

Group projects

Some issues:

What are the purposes of group projects ?

aims and objectives.

How can we manage group projects ?

structures and processes.

How do we assess group projects ?

History of running group projects in Computer Science:

started in 1986,

currently involves two first year courses (including complete software design project);

major second year course (Software hut - building software for real clients);

major 4th year course (student software company - building software for real clients);

major MSc course (Maxi - building software for real clients).

HEFCE Fund for the Development of Teaching and Learning grant on group projects.

Various publications and conferences on running group projects in computer science.

Why group projects?

to help students to develop their teamwork and personal skills;

because it's important for student employment;

to enable more complex projects to be attempted;

to give students more responsibility for progressing some aspect of their studies;

to provide staff with an alternative and possibly more interesting teaching context;

to give students a different sort of challenge.

.....

Some problems with group projects -

unpopular with many students;

difficult to manage by both students and academics;

groups can collapse;

how are groups chosen ?

there are special training needs;

facilities are not always ideal (eg. meeting rooms, labs etc.);

problems with assessment;

some group work is of poor quality.

Our experience:

group work must be a central part of the curriculum - not an add on;

the objectives for the group project should be clear and achievable;

staff must monitor all groups regularly;

there is an initial training need for students;

simple organisational problems can prove disastrous;

a clear structure and process should be established;

students should minute meetings;

all students should experience leadership roles;

some students will find it hard and will need some support.

Team roles - a good group needs members with skills such as :

leadership and planning;

documentation and archiving;

organisational;

problem solving;

technical knowledge;

presentational;

time and resource management;

arguing and agreeing;

listening and hearing;

etc.

Some practical advice:

setting up groups - for year 1 and MSc it has to be done by staff;

for other years let them choose their own groups -

subject to advice about the types of skills required for a successful group.

meet each group at least once a week;

record who is not very active;

impose a quality strategy -

make the group review their deliverables such as reports, designs etc.

introduce quality check lists

very important if there is a real client.

Having a real client transforms the entire experience;

students take much more pride in their work;

it encourages a professional approach;

students benefit from talking to the clients;

clients benefit from talking to the students;

staff benefit from talking with the clients;

technology transfer happens!

Assessment:

assessing the whole group;

assessing individuals.

Using the products of the project, marking reports, designs, presentations.

Using the processes of the project, marking the engineering approach, methodology used, the management and planning data, minutes of meetings, client feedback etc.

If leadership is also being assessed then allow a proportion of marks for marking how each person's period as group leader went.

We mark on the basis of group deliverables etc. moderated by observation and interviews with the groups during the project.

Some require each group member to produce an individual report and use this to generate an individual mark.

Problems of failure due to group collapse:

use of “back up” exam for emergencies.