in 2008 and there has been a continual improvement over the years. The initial pilot study and central idea of the activity were reported in a previous paper by the authors in 2009 (Rhamdhani et al., 2009). The detailed rationales for using a formal curriculum in the form of group work for promoting intercultural engagement and the improvements made on the activities were also reported in 2010 (Rhamdhani *et al.*, 2010, Salehi *et al.*, 2010). The group work activity was finally embedded permanently in the subject in 2011. Building up from the previous papers, this paper will share the experience and findings from the study from the first two years, focusing on the comparison of students' experiences and perspectives at the Hawthorn and Sarawak locations.

Students Demographic at Hawthorn and Sarawak

The Heat Transfer subject in the Hawthorn campus had typical number of students of 110 to 130 of which about 20-22% were international. This compulsory subject was offered to 3rd year students, however, 2nd and 4th year students were also enrolled. Typically there were about 10-15% pathway students whom either transferred or continued from diploma/TAFE program or mature students. It is clear that in addition to cultural diversity, the class also possessed diversity in a wider sense, in terms of cohorts, level of maturity, commitment and motivation. In the Sarawak campus, the total numbers of the students were 13 (with 1 international) and 15 (with 4 international) in 2008 and 2009, respectively. A summary of the differences between the Sarawak and Hawthorn campus, in terms of student demographic, size of class, knowledge resources from students, mentor to student ratio and dominating culture is shown in Table 1.

Table 1: Summary of differences in the subject at Sarawak and Hawthorn campus

Differences	Sarawak	Hawthorn
Student Demographic	More uniform / homogenous	Mixture of local and international students, pathway students, students from difference cohorts
Size of Class	• Small class (13 to 15 students; consist of 1 to 4 International). • Overall consists of 2 to 3 groups	• Large class (110 to 130 students; consist of 22 to 29 International). • Overall consists of 25 to 30 groups
"Knowledge Resources" from Students	Limited knowledge resources coming from 3 groups	More variations of local and international knowledge coming from 30 groups
Mentor to student ratio	1 : 8	1 : 30
Cultural Aspect	Asian culture influenced	Western culture influenced

Methodology

A combination of quantitative and qualitative approach was used in the current study. To explore the students' experience and perspective, two surveys were carried out before and after the group project. The first survey was mainly focused on asking the students' previous experiences in working in culturally-mixed group which provide the baseline. At the conclusion of the project, the second survey was provided and students were invited to respond on the followings,

1) Experience in the group project
   - Whether the student's knowledge and/or experience was valued by the group
   - Whether the student more confident working / studying with people from different backgrounds after the project
   - Whether the student need to learn more about inter-cultural communication
2) Engagement with other cultures
   - Whether the project raised the student curiosity and interest in other environments and/or cultures
   - Whether the project encouraged the student to work/study with people from different backgrounds
   - Whether the project encouraged the student to consider how to communicate with people from different backgrounds
   - Whether the project encouraged the student to engage more deeply with people from different backgrounds
3) Broadened cultural and international perspectives
   - Whether the project encouraged the student to broaden their cultural and international perspectives

Focus group was then carried out at the end of the semester to clarify the findings from the surveys and to gain more insight on the students' perspective and expectation as well as to identify if the project provided students with a meaningful opportunity to develop greater intercultural awareness and skills.

Details of the Culturally-Mixed Group Project

The approach has been refined incorporating feedback and lessons learnt from running the group project over the past 4 years. A more detailed explanation of the group project including the changes made over the first two years can be found elsewhere (Rhamdhani *et al.* 2009, 2010).

The group project was run for 7 weeks in a Heat Transfer subject within the Mechanical Engineering program, in parallel at two campus locations, i.e. Hawthorn (Australia) and Kuching (Sarawak, Malaysia). The students in the class were grouped (3-4 students, with at least one international expert) and required to study, research and compare sustainable energy sources to deliver energy for domestic purposes at two remote locations, in Australia (or Malaysia) and overseas. The convenor provided the groups a list of possible overseas locations to be chosen; typically China, India, Indonesia, Nepal, Sri Lanka, Macau, Hong Kong, USA, South Korea, Dubai, Thailand, Germany and Malaysia. In essence, the list was based on the place of origin of the international students enrolled in the subject. The choice of the overseas location was ultimately up to the group, however it was expected that they would choose the location of the international experts within the group. The students were aware that it would provide the additional knowledge on the international locations.

In addition to solving heat transfer calculation problems specific to the locations, the group must also discuss the differences in the applications/practices of the chosen energy in Australia/Malaysia and in the other location based on one of the followings: (a) Energy source requirement and availability, (b) Cultural and social aspects, (c) Geographical aspects; e.g. middle of desert, on top of a mountain, etc., (d) Economic values; e.g. can the system build locally, (e) Economic feasibility, can local people afford to pay for this energy, etc., (f) Transport availabilities, (g) Government policies, (h) Manufacturing facilities, (i) Communication processes, (j) Timing aspects.

Group Formation

The convenor and the students were involved in the formation of the groups. The students were allowed to choose 1 or 2 friends that they want to work with to form a sub-group. The convener then randomly merged it with another sub-group. Thus, each group had at least one international expert. It was expected that putting an international context in the task and

linking the overseas location with the international experts (or international students) in the group will encourage a two-way dialogue between students within the group. As an example, one group evaluated the use of solar energy in Nungarin in Western Australia and Narian Khorian (Paksitan). In this particular group, the international expert (a student from Pakistan) provided the required "local" socio-economic and government policy information on Narian Khorian (for example the type of supports available in that district offered by the local government or council).

Assessments

The groups were required to report their finding in a 5-page group report and in a 15-minutes group oral presentation (10 minutes presentation + 5 minutes Q & A session). These constituted to 15% (10% report and 5% presentation) of the student's total mark in the subject. The group presentations were marked by their peers and mentors, while the reports were marked by the mentors. The mentors were consisted of the lecturer, tutors and one additional dedicated mentor. A final group mark was given to the group, however an individual mark for each group member was given by adjusting the group mark considering the "peer assessment number" (PAN). PAN is a multiplier, a value ranging between 0.8 to 1.2, calculated from the percentage contribution of each member in the group. Equal contribution from each member means that PAN equal to one, which results in an individual mark equal to group mark. The group was responsible for determining the percentage contribution distribution of the group members. This distribution had to be a consensus decision of all the members of the group and substantiated by the team meeting logs and milestones.

Students Preparation and Supports

Relevant supporting documents were provided in Blackboard to help and support the students in carrying out the group project. These include Group Project Instruction with explicit task, a lectopia recording on "Bridging the Cultural Gap" by external consultant, materials and resource on Team Development and Getting Team Working, oral presentation guideline and rubric, report marking scheme, and form templates (PAN form, contribution distribution, team meeting log, schedule and milestones). Students and groups had access to mentors (1 lecturer, 2 tutors and 1 dedicated mentor) at least 1 hour per week during the duration of the project with additional times upon appointment.

Discussion

Table 2 shows the comparison of the students' experience in the project between the international and local students within the Hawthorn campus; and overall between the students in Hawthorn and Sarawak campus. There are a number of trends that can be observed from these results. First, there is an increasing positive responses coming from the students from 2008 to 2009 in almost all aspects. This is attributed to the changes made in 2009 as previously reported by Rhamdhani *et al.* (2010). It is encouraging that majority of the students in the Hawthorn campus had positive experience in the group project and they have become more confident working/studying with others of different background.

Arguably the mechanism and supports in placed in 2009 have provided better group work experience. In the Hawthorn campus, these include the more random group formation method, more supports for the students (one additional mentor and was better prepared). As with other previous findings (Kimmel & Volet 2012, Sweeney et al. 2008), this reinforces the critical factor of adequate mentor/tutor support for rewarding and positive group learning activities. That is to help the students in the technical aspect of the project, as well as nurture and facilitate the intercultural group work and process. The advantages of the group work needs to be maintained as they are often lost because of faulty group processes, which degrade the cognitive and political activity of the group (Kimmel & Volet 2012, Andersen 2001). Additional significant change made was on the more concise and focused group

project instructions with highly structured tasks. This is important, in particular when the students only have limited prior experiences in working in culturally mixed group (Volet & Ang 1998).

Table 2: Hawthorn and Sarawak students' responses on their experience in the project

	Hawthorn Students				Hawthorn Students		Sarawak Students	
	Local % Agree		International % Agree		All % Agree		All % Agree	
	2009	2008	2009	2008	2009	2008	2009	2008
My knowledge/experience was valued by the group	92.3 (7.7)	68 (21)	66.7 (33.3)	64 (36)	87.5	66	93.3	91
I am more confident working / studying with people from different backgrounds	61.5 (23)	36 (21)	100	36 (27)	68.8 (18.8)	34 (24)	93.3	58
I need to learn more about inter-cultural communication	73.1 (19.2)	59 (19)	66.7 (33.3)	55 (9)	71.9 (21.9)	58 (17)	86.7	83

***the numbers in bracket ( ) are the percentage of unsure**

Table 3 shows the students responses on whether the group project encouraged them to engage with other cultures. Although the overall responses in 2009 were better than the previous year, the positive responses were low. Nevertheless, it should be noted that quite a number of students were unsure (rather than negative towards the project) about whether the group project encouraged them to engage with other cultures. Further investigation needs to be carried out to clarify what was causing this "unsure".

Table 3: Hawthorn and Sarawak students' responses on whether the project encouraged them to engage with other cultures

	Hawthorn Students				Hawthorn Students		Sarawak Students	
	Local % Agree		International % Agree		All % Agree		All % Agree	
	2009	2008	2009	2008	2009	2008	2009	2008
The project raised my curiosity and interest in other environments and/or cultures	42.3 (34.6)	23 (23)	40 (40)	55 (18)	41.9 (35.5)	34 (21)	66.7	75
The project encouraged me to work/study with people from different backgrounds	26.9 (38.5)	36 (12)	83.3 (16.7)	45 (9)	37.5 (34.4)	37 (13)	100	83
The project encouraged me to consider how I communicate with people from different backgrounds	30.8 (46.2)	46 (12)	100	46 (27)	41.9 (38.7)	46 (18)	100	92
The project encouraged me to engage more deeply with people from different backgrounds	26.9 (38.5)	23 (23)	80 (20)	36 (27)	35.5 (35.5)	26 (25)	100	73

***the numbers in bracket ( ) are the percentage of unsure**

The second trend that can be observed from the data is that the international students in the Hawthorn campus appeared to be more receptive on the idea of culturally-mixed group project and they appear to gain more benefit from the activities. It is worth noting that in 2009 the project has made all the international students more confident working and studying with people from different backgrounds. The project also has encouraged them to work/study and to engage more deeply with other students of different backgrounds. The response from the local students, however, was less favourable.

There are a number of possible reasons why the international students in Hawthorn were more receptive and appeared to have benefited more from the activities. Once they decided to pursue education outside their country, arguably they are more prepared for intercultural engagement and want to broaden their international perspectives. Or at least they would expect intercultural learning and engagement to happen during their study. Unfortunately, being in the same class with other students from different culture does not mean that intercultural learning happen automatically. Students tend to cluster with those of similar culture background. There are overwhelming evidences that students are often reluctant to voluntarily join / form culturally diverse groups for assignments and other academic activities (Ledwith et al 1998, Volet & Ang 1998, Trice 2004, Montgomery 2009). Therefore, it can be argued that international students are more appreciative on the opportunity for intercultural learning in the group.

International students appreciated the support provided in terms of group formation as reflected in the following statements,

> **"*I feel lecturers should be more inclined towards organising/formation of groups rather than leaving it to the individual student"*** (International).
>
> **"*I had a chance to meet those local peoples, without this kind of project I wouldn't have a chance to work with these people … more likely to work with my own people and speak my own language, so this kind of project was very good for me*"** (International),
>
> **"*...it makes us meet people who we wouldn't normally mix with***" (International).

One international student appreciated the presentation aspect of the group project,

> "***I think the more number of presentations that you give makes you more comfortable for the next one. Yeah, the more experience you get, the more confident you get and it's easier to speak, especially for international students"*** (International).

Table 4 shows the students response on whether the project has encouraged them to broaden their cultural and international perspectives. It is encouraging to observe the more positive response in year 2009 compared to those from 2008. In addition to broaden the students' international perspectives, they also learnt about something new about their local context. This was reflected from the following statements. An international student from Sri Lanka stated,

> ***"Like I had to research about Sri Lanka and Australia so I came to know there were a lot of other things that were in Sri Lanka which I didn't know before the project started, so that was a good point for me"***,

another student from Scotland commented,

> ***"I guess because I'm from Scotland so we did part of it in Scotland, so it was kind of good because I have some knowledge……..we did geothermal, so I learnt quite a bit. Actually, I didn't know that there was geothermal in Scotland beforehand".***

Table 4: Hawthorn and Sarawak students' responses on whether the project encouraged them to broaden their cultural and international perspectives

	Hawthorn Students					Hawthorn Students		Sarawak Students	
	Local % Agree		International % Agree			All % Agree		All % Agree	
	2009	2008	2009	2008		2009	2008	2009	2008
The project encouraged me to broaden my cultural and international perspectives	34.6 (23.1)	11 (31)	60 (40)	36 (18)		38.7 (25.8)	20 (26)	86.7	75

***the numbers in bracket ( ) are the percentage of unsure**

Comparison between Sarawak and Hawthorn results

The columns on the right of Tables 2 to 4 show the comparison of the students' responses from Hawthorn and Sarawak. It can be seen from these results is that the students in Sarawak appeared to be more receptive and have benefited more from the group project. It is also encouraging to observe an increase in positive responses in 2009. In some aspects all (100%) of the students provided positive responses.

The learning materials, assessments, reading materials (technical and non-technical) given at the two campuses were essentially the same. Nevertheless, there are inherent differences between the two campuses as shown in Table 1. It can be seen that the student demographic in Sarawak was different than that of in Hawthorn. In 2008, there were 12 local and 1 international students, while in 2009 there were 11 local and 4 international students. Thus overall the class was smaller which provide an advantage in terms of ratio of staff/mentor to student which resulted in more support for the students. The mentor can closely monitor the groups and the dynamic within the group. Direct intervention can be made more easily by the mentor. In 2009, a more experienced (and more knowledgeable about intercultural and internationalisation of the curriculum) lecturer/mentor took over the subject in Sarawak. All of the above, with the better preparation resulted in a more successful project in that year in Sarawak. This again reinforces the importance of the role of mentor and the level of supports for the students.

However, the smaller class in the Sarawak campus means that less variation in the diversity as well as the number of the researched topics by the students. For example, in the Hawthorn campus, there were about 25 to 28 groups where each group chose different renewable energy sources and locations to be researched. The intercultural learning, the broadening of international perspective, as well as learning of the technical content were not just coming from the activities within the group but also from listening of the various presentations from other groups that provide insight on other local and international contexts. In this aspect the Sarawak campus had less knowledge resources.

This group project activity was carried out in a highly technical core subject, i.e. Heat Transfer. There are a number of advantages in embedding the project to a technical subject. The universal science and technical contents transcend beyond national boundaries; but in terms of application it needs local context. Thus, the mixed-group project can be incorporated naturally in the context of engineering profession. Students should be able to see easily the relevance to their engineering profession. One of the disadvantages in embedding the intercultural learning activities into a highly technical unit is the time limitation in terms of formal contact hours. The lecturer needs to make sure that the technical content and learning are delivered and not interfered by the additional intercultural learning activities. Therefore, an alignment between the two aspects is crucial.

Table 5: Summary of challenges identified in the subject at Sarawak and Hawthorn campus

Sarawak	Hawthorn
Small class • Low knowledge resources from students (culture context, local and international context)	Large class • Logistic problem • Lower mentor support for students due to low mentor to student ratio (e.g. monitoring of group dynamic is time consuming)
More pronounced with larger class • Free riding • Unequal commitment of a group member • Communication and finding suitable times to work on project • Different Expectations	

The students need to realise the importance of the mixed-group project activities as part of the whole subject. This does not happen automatically, and most of the time the lecturer needs to educate, explain explicitly as well as keep reminding the students of the importance of the activities as the project proceeds during the semester. In the current study, this was reflected in the mark contribution of the group work activities to the overall mark of the subject (15% of total mark or more). The authors found that below this number, the students were not likely to take the group project activities seriously.

Overall there are a number of challenges identified in this study as summarised in Table 5. The main challenge in the Sarawak was found to be the small number of students in the class which translated to limited knowledge resources and variations for intercultural and technical learning. This however provided a good mentor to student ratio, and students can receive more support. On the other hand, in the Hawthorn campus, a large class provided more resources and variations, but in terms of logistic, a careful planning was needed for effective supports for the students due to low mentor to student ratio. Other challenges identified at both locations include general challenges associated with group work, for examples dysfunctional group due to free riding, one member falling behind, unequal commitment of member of the group, different expectations within the group, and communication. This was especially more pronounced in the Hawthorn subject with larger class. A student mentioned,

> ***"…we had several issues within our group with respect to responsibility (ability to make time, and do the work), work ethic (poor standard of work within a majority of the group - 3 main contributing members), communication - (people either not responding, not talking), and the actual work completed"***.

The problem of unequal commitment of member of the group and communication are mainly coming from the diversity in a wider sense. This problem was observed both in Sarawak and Hawthorn. However this problem was more pronounced in the Hawthorn subject. The students in Hawthorn consisted of different cohorts (2^{nd} , 3^{rd} and 4^{th} year which has different level of maturity, commitment and motivation), local *vs* non-local students of different cultural background (including those regional, interstate and international students); mature and pathway students. A number of local and international students suggested the main issues being

> **"*need to be more organised earlier on and communicate better"*, "*could have been more effective if group members attended the scheduled meetings*"**,

and

> ***"..finding suitable meeting times was difficult at times"*.**

The incorporation of the peer assessment number (PAN) mechanism, appear to reduce free riders and accommodate unequal contributions within group. However, focus group revealed that some of the groups tend to be reluctant to enforce it. This was reflected in the followings,

> ***"We had a bit of a dysfunctional group member so that made things a bit difficult…."***

followed by

> ***"We could have but we chose not to (enforce the PAN). We thought we'd give him a chance to sort things out and tell him we're not happy with what's been going on"*** and ***"It's tough though when you have to give a contribution, percentage, whatever; because you don't want to be the one is going to cause them to have to repeat a subject or something"***.

They tended to resolve it within the group first rather than directly discussing the matter with the mentor. In one way this is good as it provides the students opportunity for learning group-work skills to solve dysfunctionality within the group. However, this needs to be monitored by the mentor (and provide intervention if necessary) so that a prolong problem can be avoided. The close monitoring of the group dynamic was quite difficult in the Hawthorn subject as there were limited number of mentors compared to the number of the groups.

The culture in Sarawak was Asian influenced, while in Hawthorn was Western culture influenced. However, we found no hard evidence that this affect the students experience in the group work activity. The cultural differences within the groups also did not appear to be the main issues compared to the general problems mentioned in the preceding paragraphs. A local student mentioned,

> ***"Cultural issues were not significant since all the members were engineers and objectively tackled the problem.."***.

Another student described,

> ***"…we do not have much issue about culture gap, eventually we overcome this kind of issue in a very short time without effect much on our project and presentation".***

This also confirmed the finding by Volet & Ang (1998) where after a successful experience of culturally mixed group work, students realise that cultural differences may not be as important as having similar goals and a mutual commitment to invest time and energy in the task. It has also been argued by Gudykunst et al. (1987) that once the barriers of initial inter-cultural interactions are overcome, culture is not a major factor in subsequent interaction.

It is suggested that there should be an optimum class size where a balance between high student-knowledge-resources and reasonable load for managing the group work activities can be achieved. The experience from this study suggests that 40 to 50 students (8 to 10 groups) maybe the ideal class size. With all limitations aside, overall the group project carried out at two campus locations appeared to be working quite well. Although continual improvements still needs to be carried out for perfecting the group project. In general, the students were appreciative of the group project work and acknowledge the aim and purpose of the activities as expressed in the followings,

> ***"it was to get us together and interact as a group and obviously that was successful in many different ways, even amongst this group here, it goes partly to achieving that aim"*** (Hawthorn),
>
> ***"Well it definitely gives you a better cross section of what you're going to be working with in the industry. Because you won't have the same groups of people you've met and who are similar to you, you'll be working with people who could be from anywhere, from all different age groups, all different backgrounds. So it definitely is useful"*** (Hawthorn).

Some of the comments from the Sarawak students include,

> ***"Good and excited. Hope more project like this can be done next time"*** (Sarawak),
>
> ***"It has been a fun experience to have the assignment (group project). It has deepened our knowledge on that specific topic"*** (Sarawak),
>
> ***"very interesting experience where we do the report in multi-culture group. We not only learn about the project but also valuable culture values"*** (Sarawak).

Concluding Remarks

A unique culturally-mixed group project has been developed and embedded in a technical subject. As with general group learning activities, there are a number of challenges associated with the project. However, this study reconfirms that a more effective group work with diverse students can be achieved provided that appropriate preparation and management of the project were carried out carefully. The international students appear to have benefited from the activities better. Arguably, this may be because they were more open to intercultural learning activities. The overall students' experiences and perspectives in the Sarawak location appear to be more positive which attributed to the different demographic, e.g. less number and arguably the more homogeneity of the students; which proportional to the level of support the students can get for carrying out the activities (e.g. student to mentor ratio). This study also reconfirms previous findings that the students' own attitude towards intercultural interactions maybe affected by the quality of close peers'

experiences in culturally diverse groups (Kimmel & Volet 2012); and also that mentor/teacher plays an important role on the quality of the group experiences. It is suggested from this study that a class size of 40 to 50 students (8 to 10 groups) maybe ideal for this activity.

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