Interaction and influence in culturally mixed groups
Cotton, D.R.E.*, George, R. & Joyner, M.

Pedagogic Research Institute and Observatory (PedRIO),
University of Plymouth, UK

*Corresponding author:
Dr Debby R.E. Cotton
Associate Professor, Head of Educational Development,
Pedagogic Research Institute and Observatory (PedRIO),
Teaching and Learning Directorate,
Plymouth University,
Drake Circus, Plymouth,
Devon, PL4 8AA. UK
dcotton@plymouth.ac.uk

b. Rosemary George
Research Assistant – Attainment Gap Action Plan
PedRIO, Teaching and Learning Directorate,
Plymouth University,
Drake Circus, Plymouth,
Devon, PL4 8AA. UK
rosemary.george@plymouth.ac.uk

a. Melanie Joyner
Associate Professor, Associate Dean (Teaching and Learning),
PedRIO, Faculty of Health, Education and Society,
Plymouth University,
Drake Circus, Plymouth,
Devon, PL4 8AA. UK
m.joyner@plymouth.ac.uk

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Abstract
Graduates are increasingly expected to work in international contexts, therefore skills in intercultural interaction are crucial. Previous research suggests that overseas students anticipate positive intercultural interaction but are often disappointed as some home students are unwilling to work in intercultural groups without explicit encouragement. In this study, we investigated interactions in three group work settings with home (UK) and international students in order to explore differing patterns of participation. The findings suggest that in culturally mixed groups, the UK students (particularly males) dominated discussions, with limited input from overseas students. In a group consisting solely of international students, the interactions were much more equal. However, an analysis of influence on group decisions (in terms of proportion of suggestions accepted by the group), suggested that the influence of male home students was lower than their participation would imply. The research suggests that there is a need to plan and manage group work carefully, especially where there are diverse groups of students.

Introduction
Graduates are increasingly expected to work in international contexts therefore skills in intercultural interaction are crucial. As universities move towards recruiting a more diverse student body, and increasingly aim to develop an internationalised curriculum, interactional skills between students from different countries and cultures become ever more important as part of the undergraduate career. The concept of internationalisation in higher education (HE) has undergone a subtle shift away from a narrow focus on international recruitment for financial gain, towards a wider view emphasising the importance of an international perspective as a key part of higher learning. Despite Luxton & Peelo’s (2009) claim that ‘internationalisation at the micro level of teaching and learning sometimes seems to be seen only as problematic’ (p. 51), there is increasing support for a more inclusive conception of internationalisation incorporating a focus on student activities within culturally mixed learning contexts (Killick, 2008; Wisker, 2000). Potential benefits of an internationalised HE sector include enhanced employability, as well as a richer academic and socio-cultural experience for all students. The emerging consensus suggests an acceptance that internationalisation has ‘social, cultural, moral and ethical dimensions that both transcend the narrow economic focus and establish a synergy with other agendas’ (Caruana & Spurling, 2007, p.24).

However, in practice, internationalisation has proved problematic in the UK, as it has elsewhere (see Jin et al., 2011 for the US context). Previous research has raised questions about practicalities: notably those related to effective intercultural mixing within academic settings, as well as difficulties of adopting an internationalised curriculum that is accepted by students and staff (Fielden et al., 2007). Home students may be ill-prepared for the internationalisation agenda: Intercultural contact will only be successful if both parties put in conscious effort, yet research shows that
international students seem more favourably disposed to it than their domestic peers (Summers & Volet, 2008). Home students may therefore require increased support and encouragement to contribute to an internationalised pedagogic environment. A report in the UK (UNITE 2006) found that 58% of UK students had international friends, although the extent of intercultural social interaction was varied and often a cause of discontent for international students. Middlehurst & Woodfield (2007) noted that whilst international students desire more intercultural experiences, they also frequently reported a lack of social integration with home students.

One of the challenges emerging from the extant literature concerns the difficulty of getting students from diverse backgrounds to appreciate the inherent value of interacting with one another. It is well-documented that spontaneous mixing between home and international students is rare. The reservations of home students are often related to perceived language barriers, unfamiliarity with cultural mores and a general fear of causing offence (Harrison & Peacock, 2010). Additionally, there is some evidence to show that home students perceive students using a second language to be detrimental to academic performance (Henderson, 2009). Moreover, this is not limited to the UK: similar findings have been reported in Australia (Summers & Volet 2008), New Zealand (Ward et al. 2005), and the United States (Halualani, 2008). Nonetheless, there are potential advantages – albeit largely unrecognised – to home students of intercultural interaction. Denson & Zhang (2010) argue that local students demonstrate somewhat greater development in graduate attributes after having participated in diversity activities, when compared to international students. Thus the potential benefits of mixing could actually be higher for home students than international students.

One way in which students can be encouraged to mix is through carefully designed teaching and learning activities which have intercultural interaction as a specific goal. Recent research suggests that, even within an ‘international classroom’, there may be little scope for intercultural interaction and where it does occur, it can be problematic (Leask, 2007). The need for effective management has been identified as key to the success of intercultural encounters (Harrison & Peacock 2010); however, this is rarely considered in curriculum planning. If not actively challenged, there is the risk of students self-selecting into homogenous groups, given the perceived negativity associated with mixing (Hills & Thom, 2005). For those tutors who do make targeted efforts, however, it is possible to steer students towards fruitful discussion - enabling the ‘reconciliation of preconceptions in conversation with one another’ (Bruffee, 1999, p.17). This undertaking requires sustained effort from students who need to leave their comfort zone and negotiate the crossing of cultural barriers (Phelan et al., 1991). Within the pedagogic arena, such active management of student encounters can greatly enable the development of intercultural adaptability.
Although there is plentiful literature on the experiences – both positive and negative – of international students, there is less research which specifically examines group-work interactions within the classroom environment. There has also been a tendency to explore the internationalisation agenda through strategic and policy-driven research rather than teaching and learning – at the risk of forming a gap between policy and implementation (Luxon & Peelo, 2009). Intercultural group work has the potential to bridge the rhetoric and reality of internationalisation. However, it is not clear whether simply placing students into mixed groups will have the desired effect. Empirical studies investigating the social, motivational and inter-personal aspects of group-work suggest that outcomes may be highly variable (e.g. Volet, 2001; Burdett, 2003; Wright & Lander, 2003). Factors impinging upon the success of group work (in terms of group contributions, cohesion, and genuine collaboration) include group heterogeneity, individual and personal characteristics, and the nature of the task set. Nonetheless, research indicates that, in the long term, mixed groups out-perform homogenous groups by approaching problems in different ways (De Vita, 2002; Summers & Volet, 2008). Using pedagogical strategies that promote the development of intercultural adaptability can therefore result in enhanced group performance.

The study reported here aims to contribute to the existing body of research by investigating three instances of multicultural group work within an academic setting and analysing interactions in terms of quantitative and qualitative aspects. Building on previous research findings – particularly on the importance of pedagogic design - we sought to create a group work task which applied recommendations from existing literature, and tested them in a controlled setting. Although only very small-scale, the paucity of observational research in this area gives this value a sound exploratory study.

**The Current Study**

This study was conducted at a post-1992 institution, based in a region of the UK with relatively low ethnic and cultural diversity, and this is reflected in the student makeup at the university. Nonetheless, the focus on internationalisation is strong, both in terms of encouraging international student and staff recruitment and supporting exchange programmes. Indeed, the number of international students at this institution has risen by 21% over the last five years (HEIDI, 2011). Current developments aim to move the university to a more internationalised curriculum.

The potential for intercultural interaction is already high in some disciplines such as Business, which has a very diverse student body. Moreover, the university as a whole is known for excellence in teaching and learning. Group work is in widespread use, with the concomitant opportunities to nudge students towards more frequent intercultural encounters. This is the context in which the research team studied the problems and possibilities of culturally mixed group-work. Specifically, the
researchers sought to understand the potential barriers to and benefits of culturally mixed group-work by observing interactions between students from diverse backgrounds within a group work task. The group-work interactions were analysed by gender and domicile with particular reference to:

- Patterns of participation between group-members
- The impact that each group-member had on the team.

The focus was on examining the issue from the perspective of both home and overseas students and to provide tentative recommendations which would benefit all students.

Methodology

While this research is based on a single institution, it is conceived as an instrumental case study (Stake, 1995) in that it is intended to provide insights that can be interpreted and adapted to inform developments beyond this particular university. Mixed methods were used with the aim of capturing observed experiences as well as perceptions of different student groups. The methods adopted included observation of a group-work task, and individual questionnaires completed by participating students. The project conformed to the ethical principles and procedures of the university. A ‘purposive sampling’ approach (Patton, 1990) was taken in order to maximize the opportunity to learn from a wide range of respondents. The research sample was selected from the Business School, on account of its greater mix of international students. Students volunteered to participate in the project and 15 were recruited in total. A total of three group-work sessions were organised, of which two groups consisted of both UK and overseas students (originating from China, Angola and Nigeria). The third group consisted solely of overseas students (originating from Hong Kong, Latvia and Singapore). The overseas students were international in terms of fee status, but also were non-native English speakers, as are many of the international students at this institution. All sessions were video and audio recorded to aid analysis. Whilst the sample was not large, it was possible to quantify the utterances within groups, as well as collect qualitative data on interactions and perceptions, which would have been problematic with a larger sample.

The research team devised the group-work task based on a literature review of the principles for effective multicultural group-work. The following design principles were applied:

1. Proactively encourage or engineer mixed groups.
2. Explain clearly the learning outcomes of the exercise.
3. Place equal emphasis on social and well-being goals as well as academic goals.
4. Make explicit the benefits of having a group composed of various cultures, languages and ethnicity and connect this to social and well-being goals.
5. Ensure that the nature of the task is conducive to the group work element, building on the diversity of knowledge and abilities.

The task was set in South America, with the assumption that participants would possess minimal prior knowledge of that region, and entailed creating a poster outlining a marketing campaign for a restaurant to be launched in Buenos Aires. Participants were required to present the poster to the audience at the end of the exercise. All participants were invited to complete a questionnaire about their experiences during the task, and their perceptions of their role. A questionnaire was selected rather than a focus group or interview, in the belief that the views expressed would be more candid and open, since the participants were assured of complete anonymity.

The three group work sessions were transcribed and analysed. The data were quantitatively analysed for intergroup variations as well as variations by gender and domicile. Perceptions of participants towards the group work exercise were collected through the questionnaires and these were analysed by gender and domicile.

Participation by each member within each group was measured by studying the number of utterances as well as the amount of time spent speaking by each group member. Variations between individuals and groups were noted. Suggestions put forth by each group member were recorded and categorised into 'accepted', 'rejected' and 'ignored'. These measurements were used to provide an indication of the impact that each group member had on the group.

**Research Findings and Discussion**

1. **Participation.**

The overall time spent speaking by each participant was measured and analysed by gender and domicile. It was found that the UK male students spent the most time speaking, followed by the UK female student, then overseas male students and finally overseas female students. The number of utterances that took place within the groups were also measured and similarly analysed. An ‘utterance’ was defined as an instance where a group member communicated a viewpoint in the form of a question, answer or statement during the exercise. On analysing the number of utterances, they were found to be similar in proportion to the amount of time spent speaking, with UK male students having the highest number of utterances. Overseas female students were found to have a slightly higher number of utterances when compared to overseas male students, although the time spent speaking showed a reverse pattern.
This finding echoes research by Wright & Lander (2003) who conducted a quantitative study on the number of verbal interactions between a minority (overseas) group, a majority (home) group and a mixed group. They noted that the majority (home) student group produced a higher number of interactions than the minority (overseas) student group. The findings were attributed to better English speaking skills, familiar environment, previous experience of group work and familiarity with discussions on the part of the home students. When mixed, the minority group had 46% lower frequency of verbal interactions than the majority group, a finding which was attributed to cultural traits such as power distance, (overseas students attributed power to home students because they were verbally dominant) losing face (overseas students did not participate because they were under-confident about their language skills or understanding of the situation) and in-groups for collectivist cultures. However, these researchers did not consider the impact of gender, and therefore could not assess the potential interaction between gender and domicile.

**Figure 1 about here**

**Figure 1: Average time spent speaking and number of utterances by student group**

In addition to measuring participation by gender and domicile, we also looked at intergroup variations in participation. Each of the three groups were analysed in terms of average time spent speaking as well as average number of utterances within each group. The coefficient of variance was derived for each group by dividing the standard deviation by the average of the group. When the coefficient of variation of each group was compared, it was found that the two ‘UK-overseas’ groups had a higher variation than the solely overseas group. Within the ‘UK-overseas’ groups, the
participation levels of UK students (in terms of number of utterances as well as time spent speaking) were higher than average while the participation of overseas students were lower than average. The lower coefficient of variation in the overseas group could therefore indicate that the participation patterns of group members were similar and perhaps more equal than in the other groups.

*Table 1 about here*
Table 1: Variance levels in participation of the three groups

<table>
<thead>
<tr>
<th>Domicile/Gender</th>
<th>No of Utterances per person</th>
<th>% of total&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Time spent talking per person (seconds)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group ONE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>UK male</td>
<td>153</td>
<td>33%</td>
<td>764</td>
</tr>
<tr>
<td>2</td>
<td>UK female</td>
<td>116</td>
<td>25%</td>
<td>491</td>
</tr>
<tr>
<td>3</td>
<td>OS female</td>
<td>78</td>
<td>17%</td>
<td>372</td>
</tr>
<tr>
<td>4</td>
<td>UK male</td>
<td>68</td>
<td>15%</td>
<td>57</td>
</tr>
<tr>
<td>5</td>
<td>OS female</td>
<td>28</td>
<td>6%</td>
<td>71</td>
</tr>
<tr>
<td>6</td>
<td>OS female</td>
<td>14</td>
<td>3%</td>
<td>46</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>457</td>
<td></td>
<td>1801</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td>76.17</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td></td>
<td>52.43</td>
<td></td>
<td>294.27</td>
</tr>
<tr>
<td>Coefficient of Variation</td>
<td></td>
<td>0.69</td>
<td></td>
<td>0.98</td>
</tr>
<tr>
<td><strong>Group TWO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>OS male</td>
<td>52</td>
<td>10%</td>
<td>206</td>
</tr>
<tr>
<td>2</td>
<td>UK male</td>
<td>185</td>
<td>36%</td>
<td>880</td>
</tr>
<tr>
<td>3</td>
<td>UK male</td>
<td>187</td>
<td>36%</td>
<td>722</td>
</tr>
<tr>
<td>4</td>
<td>OS female</td>
<td>92</td>
<td>18%</td>
<td>371</td>
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<tr>
<td>5</td>
<td>OS female</td>
<td>2</td>
<td>0%</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>518</td>
<td></td>
<td>2187</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td>103.6</td>
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<tr>
<td>Standard Deviation</td>
<td></td>
<td>81.70</td>
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<td>360.29</td>
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<tr>
<td>Coefficient of Variation</td>
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<td>0.79</td>
<td></td>
<td>0.82</td>
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<tr>
<td><strong>Group THREE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OS male</td>
<td>108</td>
<td>24%</td>
<td>762</td>
<td>30%</td>
</tr>
<tr>
<td>OS female</td>
<td>149</td>
<td>33%</td>
<td>787</td>
<td>31%</td>
</tr>
<tr>
<td>OS male</td>
<td>49</td>
<td>11%</td>
<td>177</td>
<td>7%</td>
</tr>
<tr>
<td>OS female</td>
<td>143</td>
<td>32%</td>
<td>817</td>
<td>32%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>449</td>
<td></td>
<td>2543</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td>112</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td></td>
<td>45.88</td>
<td></td>
<td>306.66</td>
</tr>
<tr>
<td>Coefficient of Variation</td>
<td></td>
<td>0.41</td>
<td></td>
<td>0.48</td>
</tr>
</tbody>
</table>

Although the small sample size inhibits generalisation, the findings may suggest that overseas students are less likely to participate when mixed with a dominant (home

<sup>1</sup> Percentages may not add up to 100, due to rounding
student) group. Previous research has indicated that minority groups tend to stick together especially when faced with exclusion from majority groups (Brewer 2003). This may be a rational response since the findings here suggest that their contributions may be ‘squeezed out’ in mixed groups. Other research suggests that the lack of participation by minority groups might be due to culture shock or language barriers (Ward et al. 2001). Instances where overseas students seemed uncomfortable in English and began discussions amongst themselves in their native language were noted in one of the ‘UK-overseas’ group sessions. Interestingly, this was picked up negatively by one of the UK students in the feedback questionnaire:

_Slight language barrier here? Also worth noting that the Chinese girls spoke their language both before and after. I feel that does not encourage any sort of cooperation._’ – UK Female student

However, it is clear that this is not an uncommon coping mechanism used by international students studying in non-native languages. Strauss et al. (2011) note that international students may prefer to work in their first language and transfer the outcomes into English, simply because they feel unable to cope with academic language in a non-native tongue. Whilst it could be argued that lack of participation does not indicate lack of learning, research in the online environment suggests that ‘lurkers’ who do not contribute to discussions gain less than those who actively participate (Palmer et al. 2008) and this is supported by wider theories of learning (e.g. Kolb, 1984).

2. Impact

In addition to the amount of time spent by each participant, the apparent impact that each participant had upon the rest of the group was also measured. Impact was viewed as the influence wielded by each group member on their group, in terms of suggestions made and accepted by that group member. Three categories were studied: the percentage of suggestions accepted by the group, the percentage of suggestions rejected by the group and the percentage of suggestions ignored by the group. It was found that the sole UK female student had the highest suggestion acceptance rate, followed by the overseas male students, overseas female students and finally UK male students. Although caution should be taken in interpreting these findings owing to the small numbers involved, this may suggest that some speakers are having a proportionally greater impact on the outcome of discussions than the raw data on time spent speaking and number of utterances would suggest.

_Figure 2 about here_
Figure 2: Rate of suggestions accepted, rejected and ignored for each student group

The UK male students were found to have the lowest rate of suggestions accepted at 31%, the highest rate of suggestions ignored at 54% and a low rate of suggestions rejected at 15.3%. The UK female student had the lowest rate of suggestions rejected at 8%, though a relatively high proportion of suggestions ignored at 50%. This finding could imply that the authority of UK students was less challenged by an overt rejection of their suggestions, but was instead expressed indirectly by other group members abstaining from endorsing their suggestions, resulting in a high ignored rate. Overseas students were more likely to have their suggestions explicitly rejected by the group at 26% compared to 12% for UK students. However, both male and female overseas students were also more likely to have their suggestions accepted when compared to UK male students (but made far fewer suggestions in total).

It was notable that UK male students took the role of lead presenter at the end of the group work session in both mixed groups. They seemed to take on leadership roles effortlessly, and the other participants seemed happy to let them do so. Previous research has highlighted the tendency of first language speakers to take on dominant roles of ‘experts, masters or at least the more senior members of the community’, while viewing second language students as ‘novices or apprentices’ (Leki, 2001, 60). Second language speakers on the other hand, expect a leader to
be appointed in the group and also expected the dominant group member to be a UK student (Cathcart et al., 2006).

3. Evaluation

Interestingly, the evaluation data revealed that overseas students were more satisfied with the group-work exercise, despite having fewer suggestions accepted:

‘It was a good experience as I have never met the people that I was working with.’ – Overseas male student

‘It's much better than previous experience, for the people I work with is great’. – Overseas female student

Most of the positive comments that came from overseas students referred to the opportunity that the group work task presented for social interaction, although there was also a comment about the advantage of undertaking group-work outside of the context of assessment:

‘More free to talk because people are not under pressure with marks’ – Overseas female student

The importance attached to assessment is seen as the most common cause of contention within all group-work scenarios. Non-assessed group work seems ideal, although it may impact negatively upon student motivation for the task. An alternative approach is to attach equal or a higher proportion of marks to social and well-being learning goals, rather than to academic learning outcomes. These can be measured by co-operation (instances of mutual help), understanding culture and examples of negotiating cultural barriers. In some disciplines it may be possible to assess the group-work exercise based on the extent of new knowledge about the different cultural groups gained (Business provides a good example of where such shared knowledge might be particularly useful). This might also mitigate the concerns of home students about grades being reduced by students whose first language is not English.

Comparatively, the feedback given by UK students was somewhat more critical of the multicultural nature of the group and the impact that this had on the final outcome:

Problems encountered - Cohesion, thanks to a multi-ethnic group and clash of dominance’ – UK male student

Varying levels of contribution but overall not what I would produce alone. Group work adventure/outdoor - co-operation + group spirit poor in comparison. - UK Female student
This echoes the finding of other studies (e.g. Kimmell & Volet, 2010, Ledwith & Seymour, 2001) in which overseas students were more positive about the opportunities offered for intercultural contact through group work.

Conclusions and recommendations:

This study indicates that, despite utilising best-practice principles in the design of multi-cultural group-work, there were still substantial differences in the level and nature of contributions from home and overseas students, and from male and female students. An interesting and novel finding is that home student dominance over outcomes (in terms of suggestions accepted by the group) was less strong than dominance over discussion time. However, further research would be helpful to investigate these findings in different contexts and with larger sample sizes.

Nonetheless, both the findings of this study and previous research indicate that further effort is required to help UK students understand the importance of the social aspects of group-work and the potential impact of successful inter-cultural interaction on their future careers. Based on this research and previous studies, a number of recommendations can be made about encouraging successful inter-cultural group-work:

1. Active classroom management is essential in enabling intercultural learning (Harrison & Peacock, 2010), and arguably a greater degree of meta-cognitive instruction prior to undertaking group-work would be of benefit to all students.
2. Specific roles and responsibilities may need to be allocated in advance in order to enhance equity in multicultural group-work. Brookfield & Preskill's (1999) structured discussion techniques provide some guidance for tutors in more effectively achieving democratic ideals through discussion, and enabling a more balanced mixture of contributions to be aired.
3. Assessment of group-work outcomes should be minimised in order to encourage students to focus on the benefits of inter-cultural interaction. The negative impact exerted by grades diverts students’ focus away from social learning experiences. Assessment of process (e.g. peer or self-assessment of discussion facilitation or success in a given role) may be one way to ensure that students still engage.

In order for the internationalisation agenda to succeed in higher education, existing barriers to inter-cultural group-work need to be addressed with some urgency.

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