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## Promoting Learning Through Peer Group Work

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## **Session: Peer group work**

**Dr Bill Byers, Ulster University and Dr Tina Overton, University of Hull.**

Report by Dr Christine O'Connor, Dublin Institute of Technology and Dr Renli Ma, Northumbria University.

### **Title: Promoting learning through Peer Group Work**

The session aimed to help the Summer School participants develop tasks and assessment strategies of peer group work in their own teaching.

The session was introduced by Dr Byers outlining the agenda including Group Work (a) advantages, (b) problems and (c) factors to consider which was followed by Group work in teaching and some exercises.

Dr Byers posed the question “*Who does group work?*” in which most of the summer school delegates gave a positive response. A second question was then posed, “*Do you think chemistry is taught better now than 20 years ago?*”, again a comprehensive positive response was received from the delegates. A third question followed which stated “*Do you think chemistry students are learning better now?*”, a unanimous negative response was received.

The presentation commenced with a symbolism [ $\text{Learning} \neq m(\text{Teaching}) + c$ ], which represents that students do not necessarily learn what we teach them. He went on to mention that we must get students active to get them to work. By getting students active/interactive there is a potential to enhance learning. At this stage Dr Byers split the delegates into small groups to discuss the advantages of peer groups.

Comments which were delivered from these groups were;

- (i) broadening of horizons of students,
- (ii) students teaching other students and,
- (iii) teachers give their perspective to it is better to here the students also (?).

Dr Byers continued his presentation to highlight the advantages of working in peer groups such as;

- interaction
- exchange of ideas with peers,
- tasks approached with more confidence,
- enhanced time on task,
- promotes friendship,
- students develop communication and interpersonal skills,
- decreases feeling of isolation.

The presentation continued with two quotes the first being “You can learn more by getting things wrong than you can by getting things right” and secondly “it is not stupid to get things wrong, it is only stupid if you do not learn from your mistakes”. He then defined the difference between Team work versus Group work. Team work is when a task is divided by individuals and each person deals with their section exploring their strong points whereas in group work it involves the groups working together on a task to improve individuals’ weak aspects. Problems always arise when working in groups.

Some individuals may be described as “hitchhikers” (voice their opinions but do very little), “lurkers” (have little to contribute but will do what they are instructed to do), “know it alls” and “aggressive individuals”, which are self explanatory. Other problems that arise are poor communication, lack of ambition and assessment. Assessment must be focussed on learning outcomes and should drive learning.

Factors to consider in group work were;

(a) size of group, (b) selection of groups and (c) clear group goals and accountability. The size of the group is often dictated by the size of the task and the resources available. The selection of the group should be done randomly as students will always want to work with friends and this will reflect the workplace in which you cannot choose who you work with. Nevertheless each group member should know their task under group goal. Lectures are not the best medium to support group work. ‘Buzz groups’ in lecture breaks creating discussion are much more effective along with laboratory work, tutorials, case studies and role play.

At this point Dr Byers handed over to Dr Overton to facilitate a group work session on managing group difficulties, tutor mediation and the summer school delegates were split into groups. ‘Advantages of developing communication skills within higher education’ was the chosen topic to be discussed through role play in which a tutor, observer, deferential student, enthusiastic student, silent student and overbearing student were assigned per group. The resulting feedback highlighted that the non-responsive students were the most difficult to deal with. The subject matter for discussion would also play a large role in group dynamics.

Dr Byers then circulated a case study which described an accident in a laboratory. The groups were assigned their role as an individual involved in the accident and after discussion a dice was rolled to decide which group would present their angle first and the second role of the dice decided which member of the group would present on behalf of the group to ensure all group members were kept equally engaged.

Dr Overton then gave each person a number and asked them to form groups of the same number. Again a case study on CFC’s as refrigerants was circulated and the four groups reported as ‘the CFC production company’, ‘Greenpeace’, ‘the fridge production company’ and ‘the EU commission’. Problems to be addressed were the disposal of old fridges, the cost of solutions and who should pay for this. As can be imagined a heated discussion ensued.

The presentation concluded with Dr Byers stating that teaching and learning should not be just focussed on group work, that alternate methods to approach better learning should be investigated. A metaphor was used to then describe the success of alternate methods of learning and teaching ‘A golf swing can be 90% right and still be rubbish – it only needs small things to go wrong to make it rubbish’.