

Group work as a vehicle for engaging students into the process of broadening perspectives and building inter-cultural skills

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Abstract: *This paper describes a trial project designed to broaden students' cultural perspectives by incorporating a forced mixed group assignment in a third year mechanical engineering unit. Students were formed into groups that included at least one international student in each group. They were required to complete a group work project on a real-world problem that transcended international boundaries. The student groups were encouraged to consider that the international student might have expert local knowledge useful for the project. Following the trial project, all students were asked to comment on whether they had a heightened awareness and curiosity about other cultures, reflect on any communication issues they personally needed to address, and whether the experience had encouraged them to confidently engage cross-culturally. As with previous research, it was concluded that getting students to engage inter-culturally is difficult. It requires teaching staff to intervene by creating a conducive environment and provide assistance throughout the process to foster the intercultural engagement.*

Introduction

Internationalisation of the curriculum has been one of the emphases in the Higher Education in Australia. One of its goals corresponds to the need to develop an intercultural competence so that graduates are able to perform professionally/socially in an international and multicultural context. The impact of increasing diversity of students on campus provides unprecedented complexities and learning opportunities for all students to develop intercultural awareness and communication skills. The learning opportunities inside and outside the classroom of this rich diversity is often ignored. Research and surveys (Quintrell and Westwood, 1994; Volet and Ang, 1996; Eisenchlas and Trevaskes, 2003) indicate that local and international students do not engage interculturally and tend to socialize and study in parallel throughout their programs.

According to Volet and Ang (1998), students will not naturally choose to work in mixed cultural groups, preferring to work within their own cultural environment. It is up to institutions to artificially create conditions for safe and meaningful inter-cultural engagement to better prepare students for a changing world. Unfortunately there are few practical examples of how intercultural learning may be successfully fostered at university level. According to Leask (2005) intercultural learning is not an automatic outcome of intercultural contact.

The Swinburne University of Technology 2015 Statement of Direction (2009) states that all Swinburne students will be "...international in their outlook..." whether they study on or offshore. This article describes a trial project carried out in a mechanical engineering unit designed to enhance and broaden students' intercultural perspectives by forcing them to work in culturally mixed groups on a real-world problem.

Methodology

The pilot study was carried out in a third year, undergraduate Heat Transfer unit in Mechanical Engineering at the Hawthorn (Australian) campus. 112 students were enrolled, 87 (78%) local and 25 (22%) international students (i.e. students with an international student visa). A parallel study was also carried out at the same time on the offshore Sarawak (Malaysian) campus with twelve students (11 local and 1 international). This paper's focus is on the result from the study in the Hawthorn campus.

A paper-based survey was undertaken to explore the students' perception of their experience in the mixed group project, asking whether they had a heightened awareness and curiosity about other cultures and whether they were more confident to engage cross-culturally as a result. A focus group discussion was also carried out to provide further insights into the students' experience.

In engaging students in a culturally mixed learning experience a number of considerations needed to be made: (1) process for allocating students into culturally mixed groups; (2) cultural preparation (awareness raising) for students; (3) design of an authentic, collaborative project task; (4) level of support needed to assist the groups; and (5) assessment design to incorporate the group work process as well final product.

Group project details

The student groups were to complete a 7-week project (worth 15%) on a real-world problem across two geographical locations related to sustainable energy. The groups were required to research, evaluate and report their findings, on the feasibility of one type of sustainable energy to be used for delivering electricity at two specific remote locations, i.e. in Australia and in another country. Each group must compare the applications of the chosen energy in the two geographical locations. The overseas countries to compare with the Australian location were: China, India, Indonesia, Nepal, Sri Lanka, Macau, Hong Kong, USA, South Korea, Dubai, Thailand, Germany and Malaysia. In the report, they needed to include international comparisons of the impact of the energy source requirements and availabilities, cultural, social, geographical aspects, economic values, logistics and transportation availabilities.

Formation of culturally-mixed groups

Groups were made up of 4-5 students, but each group must include an international student. There were 25 groups over 4 tutorial classes. Students were made aware that the overseas countries to choose from were represented by nationals within the class. They were encouraged to consider the potential knowledge international group members may have in terms of expert knowledge of the local socio-cultural environment of the country of choice. It was hoped that they might draw on this knowledge to provide some authenticity to their project research and thus improve the learning experience and intercultural engagement among students within the groups.

Supports for the groups

A guest lecture on "Bridging the Cultural Gaps" by an external consultant from industry was provided prior to the commencement of the project. The internationally experienced consultant provided advice on managing the challenges in working cross-culturally in a professional environment.

Detailed project instructions, information and resources were provided on the unit website. These resources included information on: (1) managing the group work processes; (conflict resolution, group presentations), (2) communication of results and findings; (examples of previous reports and presentations as a guide to the standards expected), and (3) online collaborative work area.

Mentoring for the groups was provided by the convenor and the two tutors, for support regarding any issues relating to the group work processes or any technical aspects of the project. Information about assessment was clearly specified which included details of expectations. These included such things as details of records of meetings, peer assessment that assessed each group member's contribution etc. and these were to be included in the group report.

Results and Discussion

The students' view on the importance of inter-cultural awareness and communication

Table 1 summarises the students' perception of their experience during the project. It can be seen from Table 1 that majority of the students, local (59%) and international (55%), agreed that they need to learn more about inter-cultural communication, thus may indicate that they understood that inter-cultural awareness and communication skills are important for their career as an Engineer. In an exchange within the focus group between a local and an international student there was a clear agreement between them on the need for students to be developing their inter-cultural understanding and communication skills as reflected in the following statements: "*... it is not only for locals to accept and understand other cultures, but also for those people from overseas to learn about Australian Culture*"

..”(International). And this student made further important comment *“if they study and grow up here ... they don’t even know how they are acting...”* this comment was followed up by the local student’s comment: *“..need to bridge the gap together, get to meet the international students, and to learn to communicate with each other, ... not only for the international students but the local students too, to teach them to adjust to each other ..”*.

Table 1: Hawthorn students’ responses on their experience in the project

	Local students		International students	
	Agree	Disagree	Agree	Disagree
My knowledge/experience was valued by the group	68%	11% (21% unsure)	64%	0% (36% unsure)
I am more confident working / studying with people from different backgrounds	36%	43% (21% unsure)	36%	37% (27% unsure)
I need to learn more about inter-cultural communication	59%	22% (19% unsure)	55%	36%

Perceived benefit of being forced in culturally-mixed groups

From Table 1, the majority of the local and international students, (68%) and (64%) respectively, felt that their knowledge and experience was valued by their group. This result is encouraging as it may indicate that the devised culturally-mixed group project may have been useful for requiring interactions between local and international students. It is also encouraging to see that more than 50% of all students agreed that they needed to learn more about intercultural communication, suggesting to the authors that self-awareness may have been raised as a result of the mixed group project. This might also be why the majority of local and international students disagreed when asked if they were confident in working and studying with people from different background.

As with the findings of Volet and Ang (1998) some reported recognition of the benefits of working in culturally mixed groups, and valued the opportunity it presented. Some students appreciated the support provided by teachers as suggested by this international student:

“I feel lecturers should be more inclined towards organising/formation of groups rather than leaving it to the individual student..” (International).

Recognizing the value of the experience is reflected in these statements:

“...everyone focused on each topic and sharing their experience...” (International)

“...the benefits of working together with people from different backgrounds...more about how to communicate and how to cooperate...” (International)

“...the idea of what the project was there for was fair enough, and made sense to bring people of different backgrounds (together) and get them talking about different ideas..” (Local)

“I believe this group project helped in working with different people that I normally wouldn't consider teaming up with” (Local)

Another aspect of the survey summarised in Table 2, looked at the question of the impact of the mixed group project on opportunities to engage cross-culturally. The results suggest that the group project overall was not effective in raising interest in further engagement between local and international students. Only 11% of local students agreed that the project encouraged them to broaden their cultural perspectives; however, the international students (already embedded in an international environment and possibly more open to intercultural experiences) were more positive with 36%.

Only 23% of the local students and 36% of the international agreed that the project encouraged them to engage more deeply with people from different backgrounds. Looking at the comments on the survey and the focus group suggest to the authors that the reasons for this are varied. Students suggested the problems were more about working in a group rather than cultural issues. One local student expressed the following: *“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.”* then followed by *“...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". There was also concern about the time available for students. A local student felt the time constraint was an issue, there was little time to *"fully interact or feel free to let curiosity to run around, as everyone was on a very tight schedule..."*. This suggests to the authors that perhaps more time and structure around the group work processes would be needed to improve the experience for all students.

Table 2: Hawthorn students' responses on whether the project encouraged them to engage with other cultures

	Local		International	
	Agree	Disagree	Agree	Disagree
The project raised my curiosity and interest in other environments and/or cultures	23%	54% (23% unsure)	55%	27% (18% unsure)
The project encouraged me to broaden my cultural and international perspectives	11%	58% (31% unsure)	36%	46% (18% unsure)
The project encouraged me to work/study with people from different backgrounds	36%	52% (12% unsure)	45%	46% (9% unsure)
The project encouraged me to consider how I communicate with people from different backgrounds	46%	42% (12% unsure)	46%	27% (27% unsure)
The project encouraged me to engage more deeply with people from different backgrounds	23%	54% (23% unsure)	36%	37% (27% unsure)

In a mixed focus group discussion, students were asked to comment on how the university could assist students to engage more inter-culturally, and whether there was any value of a mixed group project as a cultural learning experience. One student was a little cynical *"it was very obvious that there was a huge push to try and initiate something in this subject.."* but did raise an important point in this next sentence: *"suggests that people may have a problem, you know... we have to teach you this stuff... because you don't know..."* and another comment *"maybe you could put it into a management subject which will require you in the future to deal with people from different cultures and maybe that is where it would belong"* suggesting that this student did not see the relevance of the learning experience within the technical unit.

An international student within the group was very appreciative of the project in his comments: *"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"*. During the focus group, a local student was quite positive about having opportunities to engage inter-culturally as illustrated in this comment: *"getting students to do this type of thing as early as possible ... like I remember first year for instance we didn't really have this sort of thing... and in final years you look at the world quite differently where it changes you because you are exposed to so many different things and I think if you were to start even as young as ... to start early to see someone else's opinion...it would be useful"*. When asked if it would have helped if located in 1st year: *"yes.. rather than doing it later.. give you a chance to apply it to things..."*

One student suggested the University needed to make more use of the informal curriculum to create opportunities for student intercultural engagement: *"...what would be a good thing and would be useful to get people from different cultures together is to have sport really... like I play for the soccer team and there are 5 guys who don't really speak English and its great!"* and another, *"yeah to be honest that is something that doesn't happen very much at Swinburne. I have friends at other universities where it seems that... like the uni organizes some little games like sport where you can get involved and it is not related to your studies.."*.

Perspective of Barriers

Why is it so difficult to get students to engage inter-culturally? According to Volet and Ang (1998) there are cultural-emotional reasons for non-engagement between students. They suggest that students need to feel they are on the same wavelength (understand each other); to have shared communication styles, commitments and expectations; a similar sense of humour and generally feeling comfortable with each other. Volet and Ang (1998) suggest that there were pragmatic reasons for the choice of

members in the study and project groups. International students found local students already had a social and familial network beyond the university. Work and leisure commitments of local and international students did not correspond and were usually another barrier for informal engagement. In this study they also suggested that international students preferred to seek out other international students to form their work and social networks, as they were seen to be more available and more open to mixing inter-culturally while at the university

According to the Volet and Ang (1998), international students often preferred to work with those from a similar culture, as they perceived that their collective work and communication styles were more compatible, whereas there was a perception by some international students that the more independent and assertive styles of the locally educated students were harder to work with. Local students were concerned about how their workload would be affected if they included international students in their groups. Volet and Ang identified that negative stereotypes and ethnocentric views were barriers to intercultural engagement.

There were perceptions expressed by the students in the current study, that language, communication and work styles were incompatible when working on the group projects. These agree with the findings by Volet and Ang (1998) and are illustrated in the following statements:

“I have to say I felt sorry to my team mates because of my low level of English. I cannot speak like them because English is my second language. So, I think this English gap brought a relationship gap with them. (I seldomly had conversation with my group mates)” (International)

“we had to work as a team ...because of my low level of English it looks like the four guys talking with each other blah blah blah... and in that situation everything is the done thing and because I don't speak English fluently I see the problem, I could see what was going on” (International)

The following was the reflection from an international student about local students who struggle with engaging with international students - they *“haven't experienced those sorts of cultures and don't know how to approach them”* and relating to working with local students, this international student struggled to get engagement with the other students whom he was working with. *“I want to find out what they actually want from me being the international student because personally I am a very polite person.”*

Some students expressed concern and frustration that the project would be detrimental to their marks, rather than seeing these experiences as enriching and broadening: *“...people get quite caught up with the actual... people want to graduate with decent marks and to make their way out of university and it is like forcing it on people and it is not seen as relevant to people, when you are in first and second year you are not really that eager.”*

Negative stereotypes were also observed; one student was very frustrated by saying *“in my experience and also the experience of many other students in other groups ...was that the international students were by far the weakest link in the groups...”* and another response *“my personal experience of several international students is that they have completely different priorities and motives to myself and many other local students...”*.

Reflection on the pilot project

As with findings in previous studies on how to foster intercultural engagement between students (Volet and Ang, 1998; Eisenchlas and Trevaskes, 2007), devising an effective environment to foster authentic engagement between local and international students is not trivial. We have observed that some of the groups carried out the project simply by allocating tasks and working individually and collating the information close to the due date as a final report and a “group” presentation was developed and delivered. In some groups there was little evidence of any real peer collaboration. The feedback from the survey and focus group suggest that some students missed seeing the benefits of the opportunity and had a limited intercultural experience.

As a result of this study the authors have identified a number of improvements for the next iteration of this group work project involving more support for group project work process by tutors. This will hopefully facilitate deeper engagement, communication and collaborative practices between individual members and reduce the tendency for dysfunctional groups. From the results presented above, it appeared that the issues that the groups encountered were not just related to working in culturally and linguistically diverse groups, but due to general issues of working in groups.

More consideration will need to include the following: (1) Managing the diversity of experience, maturity and knowledge of students, while it is a 3rd year unit, students are able to enrol in it from 2nd to 4th year; (2) Availability of students due to work commitments and motivation to engage in the group work project; (3) Variability in commitment to the group goals (high achievers frustrated) and this can have a detrimental effect on effective group work engagement; (4) Variability of expectations, needs, communications styles and working approaches that need to be recognized particularly for culturally and linguistically diverse students.

By providing more group work mentoring, it is hoped that the groups may function more effectively, so that students can maximise the intercultural learning experience during the project. Tutors will need to be better prepared to mentor these diverse groups. Tutors will need to focus more on supporting the student groups by building on similarities as suggested by Biggs (1997) rather than focussing on differences. They will also need to assist students to develop their intercultural communication skills and respect different working approaches thus using principles that transcend cultural differences and yet engaging effectively across different cultures. Much attention has been on how to “orientate” and “assimilate” the international student into the university environment, however to be more effective, all students need to be prepared to engage and work in an international and multi-cultural environment.

Conclusion

In the current study, a group work project was used as a vehicle for engaging students to broaden their cultural perspectives and build intercultural skills. In this project, the students were placed into culturally-mixed groups and were required to carry out a locally and internationally based research project. The group project was initially designed to encourage the contribution and cooperation of all members of the group. Mentoring was provided to support the group work. The assessment design involved peer-assessment as well as an assessing the final product. One of the strong points of the pilot project is that it simulated the complexities of working in actual multi-cultural environment as an engineer. The results of the study indicated that international students appreciated the opportunity to work with local students; though less appreciated by some local students who did not see the benefits of working in culturally mixed groups. While the current approach was not as effective as had been hoped, in raising student interest and curiosity in a deeper intercultural engagement however, the results did provide some insights into what was valued by some students, what worked and what did not. This has provided useful data for further improvement of the unit for the following year. In a similar way to previous studies, this study also concludes that getting students to engage inter-culturally is difficult; however it has also identified a need to see “culture” in a broader sense than first envisaged. Teaching staff need to take courage and persist with placing students in disparate groups which can be challenging and uncomfortable for some students, however at the same time these environments provide important learning insights in preparing them for a changing world. It is hoped that the current study will provide some ideas and will stimulate further discussion and research in the area.

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