

## British psychology students' perceptions of group-work and peer assessment

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*This paper reports on part of an Action Research project into students' perceptions of group-work and peer assessment which was carried out by the author to meet part of the requirements for her postgraduate teaching certificate in Higher Education. One-hundred-and-fifty-six first-year psychology students were asked to complete questionnaires regarding their attitudes towards participating in group-work and peer assessment both before and after participating in a small group project. By asking the students to provide written comments qualitative measures were also collected. The results regarding group-work showed that in general the students were favourably disposed towards participating in group-work. However, there were concerns expressed regarding inequalities in workload distribution and in whether students learned more by working independently. The results regarding peer assessment showed that following participation the students were much more positive although concerns existed regarding the possibility of bias and lack of training. The implications for group projects and peer assessment on Higher Education courses are discussed.*

### INTRODUCTION

#### Perceived benefits of group-work

The use of group-work assessed by some form of peer assessment is increasingly being incorporated into the teaching strategies used by educators in the Higher Education sector (for examples see Boud, Cohen and Sampson, 1999; Gatfield, 1999; Lopez-Reak and Yin-Ping, 1999). Whilst the two are often used simultaneously they can be used independently, in that group-work can be used as a vehicle for learning, with the learning assessed by more traditional methods and peer assessment can be used to assess individual presentations, written work and in tests (Topping 1998). According to Mello (1993), the main benefits derived from group-work are: (i) group-work allows the instructor to develop more comprehensive assignments; (ii) the students gain an insight into group dynamics and processes; (iii) the students develop their interpersonal skills; (iv) the students are exposed to the viewpoints of other group members; and (v) the students are further prepared for the 'real world'. In addition, from a more psychological viewpoint, research stemming from the theories of Piaget (1932) and Vygotsky (1978) has shown that working with others can result in cognitive gains (for examples see Littleton and Light, 1999); Foot and Howe, 1998; Howe, Tolmie, Anderson and McKenzie, 1992). This has been shown to be especially the case where the disparity between the partners' viewpoints force them "to make explicit the basis of their ideas, so that their respective qualities to be assessed" (Tolmie and Boyle, 2000, p.120). However, too much disparity can lead to unproductive dialogue and reduced learning (Kruger, 1992, Mugny and Doise 1978).

#### Perceived benefits of peer assessment

The main benefits attributed to peer assessment are: (i) peer assessment is a fairer method for assessing group-work than tutor-assessment as the students often have a greater knowledge of the contributions made by their fellow group members (Davis and Inamdar, 1988; Boud, 1986; Falchikov, 1986; Kane and Lawler, 1978); (ii) peer assessment increases the students' responsibility and autonomy and allows for the development of both personal and interpersonal skills (Falchikov, 1986); (iii) prior knowledge of the assessment procedure can lead to greater clarity concerning what constitutes high-quality work, this is especially the case when concrete examples of assessed work are provided (Topping, 1998); (iv) the knowledge that one is to be assessed by one's peers makes students work harder (Abson, 1994); (v) peer assessment can be used as a means for cutting down on the time lecturers spend marking and allows feedback to be provided in greater quantity and more efficiently (Topping, 1998; Searby and Ewers, 1997).

#### Perceived concerns regarding the use of group-work and peer assessment techniques

A number of concerns have been raised regarding the use of group-work as a teaching method: (i) interpersonal conflict within the group may cause the group to be unable to complete the set task (Mello, 1993); (ii) some group members may not do their share of the work (referred to as 'freeloaders' by Daly and Worrel, 1993), but still reap the benefits due to other members of the group having contributed more than their fair share (Mello, 1993); (iii) group-work can reduce, rather than increase, the expenditure of mental effort in ways that debilitate learning, for example through loafing behaviour and effort-avoidance (Salomon and Globerson, 1989); (iv) some

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students have been found to display negative reactions to group learning experiences, especially when they believe the tutor had poor group skills or did not help the group (Colbeck, Campbell and Bjorklund, 2000; Feichtner and Davis, 1984-85). Concerns regarding the effectiveness of peer assessment techniques or even the possibility of them harming individual students have also been raised: (i) several studies have concluded that peer marks are too unreliable to be given significant weighting in final assessment (Boud, 1986; Swanson, Case and Van der Vleuten, 1991), although it is not clear whether peer marks are any less reliable than those given by tutors (Falchikov and Magin, 1997); (ii) Students have been reported as disliking being given the responsibility for awarding marks to their peers (Burnett and Cavaye 1980; Cheng and Warren 1997); (iii) Lopez-Real and Chan (1999) reported an Insider/Outsider distinction with group members being very protective and generous towards their own group but highly suspicious and mean towards other groups, thus threatening the reliability of some forms of peer assessment; (iv) Falchikov and Magin (1997) raised the possibility of gender bias, although the two case studies they reported failed to find any support; (v) Abson (1994), also reported evidence that suggested that peer assessment could be used as a means of legitimising prejudice and discriminatory practices against individual students.

#### **Previous research into students' perceptions of group-work and peer assessment techniques**

There have been very few published papers to date that have reported on students' perceptions of group-work. One recent exception has been a paper by Colbeck *et al.* (2000) who reported that prior influences such as the amount of instruction that the students received and the degree of group-work experience that they had previously undertaken affected the amount of interdependency constructed between the group members. This in turn was related to the degree of importance with which students perceived group-work participation as a means of aiding the development of career-related skills. A related study that looked at students' perceptions of using peer assessment to assess group-work was reported by Gatfield (1999). Gatfield reported that whilst age and gender were not found to be related to the degree of satisfaction expressed by the students, previous work experience and home (Australia) or overseas status were found to have an effect, with overseas students and those with less work experience expressing a greater level of satisfaction. Gatfield proposed that the differences between the satisfaction levels expressed by the home and overseas students may be related to cultural differences in the students' country of origin. Research which has examined the collectivist/individualist nature of cultures has shown that students from collectivist cultures, for example Japan, China and Korea, value goals and interests related to the cultural group, whilst students from individualistic cultures, for example America and Britain, orient towards personal aspirations (for more detail see Milhouse, 1996).

Other studies that have reported on students' perceptions of peer assessment techniques include those of Burnett and Cavaye (1980), who reported on 175 medical students in Australia; Williams (1992), who reported on 99 first-year BA Business Studies students studying at the Polytechnic of Wales; and Cheng and Warren (1997), who reported on 52 first-year electrical engineering students studying English as a second language in Hong Kong. Similar findings were reported, in that although the students in general were favourably disposed to participating in peer assessment and felt that they had personally made a fair and responsible assessment of their peers, many of them did not feel comfortable about carrying out the assessment. Cheng and Warren's (1997) study differed from the earlier studies in that they used pre- as well as post-questionnaires thus allowing them to identify students who showed a shift in attitude. By later interviewing the students who had shown a shift, Cheng and Warren were able to identify a number of reasons to account for these shifts. These included: (i) the students not feeling qualified to award marks; (ii) doubts regarding their own and others' subjectivity when awarding marks; (iii) lack of training; and, too much responsibility being placed upon them (50% of the marks were awarded by the student and 50% by the tutor).

#### **The aims of the present study**

The present study had two aims. The first was to identify the perceptions of group-work and peer assessment held by students studying psychology in a British university. The second was to recommend how the group project undertaken by the students should be amended to accommodate the needs identified by the research. Copies of the full action research report are available from the author upon request.

#### **THE ASTON-BASED GROUP PROJECT**

At Aston University, Birmingham, first-year undergraduates taking a 12-week introductory course on Perspectives in Psychology were required to participate in a small group exercise which required them to work together in small groups to produce a 2,000-word report and a 20-minute oral presentation on a subject related to psychological perspectives. Peer assessment formed 20% of the overall assessment with group members being required to assess each other on the four dimensions of teamwork, communication, leadership/organisation/innovation and hard work and production. A second assessment was carried out by the group tutor who awarded the same grade to all the group members for the content, argument, evidence, structure and presentation of their joint work (full details available from the author upon request). The Aston-based project was chosen by the author as it was an established course that has been running for a number of years. Although the course tutors believed that the students enjoyed the opportunity to work in groups and that the course provided social as well as academic benefits for the students, the students' perceptions of

group-work and peer assessment had not previously been assessed.

### The questionnaires

The decision was taken to follow Cheng and Warren's example by using both pre- and post-questionnaires but to amend the design of the questionnaire to allow the students to write a comment following each rating. The reason for this amendment was to try and ensure that the comments were related to how the student was feeling at the time that they made their rating, rather than at some later time when they possibly could not remember and so might provide stereotypical replies. An additional benefit of collecting the data in this way was that all the participants were invited to respond rather than just those who had shown a shift in attitude.

The pre- and post-questionnaires were identical except that in the pre-condition the questions were couched in the present tense, whilst in the post-condition the past tense was used (questions shown in results section). The pre-questionnaire also contained a further section assessing the collectivist/individualist orientation of the students (these results are reported elsewhere). The questions in the first section related to the students' attitudes towards group-work (questions devised by author), whilst the questions in the second section related to their attitudes towards peer assessment (questions based on questionnaire used by Cheng and Warren, 1997, which was an amended version of Burnett and Cavaye, 1980). All responses were given on a 5-point Likert scale anchored with 1 for "agree very much" through to 5 for "disagree very much." Sufficient space (enough for a couple of sentences) was provided at the end of each question for the respondent to add a written comment if they wished. The questionnaires were labelled with each student's personal course number to enable the student's pre- and post-responses to be paired together. Although each scale consisted of only four questions, it was felt that this was sufficient for the current purpose, as at this stage the research was mainly exploratory with the intention of developing it further at a later date.

### Participants

The participants were 153 first-year undergraduates enrolled on courses that included an element of psychology. Forty of the participants were omitted from the analysis due to them not returning both questionnaires. Of the 113 students whose questionnaires were analysed, 91 were aged under 21 years, 17 between 21 and 34 years and five over 35 years. Twenty were males, 93 were females.

### Procedure

On week five of the Perspectives course the students were randomly assigned into small groups of approximately ten by the course leader. Each student was provided with a handbook that outlined the advantages of group-work and gave a step-by-step guide of the stages of successful group-work, as well as details regarding the peer assessment exercise

(copy of handbook available from author). In week six under the guidance of their individual group tutor the group members chose a topic that was related to psychological enquiry, for example, "Do working parents affect their children's development?" The group then subdivided into two groups of five, one arguing for and one arguing against, their chosen topic. It was explained to the students that they would have total responsibility for the organization and running of their own groups but that they could request additional guidance from their tutor if required. At this point the students were asked to complete the pre-questionnaire. In the final session, after giving their group presentations and completing the peer assessment forms (copy available from author), the students were asked to complete the post-questionnaire. The following day, the written reports that formed the second part of the course assessment were handed into the psychology office and marked by the course tutor.

## RESULTS

### Quantitative results

The ratings for the four questions that made up the group-work scale and the four questions that made up the peer assessment scale were summed. Significant correlations were found in both conditions between the overall ratings for the two scales (pre-condition  $r_s(113) = 0.32$ ;  $p < 0.001$ , post condition  $r_s(113) = 0.24$ ;  $p < 0.05$ ), suggesting that in both the pre- and post-condition students who felt positive towards group-work also felt positive towards peer assessment and *vice versa*<sup>1</sup>.

**Table 1**

Frequencies for ratings to group-work questions

Ques	Rating					Total
	1	2	3	4	5	
1	20 (30)	67 (56)	18 (15)	6 (10)	2 (2)	113 (113)
2	13 (22)	69 (50)	27 (29)	4 (8)	0 (4)	113 (113)
3	14 (67)	58 (26)	27 (11)	11 (6)	3 (3)	113 (113)
4	20 (30)	53 (33)	32 (24)	7 (19)	1 (7)	113 (113)
Total	67 (149)	247 (165)	104 (79)	28 (43)	6 (16)	452 (452)

Post-condition shown in brackets

1=agree very much, 2=agree, 3=not sure, 4=disagree, 5=disagree very much

<sup>1</sup> Due to space limitations no further details regarding the individual shifts between conditions are reported. However, this information is available from the author upon request.

**Table 2**

Measures of central tendency and standard deviations for group-work ratings

Group-work scale questions	Median	Mean	SD
1] I think that a group project is a good idea	2 (2)	2.14 (2.10)	0.83 (0.95)
2] I think that I will enjoy taking part in group work	2 (2)	2.19 (2.31)	0.68 (0.98)
3] I think that all members of the group will be given an equal opportunity to contribute	2 (1)**	2.39 (1.69)	0.92 (1.03)
4] I think that I will learn more about the subject matter working in a group than I would if I worked by myself	2 (2)	2.26 (2.47)	0.85 (1.23)

Post-condition shown in brackets

1=agree very much, 2=agree, 3=not sure, 4=disagree, 5=disagree very much

Significance level \*p&lt;0.005, 2-tailed; \*\*p&lt;0.0005, 2 tailed.

**Rating for group-work questions**

As shown in Table 1, for each question on the group-work scale in both conditions there were more positive than negative ratings. As shown in Table 2, for questions 1, 2 and 4, the medians remained constant at 2 indicating that in both conditions the students in general agreed that a group project was a good idea, that they enjoyed taking part in group-work and that they learnt more about the subject matter by working in a group than working independently. However, the median for question 3 changed from 2 to 1 indicating that following participation the students were in even greater agreement that all the group members had been given an equal opportunity to contribute. These results were further supported by the application of Wilcoxon matched pairs signed rank tests which reported a highly significant difference between the scores in the pre-and post-condition for questions 3 but not for the other questions.

**Ratings for peer assessment questions**

As shown in Table 3, in both conditions a number of the students were unsure regarding their feelings towards the peer assessment questions. However, as shown in Table 4, in the post-condition there was a change in the medians for questions 1 and 2 indicating that following participation the students felt more positive towards assessing their peers and assigning them grades. The median for question 3, however, remained constant at 3 suggesting that in both conditions the students either disagreed or were not sure about whether they felt comfortable with making peer assessments. The median for question 4 remained constant at 2. However, the mean (also shown in Table 4) showed that following participation the students felt more positive regarding their ability to make a fair and responsible assessment of their peers. The results were supported by the application of Wilcoxon matched pairs signed rank tests with significant differences being reported for questions 1, 2 and 4 but not for question 3.

**Table 3**

Frequencies for ratings to peer assessment questions

Ques	Rating					Total
	1	2	3	4	5	
1	14 (41)	37 (29)	38 (21)	19 (11)	5 (11)	113 (113)
2	6 (33)	41 (47)	46 (24)	18 (5)	2 (4)	113 (113)
3	8 (18)	23 (29)	45 (29)	29 (24)	8 (13)	113 (113)
4	20 (52)	56 (44)	30 (10)	6 (5)	1 (2)	113 (113)
Total	48 (144)	157 (149)	159 (84)	72 (45)	16 (30)	452 (452)

Post-condition shown in brackets

1= agree very much, 2= agree, 3= not sure, 4= disagree, 5= disagree very much

**Qualitative results**

The written comments to each question on the group-work and peer assessments scales were categorised as either 'agreements' or 'concerns'. The frequencies and percentages for the group-work scale are shown in Table 5 and for the peer assessment scale in Table 6. The category classification for the written response did not always mirror the rating for the same question. For example, one student gave a high rating to question 1 showing that she agreed very strongly with the statement "I think that a group project is a good idea". However, in the written comments she added the concern, "As long as the rest of the group are well motivated!". Nearly all of the students (88%) provided at least one written comment. However, no student in both conditions provided written comments to every

**Table 4**

Measures of central tendency and standard deviations for peer assessment ratings.

Peer assessment scale	Median	Mean	SD
1] I think that students should take part in assessing their peers	3 (2)*	2.68 (2.31)	1.04 (1.32)
2] I think that first-year students will be able to assign grades to their peers in a responsible manner	3 (2)**	2.73 (2.12)	0.86 (1.00)
3] I think that I will feel comfortable when making peer assessments.	3 (3)	3.05 (2.87)	1.02 (1.25)
4] I think that I will make a fair and responsible assessment of my peers	2 (2)**	2.22 (1.77)	0.83 (0.92)

Post-condition scores shown in brackets.

1= agree very much, 2= agree, 3= not sure, 4= disagree, 5= disagree very much

Significance level \*p&lt;0.005, 2-tailed; \*\*p&lt;0.0005, two-tailed.

**Table 5**

Frequencies and percentages per category for the written responses to the group-work questions

Group Scale	Pre-condition		Post-condition	
	Agreements	Concerns	Agreements	Concerns
Q1	39 (71%)	16 (29%)	27 (53%)	24 (47%)
Q2	13 (45%)	16 (55%)	10 (37%)	17 (63%)
Q3	5 (19%)	22 (81%)	5 (20%)	20 (80%)
Q4	31 (77.5%)	9 (22.5%)	15 (65%)	8 (35%)
Total	88 (58%)	63 (42%)	57 (45%)	69 (55%)

Percentages shown in brackets

question. Comments were attached to negative as well as positive ratings, with students who gave highly negative or positive ratings providing no comments, whilst others who gave similar ratings providing multiple comments<sup>2</sup>.

### Written responses to the group-work questions

#### *Question 1 - I think that a group project is a good idea*

The agreements in the pre- and post- condition referred to both the development of essential key skills which would be needed later on in the course and in the world of work, as well as to more social gains, such as the opportunity to make new friends, helping each other in the learning process and the potential for sharing the workload. The concerns in the pre-condition included references to previous bad experiences of group-work and showed a mistrust in the commitment level of fellow students. In the post-condition they related to fairness, with the feeling that the marking scheme did not take into account the fact that some group members did more work than others. In the post-condition there was also a number of concerns relating to more domestic issues. These included the problem for students on different courses to find a mutually appropriate meeting time, the fact that the presentation and hand-in date had coincided with the exam period and the fact that group-work took up a lot of time.

#### *Question 2 - I think that I will enjoy taking part in group work.*

The agreements in the pre-condition were similar to those given to question 1, whilst in the post-condition they confirmed that the respondent had found the group project an enjoyable experience. The concerns in both conditions expressed doubts regarding the commitment level of fellow group members.

#### *Question 3 - I think that all members of the group will be given an equal opportunity to contribute.*

The agreements in the pre-condition mainly confirmed the necessity for equal contributions to be made, whilst in the post-condition they emphasised the successfulness of the respondent's particular group in allowing members to make equal contributions. The main concern expressed in the pre-condition was that group members with more dominant personalities would take over, making it difficult for shy members to make an equal contribution. However, in the post-condition the concerns indicated that it was not so much that members were not given an equal opportunity to contribute but that some group members were unwilling to make an equal contribution.

#### *Question 4 - I think that I will learn more about the subject matter working in a group than I would if I worked by myself*

The agreements in both conditions indicated that some of the students were aware that working with others could be of benefit academically. The concerns indicated that the respondents thought they would have learnt more by working independently.

### Written responses to the group-work questions

#### *Question 1 - I think that students should take part in assessing their peers*

The agreements in the pre-condition emphasised how peer assessment was a "fair" means of assessment and a good way of making "people pull their weight". In the post-condition, they either referred to the personal benefits for the students of using this form of assessment and reaffirmed the belief that peer assessment was a fairer means of assessing group-work than having the tutor award the grades. In both conditions, the concerns were with lack of experience and the possibility of bias.

**Table 6**

Frequencies and percentages per category for the written responses to the peer assessment questions

Peer assess. questions	Pre-condition		Post-condition	
	Agreements	Concerns	Agreements	Concerns
Q1	9 (26%)	25 (74%)	19 (54%)	16 (46%)
Q2	0 (0%)	21 (100%)	3 (25%)	9 (75%)
Q3	1 (9%)	10 (91%)	5 (26%)	14 (74%)
Q4	6 (38%)	10 (62%)	3 (43%)	4 (57%)
Total	16 (20%)	66 (80%)	30 (41%)	43 (59%)

Percentages shown in brackets

<sup>2</sup> Copies of the individual written responses are available from the author upon request.

*Question 2 - I think that first-year students will be able to assign grades to their peers in a responsible manner*

The agreements confirmed that students were able to assign grades responsibly. The concerns were related to the possibility of bias and/or the students' lack of experience in assessing their peers.

*Question 3 - I think that I will feel comfortable when making peer assessments*

The benefits were justifications for why the respondents felt comfortable when making their peer assessments. The concerns in the pre-condition were related to the students' lack of experience, the possibility of bias and the need for marks to be made anonymously. In the post-condition they were related to the issue of confidentiality and the difficulties experienced when being forced to judge friends.

*Question 4 - I think that I will make a fair and responsible assessment of my peers*

The agreements in the pre-condition expressed a willingness to try and be fair, whilst in the post-condition they confirmed that the respondent had tried to be fair. In both conditions the concerns reflected how difficult it was to be fair, especially when assessing friends.

## DISCUSSION

The quantitative results showed that in both the pre-condition and post-condition the students in general had a positive attitude towards group-work. With peer assessment, probably because many of them had had no previous experience, there was a lot more uncertainty expressed. However, once the students had carried out the peer assessment exercise they were a lot more positive about the possible benefits, although, as previous studies have reported (Cheng and Warren, 1997; Burnett and Cavaye, 1980), many of them still felt uncomfortable about assessing one another. In relation to the qualitative responses, there were far more written responses to the group-work scale than to the peer assessment scale. The reason for this could have been due to the fact that the scales had not been counterbalanced, causing the group-work scale to always be presented first. Alternatively, it could have been due to the lack of familiarity with peer assessment, a concern expressed by many of the students.

### Differences in focus: self versus others

The written responses to question 1 and 2 on the group-work scale identified a number of factors that might have accounted for why some students were more positive towards group-work and peer assessment, whilst others were more negative. One of the main differences related to how students perceived the exercise. Whilst some students saw it as relating to themselves, either in terms of the development of work-based skills or social needs, others were more concerned about the other members of the group, as in whether "they would pull their weight". This difference in perspective between the positive benefits

that group-work can offer the individual and the negative expectations regarding the behaviour of others was a recurring theme and is very similar to the benefits and concerns regarding group-work previously identified by Mello (1993). One of the possible reasons for why some students felt more negative towards group-work than others relates to the quality of the students' previous experience of group-work. A number of students mentioned that they had had particularly negative experiences in the past and it is understandable that this would cause them to be more negative towards group-work than students who had previously had only positive experiences. A tutor-led discussion at the start of the exercise where students who had had positive, as well as negative, experiences were invited to talk about them may have helped the students to gain an insight into some of the problems related to group-work and to develop strategies that helped them to avoid these pitfalls.

### Equal opportunities

In the pre-condition very few of the respondents strongly agreed with the statement that suggested that every member of the group would be given an equal opportunity to contribute, whereas in the post-condition over 50 % of the respondents strongly agreed. The analysis of the written statements showed that whilst in the pre-condition the concern was that more dominant members would restrict the opportunities of less dominant members, in the post-condition the emphasis was on justifying the fact that all members had been given an equal opportunity but that some had decided not to take the opportunity. This suggests that in most cases the students who completed the exercise did not feel that their opportunities to contribute had been restricted by others. In order to substantiate this claim, further research is required which rather than asking students to generalise about the experiences of the other group members asks them specifically about their own individual experiences.

### Working as a group versus group-work

In general the students agreed with question 4, which asked if the respondent believed they would learn more by working in a group rather than working alone. However, in the post condition there were more students who disagreed with this statement than with any other statement on the group-work scale. For students who have not had a great deal of experience of group-work working as a group can be a major problem (see Campbell and Ryder, 1989, for a good discussion on the difference between working as a group and working in a group). To be successful, group members need to be aware of the difference between co-operative and collaborative methods of learning (see Foot and Howe, 1998). In co-operative learning, students work in groups towards the attainment of some superordinate goal. Each member of the group has responsibility for a different subgoal and carries their work out independently, only going back to the group at the end to produce the final product. In collaborative learning, group members work together and acquire knowledge through their struggle to maintain equilibrium, a process involving

the reconciliation of conflict between new and previously owned beliefs (Foot and Howe, 1998). For exercises such as the one ran at Aston, where the focus is on the final product and the groups are quite large, the co-operative style is more feasible and also more representative of the practices that take place in the workplace. However, students need to be made aware of the differences between co-operative and collaborative methods of learning and the need to use a combination of the two by carrying out the task co-operatively but ensuring that enough time is allocated for the collaborative activities of feedback and discussion.

### **Comparing the peer assessment comments in this study with previous studies**

The positive comments, described in the Results section as agreements, were similar to those of previous studies in that peer assessment was seen as a fairer means of assessing group-work than having the tutor award the grades (Boud, 1986; Davis and Inamdar, 1988; Falchikov, 1986; Kane and Lawler, 1978) and a good way of making "people pull their weight" (Abson, 1994). Concerns were also similar to those reported in previous studies (Cheng and Warren, 1997) in that; (i) some of the students felt unqualified and that it was not their position to assess their peers, (ii) personal objectivity as well as the objectivity of others was questioned, especially in relation to the assessment of friends, and (iii) lack of training and prior experience was seen as problematic. However, in the present study there was also a concern with confidentiality, illustrating how important it is for course designers to ensure that students are not placed in a position where they are forced to give 'good' peer assessment grades in order to save face (a similar concern is discussed by Cheng and Warren, 1997, p.238)

### **The possibility of peer assessment being used to legitimise discrimination practices**

The written responses in this study did not suggest that any student felt that they had been victimised or penalised by any other group member (Abson 1994). However, this could be due to the facts that the marks were confidential, and at the time that the students completed the questionnaires their grades had not been determined. Alternatively, it could be due to the fact that any students who had felt victimised had already dropped out, so had not returned their questionnaires and therefore had been excluded from the study. As prejudice is a serious matter, further research is required that looks at the reasons for why some group members are consistently awarded lower marks than the rest of the group and why some group members drop out of the group.

### **Paradox between group-work and peer assessment techniques**

The responses to both the pre and post peer assessment scales showed that a lot of the students were unsure regarding how they felt towards peer assessment. In the pre-condition this was not unexpected, as a lot of the students had not had any

prior experience of peer assessment techniques so were uncertain of what to expect. In the post-condition, however, this was unexpected and suggested that even after having the experience of participating in peer assessment there was still a high degree of uncertainty. A possible reason why some students may have found it difficult to determine their feelings towards peer assessment was pointed out by a male student who objected to the whole concept of peer assessment. The student argued that "you put us together and expect us to form friendships and then when we do and we're all getting along great, you expect us to judge each other." In this way the practice of using peer assessment to assess group-work can be seen as paradoxical, in that it creates disharmony in the normal processes that groups go through in their construction and maintenance as each member is aware that they have to undergo mutual assessment. This is an issue that has been discussed in detail by Boud *et al.* (1999) in relation to assessing peer learning. One of the possible solutions that Boud *et al.* offer is the use of negotiated assessment using learning contracts and a combination of self- and peer assessment. Another possibility would be to use a formative form of assessment where the group members provide feedback at regular intervals (Topping, Smith, Swanson and Elliot, 2000). Both the negotiated and the formative forms of peer assessment are aimed at students supporting, rather than making, judgements about each other.

### **Limitations with the study design**

The aims of the study were met in that the students' perceptions of group-work and peer assessment were recorded, analysed and discussed and recommendations were made regarding changes to the present course. However, there were limitations with the design of the present study. The first limitation concerns the written comments. Whilst the majority of the students provided at least one comment, very few provided more than six or seven, although sixteen were possible. In many cases the comments were quite general and not directly related to the statement that had just been rated. For example, in the post condition a female student gave question 1 on the group scale a high positive rating indicating that she strongly agreed that the group project was a good idea. In her comment she wrote "Good for practice, but difficulties linked with working with a group - makes it hard to assess." She then provided no further comments to the group-work questions but gave positive ratings to questions 2 and 4 and a negative rating to question 3. On the peer assessment scale she gave a high positive rating to question 1 and added the concern "But difficult to do." Thus confirming her previous comment regarding difficulties with assessment. She provided no further comments, but gave high positive ratings to questions 2 and 4 and a 3 to question 3. The problem with this student's response is that her written comments indicate that she has some concerns, but the nature of these concerns is not made clear. A more structured approach to the written section where the respondent is forced to select from a number of options may

provide a clearer picture. The second limitation concerns the context in which peer assessment was used. Different results may have been obtained if the students had been required to assess academic output (that is, the group presentations and essays) rather than factors relating to the group-work process. Further research is required which examines whether students' perceptions of peer assessment differ depending on the context in which it is being used.

#### The main recommendation from this study

The main recommendation from this study is that educators in Higher Education need to be aware of the students' perspective regarding their teaching methods and to take these into consideration when designing or amending courses. As with previous studies (for example Cheng and Warren, 1997; Williams 1992), a lot of the concerns of the students were related to their own personal lack of knowledge and their previous negative experiences of group-work. Course designers and tutors need to be aware of the relative inexperience of their students in the use of group-work and peer assessment techniques. Although a greater number of Higher Education institutions are using these methods they are still quite innovative. As Williams (1992, p.55) concluded "students need guidance and training in new role behaviour before this [new behaviour] can be effective."

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*Manuscript received on 9 April 2001*

*Revision accepted for publication on 30 June 2001*