

# The Use of Small Group Tutorials as an Educational Strategy in Medical Education

Dr Helena Ferris<sup>1</sup>

<sup>1</sup> Lecturer in Clinical Medicine, Trinity College Dublin, Ireland

Correspondence: Dr Helena Ferris, Lecturer in Clinical Medicine, Trinity College Dublin, Ireland. E-mail: ferrish@tcd.ie

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## Abstract

Small group tutorials are an educational strategy that is growing in popularity in medical education. This is indicative of the movement from a traditional teacher centred approach to more student-centred learning, which is characterised by active participation and autonomous learning (Hedge et al, 2011). However, small group teaching is one of the most difficult and highly skilled teaching techniques and should be planned carefully (Harden & Laidlaw, 2012). It also demands, a higher teacher: student ratio and both teachers and students should be thought how to work with it (Jacques & Salmon, 2007). In addition, small group learning comes with its own unique leadership challenges, namely participative leadership. Fostering leader inclusiveness at an undergraduate stage through small group tutorials instils a mutual respect and encourages the sharing of knowledge across professional borders (Mitchell et al, 2015).

It is important to assess whether or not one's innovative endeavours in instituting small group tutorials are effective. This can be achieved by either examining the end product i.e. grades or by analysing the process of interaction in the group (De long et al, 2010). In practice, both methods provide valuable data for personal and professional development. One may ask what implications this discussion has for our future practice? There is a need for the implementation of small group teaching as a complimentary educational strategy in medical education. Moreover, there is an immediate need for leadership programs so that future doctors are armed with the tools to manage the trials and tribulations of medical education and modern medical practice.

**Keywords:** Medical education, Small group tutorials, Leadership

## 1. Introduction

Small group teaching is an educational strategy that may be used to facilitate learning. It is an important tool as it provides students with an ideal setting in which they can clarify misunderstandings, test hypotheses and evaluate ideas (Robillard et al, 2011). In recent years, we have seen many Universities reform their curricula to include small group learning, however, there is a general paucity of literature examining its effectiveness as an educational intervention.

Small group learning has grown in popularity in medical education as it offers a dynamic and collaborative setting for learning (De Long et al, 2010). Research has shown that students taught in this way retain more material for longer as it prepares learners to be independent thinkers, a vital skill in the fast changing world of medicine (Amin & Hoon, 2006). Furthermore, small group learning has been shown to have a direct positive effect on student's motivation to learn, which in turn plays a central role in promoting the elaboration of knowledge and productivity (Harden & Laidlaw, 2012) (Dolmans et al, 2005). However, it brings with it the need for highly skilled educational techniques, leadership and a higher teacher: student ratio, which may prove costly in financial and logistical terms.

In this paper I will critically discuss the various facets of small group learning. I will discuss the advantages and disadvantages of such methods, the leadership challenges associated with such an approach and I will explore how or if one can assess the success of a teaching or learning strategy.

## 2. Teaching/ learning strategy

Small group tutorials are one of the many different teaching strategies available to a university when implementing a curriculum. What's constitutes a small group depends on the cultural context, however, in Europe, 6-10 students are

generally regarded as a small group for teaching and learning purpose (Jacques D, 2003). Groups can consist of a little as four or as many as 20, however, in these situations strong leadership is needed to ensure that the group interacts appropriately and develops their interpersonal skills (Bales at al, 1951). Importantly, the size of the group is not as significant as what the group does, as it is the well-defined structure and skill of the teacher as a facilitator that are key to the effectiveness of small group sessions (Wood, 2003).

This educational intervention has many advantages when compared to other strategies such as large group lectures. Specifically, it encourages a more complete understanding of a subject rather than superficial learning where the emphasis is on memorisation (Harden & Laidlaw, 2012). It does so by being interactive and it has been consistently shown to engage students in active discussion and critical thinking (Edmunds & Brown, 2010). Furthermore, small group learning allows students to develop interpersonal, presentation and communication skills which are useful lifelong skills. These generic skills are difficult to develop in isolation without multisource feedback from teachers, peers and self-assessment (Crosby & Hesketh, 2004).

In the healthcare setting, the ability to work as part of a team is paramount and encouraging team members to engage is often a difficult leadership challenge. However, the small group setting provides students with a more relaxed atmosphere in which they can actively rather than passively build on the expertise and talents of the group (Wood, 2003). This informal setting can help students to acquire a greater appreciation of the role of others through group problem solving and open discussion, which promotes collaborative medicine.

As we have discussed, small group tutorials are a useful educational tool with many advantages. However, effective small group learning in medicine is not an easy undertaking and has many challenges associated with it. Essentially, the key to successful learning lies with the teacher. Teachers who are accustomed to lecturing may be less comfortable in the role as facilitator in small group settings. Often, this can lead to small group work deteriorating into mini-lectures (Jason & Westberg, 1982). Other reported pitfalls include a low level of student participation, discussion dominated by a few students or an insufficient variety of activities in a session (Brookfield & Preskill, 2005) (Das, Swadi & Mpofu, 2003). However, issues that arise can be managed with clear leadership and by understanding the series of defined stages that groups go through i.e. forming, storming, norming and performing (Belbin, 2004). This allows the facilitator to have confidence and appreciate that the difficulties that may arise are a normal part of the small group learning process.

It is imperative that the team leader impresses on staff the role of small group sessions in promoting the comprehension and application of previously acquired information i.e. it is not the setting for transmitting new information (Mamede et al, 2006). Small group leaders must also formulate clear objectives, teaching methods and organise a physical setting which can present logistical and financial issues due to the higher teacher: student ratio required. Many teachers find a mind map useful when preparing for small group teaching and there are many online aids to assist when planning small group sessions (McDermott & Clark. 1997).

It is generally acknowledged that small group teaching is considerably more difficult to manage than a lecture as more attention needs to be paid to individual students' behaviour, personalities and difficulties (Edmunds & Brown, 2010). In teaching students to interact professionally as part of a diverse and dynamic group, it is hoped that the group will become effective team players who adopt the various roles and responsibilities, as outlined by Belbin, which are necessary for success (Jacques D, 2003). The facilitator plays a crucial role in this process as group leader. A facilitator, who is supportive, gives guidance and feedback is more likely to reduce anxiety, build confidence and promote reflective learning (Hattie & Temperly, 2007). This has implications for future medical practice as groups that cooperate and reflect upon the learning process have been shown to be more effective than those who focus solely on the task in a competitive manner (Johnson & Johnson, 1987). The importance of teamwork is reiterated throughout the small group learning process, which is complimentary to the modern multidisciplinary approach to medicine.

As we have discussed, small group teaching is an effective educational intervention, although it is not without its challenges. Let us look more closely at the specific leadership challenges that underlie the implementation of such a teaching strategy.

### **3. Leadership challenges with small group tutorials**

It is imperative that we prepare doctors for leadership roles due to the growing complexity of medical practice. We need our future colleagues to be innovative, visionary and to manage change in an effective way. A recent systematic review of faculty development initiatives designed to promote leadership in medical education showed that participants consistently found leadership programs to be useful on both a personal and professional level (Mitchell

et al, 2015). Many of these initiatives involved seminars, workshops or mentoring programs and addressed topics such as team building, time management, conflict resolution and strategic planning. As small group tutorials encourage participants to critically discuss issues and build on the strengths of a diverse group, they encourage students to take on leadership roles and create collaborations and networks.

Small group teaching poses the leadership challenge of including all the members and respecting diverse view-points. This is reflective of working life where there is a growing tendency to work in multi-disciplinary teams. Interestingly, it has been shown that leader inclusiveness enhances inter-professional team performance through an increase in shared team identity and a reduction in perceived status differences (Mitchell et al, 2015).. This highlights the importance of exposure to small group tutorials at an undergraduate level as it promotes open discussion from different perspectives and shared decision making. Our future doctors will be working with people from different cultures due to the global nature of modern medicine and health professionals from Generation Y and mature graduates alike. Fostering leader inclusiveness at an early stage through small group teaching instils a mutual respect and encourages the sharing of knowledge across professional borders (Ferlie et al, 2005).

#### 4. Evaluating small group learning

It is important to assess whether or not one's innovative endeavours in instituting small group tutorials are effective. Sessions of small group learning can be evaluated by examining either the end product i.e. grades or by analysing the process of interaction in the group (Edmunds & Brown, 2010). Both methods have merits and limitations. For instance, when looking at student grades, assessment is often distant from the small group teaching sessions and so can only provide an indication of the overall quality of the strategy. However, if the purpose of an evaluation is to help participants improve their communication and cogitative skills, then studies of the process are more important (Edmunds & Brown, 2010). Furthermore, these studies can be carried out immediately after the sessions and can give detailed insights based on student, peer and tutor feedback.

In practice, it is best to use multiple methods of examining a teaching or learning strategy as no one method alone can provide a complete evaluation. Auditing one's work in such a manner should be encouraged by the group leader as it provides valuable information for personal and professional development. Findings should also be shared at a departmental and institutional level so that one can justify the introduction and maintenance of diverse teaching methods.

#### 5. Conclusion

Small group tutorials are an educational strategy that is growing in popularity in medical education. This is indicative of the movement from a traditional teacher centred approach to more student-centred learning, which is characterised by active participation and autonomous learning (Hedge et al, 2011). However, small group teaching is one of the most difficult and highly skilled teaching techniques and should be planned carefully (Rasuol, 2010). It also demands a higher teacher: student ratio and both teachers and students should be thought how to work with it (Jacques & Salmon, 2007).

We have seen how small group learning comes with its own unique leadership challenges, namely participative leadership. Fostering leader inclusiveness at an undergraduate stage through small group tutorials instils a mutual respect and encourages the sharing of knowledge across professional borders (Ferlie et al, 2005). It is important to assess whether or not one's innovative endeavours in instituting small group tutorials are effective. This can be achieved by either examining the end product i.e. grades or by analysing the process of interaction in the group. In practice both methods provide valuable data for personal and professional development.

One may ask what implications this discussion has for our future practice? There is a need for the implementation of small group teaching as a complimentary educational strategy in medical education. Moreover, there is an immediate need for leadership programs so that future doctors are armed with the tools to manage the trials and tribulations of modern medicine.

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