

Red Guides
Paper 53

Group work assessment: benefits, problems
and implications for good practice

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Introduction

Group work has become increasingly important in higher education, largely as a result of the greater emphasis on skills, employability and lifelong learning. However, it is often introduced in a hurry, can be unsupported and may be assessed without fully exploring the consequences (www.heacademy.ac.uk/ourwork/learning/assessment.group).

Both group work and its assessment have been the focus of considerable research and debate in the higher education literature; see for example reviews by Webb (1994), Nightingale *et al.* (1996) and Boud *et al.* (1999).

Davis (1993) identifies three types of group work: formal learning groups, informal learning groups and study groups. Formal groups are established to complete a specific task in one class session or over many weeks, such as a laboratory experiment or the compilation of an environmental impact report. Informal groups involve ad hoc clusters of students who work in class to discuss an issue or test understanding. Study teams are formed to provide support for members, usually for the duration of a project or module. This guide will focus on formal group activity and its assessment. Group work is highly complex, however, and assessment should consider both the product or outcome and the process of student learning (Webb 1994, Glebhill and Smith 1996). Consequently, the development of effective group work assessment strategies, designed to engage the students and provide the best possible learning experience, raises a number of important questions. For example, what is the most effective group size? How should the groups be formed? How can we best prepare students for group work? What are the most effective ways of supporting groups and individuals within them? To what extent should group progress be monitored by tutors? How should we assess group work and where does the balance lie between product and process, and group and individual? What is the most effective way of gathering meaningful student feedback for

the purposes of evaluation and review? This guide will explore these questions and many others. It will begin by looking at the benefits of group work and its assessment before exploring some of the key concerns. It will then reflect on some personal experiences and lessons learned from the planning and delivery of group work assessment strategies, with a view to providing some ideas and tips for good practice.

Group work assessment: some benefits

There is a considerable body of literature on the educational benefits of group work, particularly within the context of transferable skills development and graduate employability. It is said to play a key role in the development of communication, leadership, negotiating, decision-making and problem-solving skills, and in promoting flexibility and adaptability in terms of accommodating the various roles and tasks required (Zarisky 1997, Millis and Cottell 1998, Boud *et al.* 1999). Bourner *et al.* (2001) argue that group work plays a key role in enabling graduates to critically evaluate their own work and that of their peers. According to Boud *et al.* (1999) it is also important for students to learn about their effectiveness in a group setting.

In relation to graduate employability, team work was identified as part of the 'employers curriculum' established by the Enterprise in Higher Education (EHE) initiative as far back as 1989, providing valuable preparation for work experience in the 'real world'. This is further supported by Hiley and Carter (2003), in relation to students on degree programmes in construction and building, who state that employers greatly value a graduate's ability to work in both single and multi-disciplinary teams. These authors go on to suggest that group work can motivate others, to manage a process, to resolve conflict, and to analyse and critically evaluate options, whilst Norman and Schmidt (1992) argue that group work encourages the application of concepts learnt in one situation to another.

Furthermore, Maguire and Edmondson (2001) argue that being a good team player is an important measure of 'graduateness'.

Mills (2003) emphasises the role of group work in encouraging deep learning and developing specific 'life skills' such as decision-making, teamwork and communication skills. Similarly, Parsons (2002) argues that group work provides a vehicle through which students can be involved in deep learning, develop their skills experientially and contributes to the skills they will need for life-long learning. The importance of group work for social and academic integration, student retention and engagement is also well established (Bourner *et al.* 2001). A number of key elements to reducing student disengagement are identified, many of which can be promoted through group work activity, including: allocating time and effort to student activities (Kuh 2003), promoting a strong university based academic and social network (Wilcox *et al.* 2005), seeing the University as part of the rest of their life and not an isolated activity (Zepke and Leach 2007), and feeling like a valued member of the University (Inkelas *et al.* 2007). Most importantly, however, students often view group working as educationally valuable and socially enjoyable in many respects (Mills 2003, Gupta 2004, Knight 2004).

Group work assessment: some concerns

Parsons (2002) discusses the problem of assessment in group work, indicating it to be 'an area rife with difficulty.' He goes on to suggest that a fair mark for a given student should reflect that individual's effort and abilities. Barfield (2003) comments on the negative emotions that may accrue when students have to rely on others for their marks, especially in later years that count more heavily towards their degree award. Similarly, Knight (2004) argues that students instinctively prefer individual assessments. More specifically, Maguire and Edmonson (2001) find that students particularly dislike peer assessment,

raising issues of lack of fairness, injustice and unreliability in relation to group work assessment.

Mills (2003) comments that the main student dislikes in relation to group work are trying to control some group members, poor group dynamics and personality clashes. Parsons (2002) also recognises the need to address the problem of 'passengers'. Bourner *et al.* (2001) identify passengers as students who benefit from a group project without making a sufficient contribution to the work. Hand (2001) uses the word 'freeloader' to describe this concept and makes a number of useful suggestions as a means of addressing the problem. His suggestions include keeping group sizes to a minimum so that opportunities for individuals not to pull their weight are reduced, getting groups to lay down ground rules on how to tackle freeloading should it arise, and building in an individual element of peer and/or tutor assessment. A key factor in the design of effective group work assessment is the degree of clarity of the assessment criteria (Barfield 2003, Knight 2004).

Glehill and Smith (1996) highlight differences in gender, age and qualifications amongst group members as possible issues or barriers to equal opportunities in student work load and group work and how friendships appeared to form the basis of the majority of groups looked at. There are also wider ethical issues of group formation and whether groups are self or tutor-selected, how marginalised students are supported and how conflict is managed. Chang (1999), for example, discusses problems faced by students who are rejected by their peers and the emotional impact on those who decide to remove a fellow student from their group. 'Problematic' individuals are often viewed as ineffective 'followers', yet a good follower is crucial to the success of any group (Tyson 1998). Similarly, Mellor and Entwistle (2008) examined ways of supporting marginalised students in a group work assessment project in Geography. Key interventions included: making timetabled sessions available for group progress meetings, allowing individuals in

groups to play to their strengths, adding a formative assessment stage to the written project and including an individual critical reflection component enabling students to reflect on the group work process. One reason for using group work assessment might be as a way of reducing the assessment burden on both staff and students (McInnis and Devlin 2002). The time saved, however, is usually more than compensated for by the extra time needed to engage with and support the group work activities (Mellor and Entwistle 2008).

Key considerations for good practice in group work assessment

This section will explore the processes of group formation, briefing and preparation of students, student support and progress monitoring, the balance between guidance and intervention, assessment of product versus process, formative and summative assessment, and de-briefing and evaluation, together with the implications of these processes for good practice. Other key considerations include the role of e-learning technologies such as use of the wiki or blog facilities on Northumbria University's electronic learning platform (Blackboard) to document group processes and progress, and the role of portfolios as a vehicle for students to reflect on the skills gained during group work activity and assessment.

What is the most effective group size?

Whilst group size might be determined to some extent on the basis of cohort size, topic or project availability and the nature of the task in hand, if a group is too large it is possible for one or more individuals to become disengaged with the process, either inadvertently or by design. Such individuals may include those who are introverted, have poor social skills or simply perceive themselves not to fit in with the rest of the cohort. It may also include those who do fit in but choose not to engage – the so-called 'passenger' or 'free-loader' (Hand 2001). If a group is too small, however, the number of tasks and workload

burden may be too great for the individuals in that group. Davis (1993) argues that the ideal group size is 3-4 and certainly no more than 6-7. The tutor should also decide whether individuals in the groups should contribute to all group tasks or play to their strengths. The former may lead to mediocrity and convergence of performance, whilst the latter may not allow individuals to address their weaknesses.

How should the groups be formed?

Thorley and Gregory (1994) outline a number of approaches to group formation including friendship groups, common interest groups and mixed ability groups. Other approaches include engineered groups, based on the tutor's knowledge of group dynamics within the student cohort, and changing groups where group composition may change throughout the duration of a project to give students the opportunity to experience varied roles. The existing power-base within friendship groups can be problematic, discouraging students from adopting different roles within the group and inhibiting individual contributions (Buxton 2003). Research also suggests that working in such self-selected groups can undermine the academic purpose of an exercise and that more diverse, tutor-selected groups might be more effective, better reflecting situations that the students might encounter in their future employment (Thorley and Gregory (1994). If this approach is adopted, however, it is perhaps best to do so right from the first level or stage of the programme, as it may prove difficult and indeed highly unpopular to introduce it in the later stages if students have been accustomed to having self-selected groups.

In general, students prefer self-selected, friendship groups, which is fine for those individuals who have a circle of friends and are popular within the cohort. The situation is more difficult for those who do not have friends, have less well developed social skills, or who are perceived by others in the cohort as being different or odd. Inevitably, such individuals can become

marginalised, which may impact adversely on their emotional well-being and wider learning experience Mellor and Entwistle 2008). So how can we best address the needs of these potentially marginalised students? One approach would be to encourage these students to form a group themselves if numbers are sufficient. There is a danger, however, that because the individuals are probably unfamiliar with each other's strengths, weaknesses and working practices, a group formed in this way may be dysfunctional and at a distinct disadvantage in comparison with the other groups. Such a group may require considerably more tutor support than other groups in the cohort, which may appear divisive to some, thus generating further negative emotions with adverse impacts on the quality of the learning experience. An alternative approach to supporting marginalised students in the process of group formation may be to allocate them to existing groups via an open and positive process of discussion with the whole cohort; these individuals may bring strengths and qualities to a group that the rest of the cohort is unaware of. This approach may help students to develop a more sensitive, tolerant and inclusive approach to issues of diversity.

How can we best prepare students for group work?

If the student cohort has no previous experience of, or preparation for, group work assessment, then time should be set aside for this in order for students to get the most out of the learning experience. This could include a simple personal reflection exercise, either individually or within the groups, of strengths and weaknesses, perhaps as part of an icebreaker session

(www.heacademy.ac.uk/ourwork/learning/assessment.group).

Alternatively, an interactive group-based exercise using the system of Belbin (1993) could be used to help in the identification of potential team roles. Such exercises could help to inform the process of group formation or take place once the groups have been formed.

An additional group preparation exercise could involve scenario rehearsals or simulations. Here, groups are given the task of reaching agreement on how they might cope with certain problem scenarios. For example, how might a group deal with a group member who is regularly absent or who fails to engage fully with the task in hand, namely the 'freeloader' or 'passenger'? Similarly, how might a group deal constructively and in a supportive and sensitive manner with a group member who produces work deemed to be sub-standard by other members of the group? Other scenarios might include dealing with disagreement or conflict between group members, including an individual who adopts a dominant position, becomes disrespectful or offensive, or who tries to circumvent democratic processes of decision-making within the group. It may also be necessary to decide how to support a group member who becomes ill or who has to deal with difficult personal problems that may arise. A useful outcome from such scenario rehearsals might be a list of ground rules for each group, or even the whole cohort, that all members sign up to; these can then be kept on display during all future group meetings (www.ukcle.ac.uk/resources/temp/assessment.html).

What are the most effective ways of supporting groups and individuals within them?

The key issues to consider are the level of tutor support, whether or not this should occur within timetabled sessions and where the balance lies between being supportive and being intrusive. In a final year, 20 credit, year-long module including a group work assignment at the end of semester 1, two timetabled sessions were given over to group support (Mellor and Entwistle 2008). Despite sacrificing the academic content delivered in these sessions, students had requested some timetabled time for group meetings because a number of them found it difficult to meet outside of timetabled classes as a result of personal commitments including paid work and child care arrangements. In addition, the large number of option modules

available in the final year meant that students rarely had times when all group members were free to meet. The timetabled group support sessions proved to be highly popular with the students. Tutors were available during these sessions but a 'light touch' approach was adopted where staff would move around groups informally only giving advice and support if requested by the students. In using this informal approach, tutors were able to avoid being too intrusive in offering help where it was not really necessary. Students could also contact tutors outside of these timetabled sessions either directly or via e-mail if necessary.

One ethical dilemma to be aware of regarding tutor support is that of equality versus equity. Should all groups receive the same support, or should that support be targeted towards groups that appear or perceive to need it most? The latter approach may be most efficient in terms of use of staff time. However, care must be taken to avoid disenfranchising the groups who do not require much support as they may feel disadvantaged over those groups at which support is targeted. Such a situation can be avoided if tutors, groups and individuals within groups are open and transparent with each other, although sometimes one has to be sensitive to issues of confidentiality regarding an individual's personal circumstances. Chang (1999) advocates a problem-solving approach to conflict, with open, honest and frank discussion on neutral ground. He argues that conflict is positive, necessary and manageable but also has a negative potential for destructiveness that must be approached with care and understanding.

To what extent should group progress be monitored by tutors?

Another ethical dilemma relates to the need for monitoring of the groups and of individuals within groups. This may be viewed by some as intrusive and detrimental to the ethos of

independent learning and self development. However, monitoring may be necessary to try and avoid problems such as student disengagement, marginalisation and free-loading but where does the balance lay? Close monitoring may be helpful for students in the early stages of their academic career with limited experience of group work activity and assessment. In the later stages, however, a lighter touch approach to monitoring may be more appropriate. De Vita (2001) tackles the free-loader problem using a three-stage approach: first, by establishing team roles and maintaining regular contact; second by encouraging reflection using peer or self assessment; and third by allocating a proportion of marks to individuals within the group. The need for explicit guidance and detailed assessment criteria in support of this process is stressed, however.

Monitoring can be conducted directly but informally by the tutor by observing the groups in timetabled meeting sessions and keeping a diary or log (Mellor and Entwistle 2008). A record of key progress points achieved, such as successful delivery of a poster or presentation, or submission of a written draft for formative feedback, could also be included in such a diary. Monitoring can also be conducted indirectly by asking each group to provide brief meeting notes or minutes, including a record of attendance. At Northumbria another approach to group monitoring is to make use of e-learning resources such as the wiki or blog facilities on the University's electronic learning platform. Here it is possible to monitor both group and individual activity and progress outside of timetabled classes, an approach that has been used successfully by colleagues running a plant physiology module in the University's School of Applied Sciences (McKie-Bell personal communication). If a problem emerges as part of the monitoring process, the tutor could intervene by contacting the group, indicating that a problem has been recognised and offering support. It is then up to the group to take up this opportunity. If a problem is considered to be particularly serious, it may be necessary for

the tutor to call the group, or an individual from within the group, for a more formal meeting but this should be a last resort. It is useful if there are a number of channels of communication between tutor and students, including e-mail, electronic learning platform and telephone to ensure optimum flexibility and opportunity.

How should we assess group work?

The author believes that group work assessment lends itself well to the principles of 'assessment for learning' (AfL) (see McDowell *et al.* 2005) and should be designed with these in mind (Fig 1).

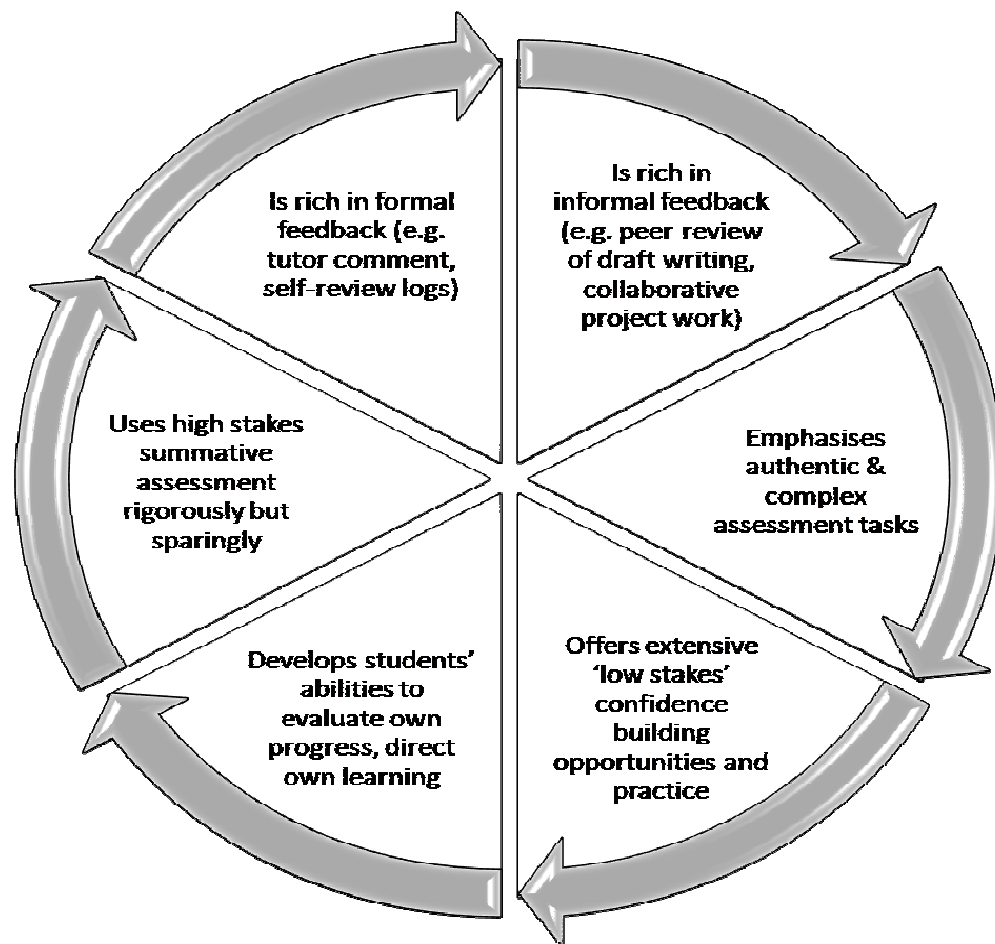


Figure 1. The six core principles of AfL (from McDowell *et al.* 2005).

Group work is most successful if it is perceived by the students to have a meaningful, 'real world' context or application (authentic). Care should be taken in preparation of the assignment brief to ensure the nature of the task(s) and output(s), and the criteria for assessment are explicitly clear (De Vita 2001). The assignment brief should be presented to the students in both written form and verbally, in-session so that they have an opportunity to seek clarification if necessary. It is suggested that the assessment should embrace three key sets of group work skills: first, planning during which realistic (SMART) objectives are set, negotiated and responsibilities outlined; second, delivery, which focuses on time management and cooperative/collaborative working; and third, reviewing where agreement is reached on the degree of success, identification of positive and negative factors and improvement of one's own learning and performance (www.heacademy.ac.uk/ourwork/learning/assessment.group).

Summative assessment tasks could include one or more formal outputs or products, such as a poster, oral presentation or written report. It may be possible to link such assessments together so that earlier ones help to inform the content of the later ones, thus having a formative as well as a summative role. Having a range of summative assessments may also appeal to the diverse learning styles and preferences of individuals within the groups. If there is only one summative assessment towards the end of the activity, groups could be given the opportunity to submit earlier drafts for formative feedback prior to submitting the final version (Mellor and Entwistle 2008). This approach reduces the stakes somewhat by allowing the students more opportunities for feedback, thus helping to build confidence.

In addition to summative assessment of the output or product, the tutor should consider whether or not the process of group work should be assessed. This may be achieved using individual critical reports where students can reflect, in confidence, on their experience of the group work process. De

Vita (2001) advocates inclusion of a reflective element as part of the assessment process in order to tackle the problem of free-loading. Writing in a reflective manner may be difficult for some students, however, particularly those in the early stages of their academic career or from the more science-based disciplines. If this is the case, students will need some preparation for this task (see for example, Moon 2001). It may also be possible to make an assessment of the group work process by looking at the level of student engagement in progress meetings attended by the tutor, from the tutor diary or log, or minutes from group meetings (Mellor and Entwistle 2008).

As well as formal feedback, groups will also receive informal feedback relating to the various tasks from tutors during progress meetings. Similarly, individuals within the groups will receive informal feedback from their peers in relation to their respective roles and tasks performed within the groups. This will further help students to reflect on and evaluate their own progress within the group setting.

Another question for consideration is should individual performance within the group setting be assessed and if so how? It may be necessary to address this question if there is a problem of passengers or free-loaders within groups. If so, a small but significant proportion of the marks could be allocated to each individual by peers in the group to reflect their contributions. Whilst this form of peer-assessment may be useful in discouraging free-loading, it is not always popular with students who may find it stressful, even if the process is conducted on a confidential or anonymous basis. If this approach is adopted, it is crucial that students receive clear guidance on the process and criteria to be used (Bone 1999). Marks allocated in this way could be moderated by the tutor to ensure fairness and consistency across the groups. It should be noted, however, that this problem might be avoided through

careful monitoring of groups by tutors as indicated in the previous section.

Use of the wiki and blog facilities on the University's electronic learning platform (Blackboard) has been discussed earlier in relation to monitoring student progress. Using this approach, it is possible to determine the proportional contribution of individual students to the group effort. Whilst this may not necessarily reflect the quality of individual contributions, it does provide one way of assessing such contributions without interfering with the group work process.

What is the most effective way of gathering meaningful student feedback?

Module reviews are inevitably rather generic in terms of student feedback and it is not always possible to make links to specific assessments using this approach. Even if more specific feedback is sought, however, use of closed questionnaires may be problematic as interpretation usually places emphasis on the majority view. Such reviews need also to capture the minority view, especially in relation to potentially marginalised students. More qualitative, open questionnaires and individual critical reflections may form useful ways of gathering this type of information, and for informing changes and modifications in future years (Mellor and Entwistle 2008).

Plan of action: checklist

- Choose a group size appropriate for the task in hand; too large and individuals can fall off the radar; too small and the work burden may be too great. An ideal group size in most instances is 3-5.
- Think carefully about whether groups should be selected by the tutor or by the students themselves and allow the students to participate in this process. Students often prefer the latter but this can lead to

marginalisation of some individuals, who will require extra support and encouragement.

- Prepare your students for group work using learner-centred, ice-breaker activities such as identification of individual strengths, weaknesses and roles, group processes and scenario rehearsals or simulations.
- Make some timetabled sessions available for groups to meet to discuss progress. Keep a diary or log and invite each group to provide brief minutes of meetings indicating attendance, goals agreed and progress made against targets. Such monitoring may help to alleviate the problem of passengers or free-loaders.
- Make your assignment brief explicitly clear in terms of the aims, tasks and marking criteria and discuss these with the students when forming and preparing the groups.
- Design your assessment task with the principles of AfL in mind. Consider the balance between assessment of the product and of the process of group work activity. Also consider the balance between assessment of the group and of individuals within the group.
- Consider use of the wiki or blog facilities on an e-learning platform to engage the students and provide flexibility regarding access to learning opportunities. This approach may be used to monitor group progress and to assess individual contributions to the group effort.
- Consider gathering specific feedback from students on the group work assessment, either as part of, or separate from, the generic module review. Such feedback can then be fed forward to the benefit of students who may undertake the assessment in future years.

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Useful web-based resources can be found at:

www.essex.ac.uk/assessment/allocating_groups.htm

www.heacademy.ac.uk/ouwork/learning/Group

www.ukcle.ac.uk/resources/temp/assessment.html