POSITIVE AND NEGATIVE IMPACTS OF GROUP WORK FROM THE STUDENT PERSPECTIVE

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This paper reports the results of a survey of law students by written questionnaire concerning the impact of group work on their perceptions of learning, attitudes towards peers and approaches to learning. The research is set in the context of previous studies of cooperative learning by Johnson, Sharan, Slavin and others. Positive impacts of learning in groups are reported by most respondents although some students' attitudes seem to have been negatively affected. A possible “moderating” effect on attitudes from working in groups is indicated. The results call attention to the need for a better understanding of how group based learning has a negative impact on some students and for further investigation of the question whether group work tends to “moderate” student attitudes and beliefs.

Introduction

Small group work amongst students at all levels is almost universally praised for its positive effects. Slavin’s conclusion is typical, to the effect that “The use of cooperative learning strategies results in improvements both in the achievement of students and in the quality of their interpersonal relationships” (Slavin, 1991, p 71). A recent volume written for Australian law teachers lists twelve distinct benefits which may flow from putting students together to work in groups (LeBrun and Johnstone, 1994, pp. 291-292).

The term “group work” encompasses a wide range of experiences extending from brief discussions in class by ad hoc “buzz groups” to complex problem-solving tasks or projects pursued by well-organised teams over lengthy periods of time. Extensive research has evaluated positively organised student interaction of these and a wide variety of other types (see Slavin, 1991, McKeachie, 1986, Kimber, 1996, Jaques, 1991, Leming, 1985, Sharan, 1990, Sharan and Shachar, 1988, Nastasi and Clements, 1991, Hertz-Lazarowitz and Miller, 1992, and Johnson, 1992). Although the group formats and teaching methods investigated in this body of research differ greatly, most studies share a common feature: student perceptions of, and reactions to, group learning processes are rarely explicitly questioned. In addition, most of these studies are of school children, not students in higher education settings.

Sharan and Shachar’s work (Sharan and Shachar, 1988) is a good example of the type of research design often used to investigate group work. They set out to examine the effect of cooperative learning on academic achievement and oral interaction, paying particular attention to the behaviour of majority and minority ethnic groups. To measure this in an experimental format they administered tests of academic achievement and videotaped school student group discussions for subsequent analysis. Based upon this evidence they concluded that “pupil cooperation during small group study predicts a significant degree of their performance on written tests of academic achievement” (Sharan and Shachar, 1988, p. viii).

Ramsden (1992) and others have urged teachers and researchers also to question students directly for valuable insight into their perceptions of educational environments and the influence those perceptions have on their learning. Collier (1985) has called for an action research approach to investigating group learning processes which would involve collaboration amongst investigators, practitioners and students. Thorley and Gregory (1994, p. 185) remark that “We now need, ... to become more inquisitive about the student experience on the courses we offer, including the group-work element.” Most of the research to date, however, has measured achievement and change in interpersonal relations in experimental settings rather than focussing on reports by students of their experiences of group work in natural teaching environments.

Research design and implementation

Approximately 120 law students were identified who had participated in group work as part of the course design in at least one of three subjects offered at the Murdoch University Law School. Some students in this category had taken two and some all three of these courses. In two of the courses student groups were required to prepare team projects; in one the project was assessed by the instructor and a single mark given, in the other the project was critiqued by another group but no mark was given. In the third subject groups were required to prepare for intergroup exercises in which only two members of each team would participate. Performance of these students was individually assessed by other students in the class.

The researchers prepared a written questionnaire which was distributed to all of these students in classes for completion on their own time. A box for deposit of the completed questionnaires was provided in the law school. Each copy of the questionnaire had a “cover sheet” attached on which students were requested to place their name and deposit in a separate box to indicate they had responded. This procedure allowed for personal follow-up with non-responders.

The survey instrument was designed to allow students to express their attitudes and beliefs in relation to doing group work and their views as to how the experience of group work had affected them as learners. Most questions took the form of Likert-type items providing for a range of answers from poles of “strongly agree” to “strongly disagree”, or similar scales. One section asked the students to recall their attitudes and levels of skills before doing group work in the law subjects and then to report any change in them. Another section investigated the extent to which students agreed with a range of goals teachers might have for setting group work. Students were also asked what they found most helpful as support in doing group work, and what impact they thought group work had on their learning and their grades. A number of open-ended questions were also included, for instance inviting students to express their “general feelings” about group work. (The survey instrument may be found on the world wide web using the url http://carmen.murdoch.edu.au/~zariski/grpsur.html)

Responses were analysed using SPSS and correlations investigated. Since the sample obtained was not probability-based no tests of significance will be reported.

Results

Following up with non-responders resulted in 85 out of the possible 120 students completing the questionnaire. Most responders also answered the open-ended questions.

Several positive impacts of group work which are in line with previous studies were reported by majorities of students. In response to the statement “Having completed group projects, I feel I am more cooperative in my approach” 78% of responders agreed or strongly agreed and 92% disagreed or strongly disagreed with its contrary, that they became more competitive. In reaction to the statement that they were more “confident with people” after doing group work 72% of responders agreed or strongly agreed. Students were also presented with the statement that group projects enabled them “to use skills which individual assessments do not” and 87% of responders agreed or strongly agreed.

Two important aspects of the experience of working in groups are the possibility of conflict between members and perhaps related to this, the possibility of unequal contribution to group work. A strong majority of respondents to this survey (83%) disagreed when asked whether their experience was that “all group members contribute equally to the project”. Nevertheless, an almost equally strong majority (80%) denied that there had been significant conflict between students in their groups. This suggests perhaps suppressed feelings of frustration or anger when dealing with “free riders” which are not manifested in overt conflict but may be linked to other attitude changes noted below.

Many responders also reported an impact of group work on their attitudes towards their peers which the researchers believe to be positive. Students were asked whether, after doing group work, there was a change in their “level of appreciation of the value of other students in contributing towards [their] own learning” and 66% of respondents replied that it had increased. In response to a statement concerning change in their
“ability to learn from other students” 53% of those responding said it had increased. For a number of questions regarding changes in attitude toward peers, in level of skills, and in approach to learning the mode response was “not changed.”

The questionnaire gave students the opportunity to draw a distinction between the effect of group work on their grades and on their learning and many students chose to do so. When asked whether group work caused them to receive higher marks than they received on individual work 75% of respondents disagreed or strongly disagreed. On the other hand, when asked whether doing group work helped them to learn more than they would on an individual project 60% agreed or strongly agreed.

More troubling were the numbers reporting a decrease in what the researchers believed to be indicators of a positive learning environment. While 39% of respondents reported an increase in their level of trust towards other students after doing group work, 13% said the opposite and 48% replied “no change”. This variation was also reflected in responses to an item concerning their “level of respect for other students” where the results were: increased - 32%; decreased - 14%; and no change - 54%. Change in approach to learning was probed by presenting the statement “After doing group work, my desire to learn more about course content has...” in answer to which respondents said: increased - 25%; decreased - 13%; no change - 62%. Asked whether they felt “more responsible for [their] own learning” having completed group projects there was a significant split of responses with 59% saying they agreed or strongly agreed and the rest disagreeing or strongly disagreeing.

In order to get a clearer picture of changes in attitude which might be associated with doing group work an exploration of correlations between past states and subsequent changes was undertaken. Some interesting associations seem to be suggested by the data. Students were asked to report whether their feelings or beliefs were at a high, medium or low level before doing group work and then to indicate if there had been an increase, decrease or no change. Table 1 summarises the post group work change in students’ level of trust toward their peers in relation to their pre group work state. Table 2 does the same for desire to learn more than minimum required course content.

Table 1 Percent of students with changes in trust by pre-existing trust level*

<table>
<thead>
<tr>
<th></th>
<th>High pre-existing trust</th>
<th>Medium pre-existing trust</th>
<th>Low pre-existing trust</th>
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</thead>
<tbody>
<tr>
<td>Increased trust</td>
<td>0%</td>
<td>42%</td>
<td>57%</td>
</tr>
<tr>
<td>Decreased trust</td>
<td>60%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Number of cases</td>
<td>10</td>
<td>60</td>
<td>14</td>
</tr>
</tbody>
</table>

*(percentage of students with no change omitted)

Table 2 Percent of students with changes in approach to learning by pre-existing state*

<table>
<thead>
<tr>
<th></th>
<th>High pre-existing deep learning approach</th>
<th>Medium pre-existing deep learning approach</th>
<th>Low pre-existing deep learning approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased</td>
<td>8%</td>
<td>25%</td>
<td>45%</td>
</tr>
<tr>
<td>Decreased</td>
<td>36%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Number of cases</td>
<td>25</td>
<td>40</td>
<td>20</td>
</tr>
</tbody>
</table>

*(percentage of students with no change omitted)

The data collected in Tables 1 and 2 appear to suggest that students at either end of the spectrum of attitudes and beliefs may exhibit the greatest impact of engaging in group work.

Discussion

The results of this survey research seem to confirm the findings of previous studies that group work can have a positive impact on students in a variety of ways, but it also highlights the existence of negative impacts of group learning which should not be ignored.
Previous studies of school children in group learning situations have usually focussed on: achievement effects (Slavin, 1991) the differential reward structures of group processes (Slavin, 1980), the impact of group processes on acceptance of racial and other differences in peers (Johnson et al. 1978, Sharan, 1980) or changes in social relations amongst students (Slavin, 1991). Only a few of such studies have considered the nexus between student attitudes and learning (Johnson et al. 1976, Slavin, 1978). More recent studies of group work amongst college students have tended to emphasise the impact of group work on attitudes towards study and learning (Godden and LeBrun, 1994, Rau and Heyl, 1990, Scott, 1995). This survey continues the latter work by investigating student dispositions which have been associated with approaches to learning as described by Ramsden (1992, pp. 38-61). The item in this survey which has been labelled as indicative of a deep learning approach reflects one of the hallmarks of that approach listed by Ramsden (“I spend a lot of my free time finding out more about interesting topics which have been discussed in classes”: Biggs cited in Ramsden, 1992, p. 52). It may be suggested that greater exposure to the ideas of others in group work opens vistas of inquiry into the subject being studied as well as challenging students to engage in synthesis of conflicting ideas resulting in greater understanding. This effect may occur through a process of cognitive conflict amongst group members which is resolved through interaction (Nastasi and Clements, 1991). In order for the maximum advantage to be gained however, it may be necessary to form groups which do not include extremes of ability or prior knowledge as suggested by Nastasi and Clements (1991). Failure to do this may contribute to a decrease in deep learning approach experienced by some students as noted above.

The data on changes in trust and deep learning approach set out in Tables 1 and 2 suggest the existence of a kind of “moderating” impact of group work on pre-existing attitudes in which students at extreme poles are brought to a more central position. An early study of college student attitudes after experience of learning in “student-centred groups” may give some insight into such a phenomenon. Anderson and Kell (1954, p. 265) found some evidence to support the argument that student interaction tended “to facilitate changes in the direction of developing a common core of positive attitudes”. The positive attitudes they found included self-confidence, lack of anxiety about expressing ideas, evaluating ideas for oneself and willingness to change one’s ideas and desiring to participate without anxiety about doing so. The present survey results give some indication that strong positive attitudes may also be eroded as a result of group learning.

Rau and Heyl (1990, p. 151) reported that 67 of 101 students completing a course evaluation questionnaire listed some problems with group work but nevertheless concluded that “When one-third of the students volunteer that this classroom format [collaborative learning groups], which demands much of them, presents ‘no problems,’ they are giving strong approval indeed.” Scott (1995) found that many students were uncertain about whether group projects were superior to what they could produce individually and that they appreciated group work more for helping them learn to work together than for helping them learn to write. The present survey found a similar split amongst students regarding some impacts of group learning such as the response by 40% of the sample who indicated group work did not help them learn more. Rather than focus on the positive majority view expressed by students perhaps it is time to inquire further into the causes of complaint about group work and its failure to stimulate learning for some.

Godden and LeBrun’s (1994) study of law students who experienced group work as an integral part of their curriculum is probably the most comparable to the present research. Their survey however did not focus on many of the same variables as the present one such as indicators of approaches to learning or report any tests of correlation amongst the items they included. One of the questions Godden and LeBrun asked about the “learning process” in group work with reference to the range of factors (not limited to teaching method or style, but otherwise left unspecified) which students considered facilitated their learning. They found that on a five point scale from “extremely effective” to “not effective” the response mode was 3, or neutral, while more students indicated ineffectiveness than effectiveness. In answer to a question whether group work was useful “in providing a support network” 42% of respondents replied “no” or were “undecided”. These results, although not related to comparably worded items, appear to parallel the results of the present survey in illustrating that group work is not universally appreciated by students.

Conclusion

The survey reported here has a number of methodological weaknesses including absence of a control group, inclusion of several different group work formats within the study and lack of a measure of academic success or of extent of learning other than self-report. Nevertheless it serves to highlight the need for further research into the student experience of group work in tertiary education given our knowledge that student perceptions of the academic environment affect approaches to learning.
The results direct attention to the need for a better understanding of how learning in groups exerts a negative impact on some students and for further investigation of the question whether group work tends to "moderate" student attitudes and beliefs. In pursuing these lines of inquiry it may be fruitful to try to build on existing research into "pathologies" of group processes described in Veiga (1991).

References


