Facilitating Group Work: a Guide to Good Practice

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Introduction

Oakley, Brent, Felter and Elhajj (2004) observe that owing to the extensive literature on group work, lecturers searching for a succinct guide on how to facilitate this activity effectively, would find it challenging to digest such a large corpus. Moreover, Gibbs (2009, p.1) suggests that despite the many publications within this field, “the literature seldom provides a clear empirical basis for informing teaching decisions”. Accordingly, our objective for this project was to produce an accessible and concise tool, supported by recent publications, for third level educators to draw on when actively engaged in facilitating group projects.

Despite the diverse disciplines of the group members, group work is an activity each of us has firsthand experience of. We all consider that given the vast array of literature and resources on group work, it can be an arduous task to select the most effective approach to employ when facilitating this activity for specific cohorts. We have identified three key stages of group work namely: group formation, group management, and assessment. Careful planning and structuring of these stages should result in a more effective experience for all.

In this report we examined the literature concerning the potential benefits of group work for students and educators in higher education. Subsequently, we considered the recommendations in the literature concerning the three stages of formation, management and assessment. We produced an artefact to benefit other practitioners considering embarking on group work with students.

This resource might be particularly useful for lecturers who have not used group work previously but are considering introducing it. Equally, the report contains valuable insights for more experienced lecturers to consider in facilitating group projects.

Literature Review and Recommendations

Justification for Group Work

Compelling arguments in favour of group work include: its capacity to promote collaboration amongst students, thus improving student engagement and retention (Gibbs, 2009); indications that students engaged in group learning achieve higher grades, learn at a deeper level, and retain information longer (Oakley et al., 2004); its ability to increase authenticity of assessment (UNSW, 2016); and its role in achieving constructive alignment with learning outcomes (DIT, 2015).

Group work promotes the development of important graduate attributes including teamwork, project management, responsibility, negotiation, leadership, communication, self-awareness and reflection (Gibbs, 2009; Lejk, Wyvill & Farrow, 1996; O’Farrell, 2005; Oakley et al., 2004; Plymouth University, 2013; UNSW, 2016). Chan (2010) suggests that employers’ needs for group work skills in the workplace are different to those developed on university courses, and that graduates may not be equipped with the desired skills. Group work is central to Enquiry and Project Based Learning (EBL/PBL) where both authentic activities and learning in context are consistent with the principles of constructivist and social constructivist based pedagogy (Delaney et al., 2015).
A key argument against conducting group work is the increased staff workload in the planning and design required for successful projects (Chan, 2010). The justification for utilising group work should be clearly articulated in the module descriptor, and the skills and attributes it will help to develop clearly identified (Gibbs, 2009). However, an advantage of group work from the perspective of the lecturer is that a well-planned project can reduce the grading burden, particularly for larger class sizes (Chan 2010; Gibbs, 2009; Nordberg, 2007; O’Farrell, 2005; UNSW, 2016).

**Group Formation**
Planning and organising groups are key tasks in the facilitation of group projects as these stages will not only impact on the student learning process, but also the dynamics of groups (DIT, 2015).

**Group selection and composition**
A fundamental decision is whether groups should be allowed to self-select, or whether the lecturer should assign students to groups, randomly or actively (Houldsworth & Mathews, 2000). In the context of randomly assigned groups, all students are recognised as equally valuable and are encouraged to contribute (Sharan & Sharan 1992). Moreover, students can often begin their work smoothly and efficiently (Chan 2010). However, randomly assigned groups may result in a lack of balance in the group (Houldsworth and Mathews 2000). Oakley *et al.*, (2004) and Gibbs (2009) advocate that when forming a group, instructors should play an active role, accounting for issues such as student availability and geography, academic ability, gender balance and cultural, ethnic and national diversity. This promotes inclusion and egalitarianism. Culturally homogeneous groups are shown to outperform heterogeneous groups where the task is of short duration, while in long and complex tasks, diversity improves learning outcomes (Watson *et al.*, 1993).

Houldsworth and Mathews (2000) suggest that students self-selecting the composition of groups has an advantage in some first year contexts by promoting socialisation. However, Gibbs (2009, p.2) contends that self-selection can create a “streaming” effect, where stronger students seek each other out, having the undesirable effect of improving the achievement of already strong students, while disimproving that of weaker ones. Self-selection can discourage students from adopting new roles within a group of peers (Chan 2010). Fiechtner and Davis (1985) note that some of the worst group experiences recounted by students involved self-selection.

Pairs of self-selected peers randomly assigned into groups combines aspects of the above approaches. Houldsworth and Mathews (2000) suggest that student satisfaction increases with peer self-selection, but performance is better, with mixed ability random selection.

Where students are asked to self-select into pairs, and these pairs randomly assigned to larger groups (‘pair and group’ strategy), performance was improved over random selection of the whole group, with enhanced student satisfaction. Alternatively, allowing students to select pairs in the group may lead to the construction of homogenous groups, and is less effective at later stages of study (Stahl, 1994; Houldsworth & Mathews, 2000).

**Group size**
While the group activity involved should be of a scale or level of complexity as renders it unsuitable for completion by an individual (Plymouth University, 2013), a team of two “does not provide enough diversity of points of view for many cooperative learning activities” (Kagan, 1985, p. 450).

Oakley *et al.* (2004, p.11), indicate that the ideal group size ranges from three to five students, with “three to four person teams for most assignments”, which is consistent with Kagan (1985) and Gibbs
(2009). The rationale for this is that more group members generate more channels of communication and diversity of opinion, thereby increasing learning potential (Kagan 1985). However, if groups are too large, individual motivation and effort can be less than if students had studied alone (Gibbs, 2009; Kerr & Bruun, 1983), and students may lack the group management and facilitation skills to cope (Gibbs, 2009).

**Group Management**

**Preparation of the group**

Oakley *et al.* (2004) recommend establishing expectations within groups to enable their effective functioning. Mechanisms including *Team Policy Agreements* and *Team Expectations Agreements* can be used to set clear expectations at the onset of group work.

Team Policy Agreements provide guidance on effective team functioning; team roles and responsibilities; procedures surrounding assignment submission; and approaches for addressing uncooperative group members. Oakley *et al.* (2004) insist that rather than assuming students are born with the skills required for teamwork, lecturers should facilitate students’ development of those skills. Students must always be clearly advised in advance of what will be assessed, the mode of assessment, assessment criteria, and mark allocation for each component (Plymouth University, 2013). Some observe that groups are more effective when students are involved in developing the assessment criteria (UNSW, 2016). Oakley *et al.* (2004) highlight the importance of any disciplinary policy being communicated in writing to all students at the beginning of the group project; given the consequences of actions that may affect the grade of uncooperative students. We recommend that this forms part of the Team Policy Agreement (see Appendix 3). Team Expectations Agreements (see Appendix 4) seek to unite the group with a shared set of realistic expectations produced by the members.

**Management of emerging issues**

While clear policy and expectations agreements aim to ensure the smooth operation of group work, disagreements may still arise. Some signs that conflict has occurred include non-participation or non-attendance at group meetings, aggressive tones or silence at group meetings, and dominant personalities imposing their views (DIT, 2015). Group members should be reminded of the importance of managing issues professionally and being respectful of each other. As noted by Oakley *et al.* (2004, p.15),

*It is a rare student team that doesn’t eventually run into problems with one or more of its members. The most common problems involve team members who refuse to do their share of the work but try to get the same grades as their more responsible teammate.*

Several strategies are proposed in the literature to address this ‘freerider’ issue. We highlight guidance from the work of Leijk, Wyvill, and Farrow (1996); Rust, (2001); Abernethy and Lett (2005); and Maiden and Perry (2011).

**Effective disciplinary procedures**

**Warnings:** Non-performing students are firstly issued a warning, from the group or lecturer. If the student’s performance improves by an agreed date, the warning is rescinded.

**Penalties:** If the warning is not rescinded, and the student’s performance does not improve by an agreed date, and the student cannot account to the lecturer/group for their behaviour, the individual’s marks are reduced. Groups should first meet with the lecturer, who can use active listening to hear the views of the group and offending students. Very often this opportunity for all parties to air grievances is sufficient to resolve issues (Oakley *et al.*, 2004).
Expulsion: In situations where disruptive team members refuse to actively engage, Strong and Anderson (1999) suggest the option of firing the implicated member. The group should send a memo to the offending student and the lecturer informing them of the intention of firing. If there is no improvement in the student's contribution, the notice of firing is sent to the student and the lecturer. Fired students must either try to identify another group who will allow him/her to join, work alone for the remainder of the project, or receive zero for group marked elements of the project.

Group Assessment
The principal challenge associated with group assessment is that not all members contribute equally (O'Farrell, 2005). This renders the grading process contentious (Gibbs, 2009). Awarding a single group mark is deficient because it encourages undesirable behaviour like freeriding, thereby diluting the potential benefits of group work (Gibbs, 2009; Plymouth University, 2013). Ideally, the assessment method used should be dictated by the nature of the task and skills lecturers want students to develop (UNSW, 2016). Further, it should be appropriate to the level and stage of the students, and consider prior experience if any, with group work (O'Neill, 2013; Plymouth University, 2013).

O'Neill (2013) proposes that educators, in considering the assessment element of group work, should ask themselves: Is product or process the main emphasis? Will a group or individual mark be awarded? Will the assessment be primarily tutor or student graded, or both? As Gibbs (2009, p.4) observes, “it is individuals who graduate and gain qualifications”, and thus it is important that assessment methods endeavour to provide a fitting mark for each individual involved in the group activity. We recommend that lecturers choose assessment methods that align with learning outcomes, concerning individual knowledge or performance ('Person'), interpersonal and teamwork skills ('Process'), and the quality of a performance or artefact produced by the group ('Product'). The literature proposes several methods which address these aspects to varying degrees (DIT, 2008, 2015; Eberly Centre, 2002; Maiden and Perry, 2011; O'Neill, 2013). A synopsis of the literature related to the constructive alignment of assessment methods to learning outcomes is presented in the following tables.
<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>References</th>
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<tbody>
<tr>
<td>Individual exam/assignment, subsequent to group process</td>
<td>Marks are allocated to individuals based on their performance in a subsequent individual assignment/exam based solely on subject matter of group activity.</td>
<td><strong>Advantages</strong>&lt;br&gt;• Group work serves as formative exercise.&lt;br&gt;• Recognises efforts of strong individual and collective group performance.&lt;br&gt;• Addresses freerider problem.&lt;br&gt;<strong>Disadvantages</strong>&lt;br&gt;• Difficult to design individual exam/assignment that compels students to be entirely engaged with group task to perform well in it.&lt;br&gt;• Assigning different marks to different members resists spirit of collaboration.</td>
<td></td>
<td>Eberly Centre (2002)&lt;br&gt;Gibbs (2009)&lt;br&gt;DIT (2015)</td>
</tr>
<tr>
<td>Individual task based grade</td>
<td>Marks are awarded to individual students for a task they performed for the group project.</td>
<td><strong>Advantages</strong>&lt;br&gt;• Recognises contributions of individual students.&lt;br&gt;• Perceived as fair by students.&lt;br&gt;• Addresses freerider problem.&lt;br&gt;<strong>Disadvantages</strong>&lt;br&gt;• Does not promote collaboration.&lt;br&gt;• Difficult to find tasks of similar size and complexity to share out.</td>
<td></td>
<td>DIT (2008)&lt;br&gt;UNSW (2016)</td>
</tr>
<tr>
<td>Self-assessment</td>
<td>Students evaluate their own contribution by reference to preset criteria, and award themselves a mark which is moderated by lecturer.</td>
<td><strong>Advantages</strong>&lt;br&gt;• Increases students’ attentiveness to appropriateness of their behaviour in the group.&lt;br&gt;<strong>Disadvantages</strong>&lt;br&gt;• Time required to teach students how to self-assess.&lt;br&gt;• Students may not be objective.</td>
<td></td>
<td>UNSW (2016)</td>
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</tbody>
</table>

*Table 1: Examples of Effective ‘Person’ related Assessment Strategies*
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<tr>
<th>Method</th>
<th>Description</th>
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<th>Disadvantages</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group average grade, based on individual parts</td>
<td>Each member submits an individual report on their individual group task. Final grade is the average grade for all work submitted.</td>
<td><strong>Advantages</strong>&lt;br&gt;• May motivate students to focus on both individual and group work, thereby developing in both areas.&lt;br&gt;• Suitable for group activities that can be divided into discrete components.&lt;br&gt;<strong>Disadvantages</strong>&lt;br&gt;• Difficult to find tasks of similar size and complexity to share out.&lt;br&gt;• Stronger students may be unfairly disadvantaged by weaker ones.</td>
<td>Eberly Centre (2002) Gibbs (2009)</td>
<td></td>
</tr>
<tr>
<td>Group mark adjusted for individual viva performance*</td>
<td>Each student enters their viva with a group based mark, but leaves with that grade plus/minus up to 20%, based on answering questions focused on the group task.</td>
<td><strong>Advantages</strong>&lt;br&gt;• Group work serves as formative exercise.&lt;br&gt;• Recognises efforts of strong individual and collective group performance.&lt;br&gt;• Addresses freerider problem.&lt;br&gt;<strong>Disadvantages</strong>&lt;br&gt;• Assigning different marks to different members goes against the spirit of collaboration.</td>
<td>Gibbs (2009) O’Neill (2013) UNSW (2016)</td>
<td></td>
</tr>
<tr>
<td>Group mark with peer-adjusted individual grade*</td>
<td>Lecturer awards shared group grade, but individual grade is adjusted using peer assessment factor.</td>
<td><strong>Advantages</strong>&lt;br&gt;• Perceived as fairer than single group mark.&lt;br&gt;• May motivate students to contribute more.&lt;br&gt;• Students develop skills in constructive criticism and diplomacy.&lt;br&gt;• Students better understand their own performance by assessing others attempts.&lt;br&gt;<strong>Disadvantages</strong>&lt;br&gt;• Possible subjective evaluation by friends.&lt;br&gt;• Possible conflict.&lt;br&gt;• May foster competition and be counter-productive to group work.</td>
<td>Eberly Centre (2002) Gibbs (2009) DIT (2015)</td>
<td></td>
</tr>
</tbody>
</table>
| Students decide grade from pool of marks | Lecturer awards pool of marks and lets group decide how to distribute them. Limits can be set on extent to which marks can vary within the group. | Advantages  
- Regarded as fairer than a single group grade.  
- Increases students' attentiveness to appropriateness of their behaviour.  
Disadvantages  
- Students may require assistance in negotiating marks. | Eberly Centre (2002)  
Gibbs (2009)  
O’Neill (2013)  
DIT (2015)  
UNSW (2016) |
| Assessment of ‘team citizenship’ behaviour | Group members assess each other’s team citizenship skills. | Advantages  
- Emphasises group work skills over academic ability.  
- All group members who cooperate effectively receive the group assignment grade.  
- Freeriders and problematic members are penalised.  
Disadvantages  
- Possible subjective evaluation by friends. | Oakley et al. (2004) |
| Peer assessment, with penalties for noncompliance | Permits group members to inflict penalties on peers displaying undesirable behavior. | Advantages  
- Group can rescind penalty if underperforming member restores contribution.  
- Promotes desirable group behaviour.  
- Addresses freerider problem.  
Disadvantages  
- May lead to conflict. | Gibbs (2009)  
UNSW (2016) |
| Random peer assessment using preset criteria | Students are randomly allocated other students'/groups' assignments to assess using preset criteria. Marks allocated are moderated by lecturer. | Advantages  
- Promotes student involvement.  
- Gives students the opportunity to give and receive feedback.  
Disadvantages  
- Students require assistance in negotiating marks. | UNSW (2016) |
### Anonymous peer evaluation

**Description:** Students anonymously mark other students’ assignments using preset criteria.

**Advantages**
- Increases student’s sense of involvement and responsibility.
- Helps students develop skills in independent judgement.
- Students better understand their own performance by assessing other’s attempts.
- Anonymity aids objectivity.
- Marker is more discerning when anonymity is protected.

**Disadvantages**
- Time required to teach students how to evaluate one another.
- Student concerns about fairness.
- Students must return relevant documentation for this to work.

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### Public peer evaluation

**Description:** Publicising peer assessment of students.

**Advantages**
- Reported to influence a student’s future performance more effectively than feedback from lecturers.

**Disadvantages**
- May cause conflict.
- Students may be afraid to give accurate evaluation of team mates.

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### Table 2: Examples of Effective ‘Process’ related Assessment Strategies

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<thead>
<tr>
<th>Method</th>
<th>Description</th>
<th>Advantages and Disadvantages</th>
<th>References</th>
</tr>
</thead>
</table>
| Single group grade       | All members receive the same grade based on one group submission.           | **Advantages**
  - Encourages group work members
  - sink or swim together.
  - Straightforward to apply.

**Disadvantages**
- Encourages freerider behaviour.
- Does not recognise individual contributions.
- May impair student motivation.
- Potential benefits of group work likely to be lost.

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Table 2: Examples of Effective ‘Process’ related Assessment Strategies

* These methods also include elements of ‘Person’ related assessment strategies

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Table 3: Examples of Effective ‘Product’ related Assessment Strategies
Artefact: Facilitating group work: A guide to good practice
The design of this AO sized (841 x 1189 mm) poster is loosely based on the format of a scientific conference poster with a grid across five columns and colour is used to thematically link different sections. The aim of the poster is to represent the findings of this project in a condensed form that is clear and visually interesting. This visual identity is designed such that it could be adapted to other print formats such as A4 concertina foldout as well as digital online platforms. (Note: the poster is available to download from http://arrow.dit.ie/)

Conclusion
It was beyond the scope of this document to examine an exhaustive list of issues implicated in the concept of group work; resulting in the omission of several areas of interest including feedback and online assessment. However, we extensively reviewed the literature on many important areas of group work, to produce an accessible guide for lecturers. It is our aspiration that this could be referenced when planning and facilitating group projects, with insights and recommendations informed by our research. Moreover, as this work draws on publications from educators in a wide range of disciplines, we expect this guide to be universally applicable. Needless to say, all group members found the material in this report to be useful for planning and managing future group projects in our disciplines, despite coming from a range of backgrounds. For example, one group member who lectures social care students plans on using team policy and expectation agreements to facilitate a group PBL activity in the 2016/17 academic year. Similarly, other members, from the business faculty and the school of food science are planning on trialling the ‘pair and group’ strategy for selecting groups next term.

Recommendations
We recommend that lecturers new to group work should consider implementing the following key steps when facilitating group work:

- Produce and distribute a Group Work Policy document.
- Ask students to produce Team Expectations Agreements.
- Establish a transparent group formation mechanism. We recommend a ‘pair and group’ approach.
- Choose assessment methods to align with learning outcomes related to Person, Process, or Product.
- Manage conflict and discipline issues using a series of measures of increasing consequence.

Future work
We believe our group report and artefact could be edited into a short pamphlet or flyer, for distribution to lecturers in different departments. We discussed the merits of a digital model such as an ‘app’; with links to allow viewers obtain more detail (and references) on certain areas. Moreover, this application could be designed to include case studies and a discussion forum allowing lectures to share their experiences. We also considered a continuation of this project to include elements such as feedback and online assessment. This would most likely require a teaching fellowship, but if pursued, could create the opportunity for a publication within this field.
References

Appendix A: Team Policy Agreements

A good team policy document should provide the groups with necessary information they need to complete the project and answer frequently asked questions. For example, it could include:

- **Assessment criteria**
  - Detailed rubric
  - Assessment mode
  - Component mark allocation
- **Required team roles (if any) and their accompanying responsibilities, for example:**
  - Minutes of team meetings
  - Chair of team meetings
  - Main team contact for lecturer
- **Procedures surrounding assignment submission**
  - Key dates, deadlines and penalties
  - Times and locations for physical assignment submissions
- **Method for addressing uncooperative group members**
  - Sequence of conflict resolution steps recommended and supported by lecturer
  - Procedure for contacting lecturer with a view to disciplining students
- **Links to recommended resources for any of the above**

Appendix B: Team Expectations Agreements

Student groups should be encouraged or required to produce a Team Expectations Agreement. This short document could cover such areas as:

- **Attendance at meetings**
  - Minimum required attendance
  - Procedure for communicating decisions to absent members
- **Work commitments between meetings**
  - Procedure for ensuring agreed tasks are completed in a timely manner
- **Communication policies**
  - Method for communicating between meetings
  - Timeframes for replies or regularity of updates
- **Punctuality**
  - Timekeeping for meetings and other tasks
- **Professionalism**
  - Manner of communication
  - Presentation of work

Students should agree to these expectations and sign the document. This can help lecturers to resolve conflicts if disputes arise between team members.