This paper reports the development of the Negative Group Work Experiences questionnaire (NGWE), an assessment tool for measuring negative experiences of group work. Study 1 involved two samples of undergraduate psychology students (second-year sample $n = 425$; first-year sample $n = 443$), who completed research modules incorporating substantial elements of assessed group work. Participants completed a 39-item inventory designed to measure their negative experiences of group work as part of their general module evaluation. Exploratory and confirmatory factor analysis of the second-year sample indicated four interpretable and reliable factors: lack of group commitment, group fractionation, task disorganisation, and storming. Confirmatory factor analysis of the first-year data set confirmed and cross-validated the factor structure of the second-year sample. Study 2 ($n > 254$) confirmed the criterion validity of the NGWE. The NGWE is proposed as a useful tool for evaluating group processes, especially in large group teaching which involves collaborative group work.

**Introduction**

Small group work is an effective and widely used teaching and learning method in higher education. Co-operative learning in small groups has educational and social benefits for students, and also has advantages in terms of sharing limited resources more effectively. Boud, Cohen, and Sampson (1999) and Gupta (2004), among others, point out the advantages of peer learning in achieving generic learning outcomes, including the development of team skills, communication skills, critical reflection skills, and self-directed learning skills—all of which combine into lifelong learning skills. Cartney and Rouse (2006) have argued that small group work may serve to improve the social and academic integration of students, and thus improve retention. It has also been suggested that team-based teaching and learning methods allow for increased complexity in the learning environment as well as in the tasks that can be assigned (Mello, 1993), thus increasing students’ preparedness for the complex environments they are expected to function in on completion of their degrees. Group work can also be seen to have advantages in terms of managing resources: teaching resources can be deployed more effectively when they are shared in groups, especially large groups. In this sense, student-led work in small groups may be a solution to the decline in small group teaching (Livingstone & Lynch, 2000).

However, despite all the potentially beneficial effects of collaborative learning in higher education, there is a persistent body of literature on negative perceptions of small group work. Many students and lecturers remain sceptical as to the value of group work. In recent years a small body of literature has examined students’ perceptions of collaborative learning (Gatfield, 1999;
Walker, 2001; White, Lloyd, Kennedy, & Stewart, 2005). Frequent objections to group work include the potential for conflict between group members, and the possibility of individual group members not doing their share of the work (Mello, 1993). Students frequently fear that assessed group work may negatively impact on their overall grades, whereas instructors tend to object on grounds of difficulty in managing the group process. There is evidence that instructors appear to get the blame if group work goes wrong, but little acknowledgement if it is successful (Feichtner & Davies, 1985).

Negative perceptions of group work appear to be mediated by cognitive and psychological factors such as metacognitive awareness and social anxiety (Cantwell & Andrews, 2002), and also by cultural factors (collectivist vs. individualist; Gatfield, 1999). Previous experience of working in groups, the amount of instruction (Colbeck, Campbell, & Bjorklund, 2000), the method of group assessment (Lejk, Wyvill, & Farrow, 1996), and the method of group formation (Daly & Worrell, 1993; Feichtner & Davis, 1985) all appear to play a role in how successful group work can be in generating positive learning experiences for students.

Livingstone and Lynch (2000) argue that the negative perceptions of group work voiced by students and academics may be due largely to what they call “myths” about group work relating to the tension between social learning and individualistic learning. However, Livingstone and Lynch (2000) also point out that poorly designed and executed group work assignments may serve to reinforce these myths. Whether they are real or just myths, a number of phenomena that could negatively impact on a group’s ability to perform to maximum benefit for all group members have been identified by previous authors.

Sources of problems in group work

Poor group work outcomes may be due to a variety of issues arising from the context of planned collaborative work. Tutors play a major role in designing group work and associated assessment, and while they clearly aim to minimise potential problems a number of potential pitfalls may remain even in well designed group projects. These are related to motivational, interactional, and logistical issues (Boud et al., 1999; Salomon & Globerson, 1989; Slavin, 1996) and include unmotivated or incompetent peers, group process deficiencies (e.g., lack of communication, bullying, or dysfunctional group interaction), and logistical problems such as managing workload (Feichtner & Davis, 1985).

Motivational difficulties. Motivational issues may arise when the group work task lacks a truly interactional focus. Although groups can succeed even if some group members fail to participate (fully) in the group task, conflict can arise if individual members fail to engage with the task. This has been referred to most commonly as “social loafing” (Karau & Williams, 1993), but also as “free-loading” (Daly & Worrell, 1993) or “free-riding” (Salomon & Globerson, 1989), and may arise when one or more students fail to contribute to the group effort because they assume the work will be done by more talented or more motivated group members.

An associated phenomenon is the “sucker” phenomenon (Salomon & Globerson, 1989), whereby one or two group members take on the responsibility for doing all of the group’s work, because other group members are either unwilling or unable to contribute. The reverse effect may manifest (avoidance of the sucker effect): motivated and competent students may withdraw from the group effort because they perceive others as not contributing to the same level as themselves.

Status differential among group members may lead to higher status group members dominating group activity and low status members interacting and influencing group processes less. This may lead to learned helplessness and self-perceived incompetence in low status group members as a result of their efforts being rejected by the higher status members. Under these conditions,
optimal learning cannot be achieved. Underperformance in groups may also result from a group-negotiated least effort approach, particularly to undesirable group tasks, or from a diffusion of responsibility, particularly in larger teams (Salomon & Globerson, 1989).

**Interactional difficulties.** Interactional issues that interfere with successful engagement with a group task are also well documented. Mello (1993) argues that most groups can manage interpersonal conflicts on their own, but notes that tutors are responsible if this is not the case.

Interpersonal conflict can be seen as a normal stage in the development of groups. “Storming” has been conceptualised as a stage in group development which is characterised by high individual and group needs and low task focus. Interactional difficulties are particularly apparent in this stage: personality clashes may become apparent and the group may argue about how to operate (Tuckman, 1965). If this stage of group development cannot be successfully resolved, the group may remain dysfunctional and unable to focus effort on the group task or, at worst, unable to complete the group task (Gibbs, 1995).

Interactional difficulties have also been examined in relation to differences in the approach taken to conflict resolution. Desivilya and Eizen (2005), for example, discuss conflict management patterns which vary along two dimensions: engagement versus avoidance, and constructive versus destructive. Negative group work experiences could arise in relation to the destructive end of the dimension, resulting either in avoidance (destructive/avoiding) or dominance (destructive/engaging).

**Logistical difficulties.** A further source of potential group problems is logistical in nature. For example, pressure of work may make a group unable to perform to its best ability (Livingstone & Lynch, 2000), and it is therefore important to integrate group work in such a way that students have the opportunity to get to know each other and establish ways of working with each other before being expected to engage in assessed tasks (Gibbs, 1995).

Feichtner and Davis (1985) have reviewed a number of logistical issues that may impact on the success of group work, both from the instructor’s and the student’s points of view. Group size and composition, for example, can impact on whether a group has the necessary resources to be successful. If groups are too large, or if they are expected to meet up outside class time, there may be difficulty in co-ordinating group members’ efforts. Arranging times to meet can be a major problem for groups (Edgerton & McKechnie, 2002), particularly for mature students and those with external commitments.

**Measuring problems in group work**

It is clear that there is potential for many things to go wrong in group work, even when instructors take care to design the group activity carefully. There has, however, been little work to date involving the measurement of negative group work experiences in a systematic way. Most authors discussing negative perceptions of group work present either anecdotal evidence or case studies (Feichtner & Davis, 1985; Salomon & Globerson, 1989), or focus specifically on the measurement of attitudes towards group work and satisfaction with assessment methods (Cantwell & Andrews, 2002; Gatfield, 1999; Walker, 2001; White et al., 2005)—this work is specifically concerned with students’ feelings and attitudes towards group work. One concern is that this approach may not represent the full spectrum of possible negative experiences. It is also possible that certain types of negative experience are more common than others, and that negative experiences vary in severity and impact on group performance. It could be that negative myths about group work are perpetuated without any real foundation in students’ experience of group work.
This paper reports on the development of a questionnaire designed to measure problems occurring in student group work. As instructors using group work in the context of large group teaching, where informal feedback from groups or evaluation of group work processes on the basis of observation is not always possible, we have felt a need for a means of measuring negative group work experience for the purpose of evaluating our practice. While our primary motivation was to develop an instrument to assess the extent to which problems occur in groups of students (evaluation of group work processes), this type of questionnaire also enables researchers to investigate not only antecedents of dysfunctionality in groups but also the effects any problems may have on task performance, individual student performance, and transferable skill learning in general. Furthermore, it may lend empirical support to some of the negative group work phenomena identified in the literature.

The questionnaire was constructed from a review of the literature, students’ qualitative accounts of group work experience, and our own experience as facilitators of group work in the academic context. The assumption was that negative experiences of group work would be multi-dimensional, given the logistical, motivational, and interactional perspectives discussed in the literature. It could be argued that different types of negative experience may cluster in such a way as to identify different types of group dysfunctionality.

Method
Development of the questionnaire

Items for the questionnaire were developed on the basis of a qualitative analysis of written reflections on group work experience produced by students as part of their module assessment, a review of the relevant literature, and the authors’ personal reflections on problems arising in the facilitation of small group work. Initially, 32 items, ranging from relatively benign logistical problems (e.g., “Other group members never being available to meet”) to more serious interactional problems (e.g. “Arguments e.g. shouting in the group”), were compiled. These were supplemented by seven items describing positive group work behaviour (e.g. “Working together in a problem-focused manner”). The positive items were added as a means of addressing response bias, but were not included in the analyses reported in this paper.

The resulting 39-item scale utilised a four-point response scale (0 = “No experience of this in my group”, 1 = “Occasional experience of this in my group”, 2 = “Frequent experience of this in my group”, and 3 = “Constant experience of this in my group”).

Participants

Study 1. Six cohorts of second-year undergraduate psychology students from two different research methods modules, Questionnaire and Survey Design (n = 173) and Quantitative Research Methods (n = 252), participated in the questionnaire development phase of this research. The 425 participants were predominantly female (89%), which is roughly representative of the gender distribution observed in psychology undergraduate students at this university in the south-east of England. The mean age was 23.6 years (SD = 7.08). All participants worked in groups of three to six, with five being the norm, to complete part of their coursework on the module.

The NGWE questionnaire was also administered to an independent sample of first-year students (n = 543) as part of a larger research project investigating the impact of electronic resources on teaching and learning in undergraduate psychology students. In this sample 87.4% were female and 12.3% male. The mean age was 22.8 (SD = 6.75). Group work was organised in the same way as in the second-year sample.
Study 2. A number of additional questions were included in the second-year questionnaire for validation purposes. These concerned the current status of the group, how problems were resolved in the group, and the extent to which problems in the group had been resolved successfully. Data from these criterion validity items were available from 254 participants from the second-year sample; these were the participants who had reported group work problems.

Procedure

All groups completed the NGWE during the final class of their module, after submitting their assignments but prior to receiving feedback on their group or individual work. Participants were instructed to complete the questionnaire in relation to the group in which they had worked during the module. If participants had changed groups during the module, they were asked to respond to the questionnaire in relation to the group which they had first been allocated to. The questionnaire was distributed as part of the general module evaluation questionnaire. Participation was voluntary and the response rate varied between 30% and 97% across all cohorts, with lower participation evident in larger cohorts.

Results: study 1

Factorial structure of the NGWE: principal components analysis

Exploratory principal components analysis with direct oblimin rotation was conducted on the negative group experience items for the second-year sample. Missing values were substituted with means. The scree plot indicated a four-factor solution (with three-factor or five-factor solutions also possible). The four-factor solution was adopted as it represented the clearest, most interpretable solution. The four components accounted cumulatively for 58.89% of the variance. Of the original 32 items, 11 were complex, and 10 of these were eliminated from further analysis on grounds of conceptual clarity.

Cross-validation of factor structure

A two-step procedure was conducted to test the factorial structure of the NGWE (Anderson & Gerbing, 1988). In the first step, confirmatory factor analysis (CFA) was used to test the overall model in the second-year sample. In order to establish its metric, the factor loading for the first item on each latent variable was constrained to 1.0. In the second step, invariance analysis using multi-sample analysis was applied to test the stability of the model from the first step, only this time the first step had been applied to the first-year sample.

Confirmatory factor analysis

The most common statistical test for the assessment of model fit in confirmatory factor analysis is the chi-square goodness of fit test ($\chi^2$). This test estimates discrepancies between the observed covariance matrices and those implied by the model. A lower chi-square value indicates better fit. The chi-square statistic assesses the absolute fit of the model to the data. However, it is sensitive to sample size and often inflates Type 1 error (Bollen, 1989; Cohen, 1988). Therefore, it is necessary to use additional indices to evaluate model fit. The comparative fit index (CFI) and the root-mean-square error of approximation (RMSEA) indicate the closeness of fit. Cut-off values close to .95 for the CFI and close to .08 for the RMSEA demonstrate adequate fit of the model (Browne & Cudeck, 1993; Hu & Bentler, 1999).

The relative CFI, the noncentrality index (RNI), and the nonnormed fit index (NNFI) are incremental fit indices (Bentler & Bonett, 1980; McDonald & Marsh, 1990). They were selected
on the basis of performance in simulation studies (Hu & Bentler, 1999; Marsh, Balla, & Hau, 1996). Minimally acceptable fit is indicated by threshold CFI, RNI, and NNFI values of .90 (Bentler & Bonett, 1980; McDonald & Marsh, 1990). Values close to .95 indicate a good model fit (Hu & Bentler, 1999).

Another minimum sample discrepancy function, the $\chi^2/df$ ratio, has been suggested as a useful criterion. Bollen and Long (1993) suggest $\chi^2/df$ not above two to five times the degrees of freedom. Akaike’s information criterion (AIC) and $\Delta \chi^2$ have also been reported as appropriate for the purposes of model comparison (Akaike, 1987). In order to test both the configural and metric invariance across the datasets, models were assessed for fit using $\Delta \chi^2$, AIC, NNFI, CFI, and RMSEA.

With respect to the data from the second-year sample, the hypothesised four-factor measurement model represented a good fit and can be accepted (see Table 1). Table 2 shows the latent factor loadings. The four factors obtained in the confirmatory factor analysis were clearly interpretable.

The first component comprises six items relating to logistical difficulties in the group to do with meeting up as a group and to group member failure to complete work as agreed. The resulting subscale can therefore be labelled “lack of group commitment” and is characterised by lack of communication within the group and individuals’ lack of engagement with the group task.

The second component combines five items which are specifically concerned with group failure to address the task appropriately. In comparison to the first component there is no indication of individuals’ lack of commitment to the group, although issues around effective communication in the group are implicated. This subscale is primarily characterised as “task disorganisation”.

The third component has five items which all represent an aspect of difficulty between individual group members on a personal level. This subscale measures group processes relating to storming, to borrow from Tuckman’s (1965) conceptualisation of group formation.

The last component contains six items indicating severe dysfunctionality in the group, and includes interactional, communicative, and organisational elements. This appears to represent a subscale measuring fractionation of the group.

**Intercorrelations of factors**

Table 3 shows the correlations between latent factors. It can be seen that all four factors have moderate to high intercorrelations. The highest correlations were between interactional factors (storming and fractionated groups) and motivational/logistical factors (lack of commitment and task disorganisation), respectively. Due to these high intercorrelations we tested two further models: a three-factor model (in which the third and fourth factors were pooled) and a two-factor model (in which the first two factors were additionally pooled). The overall fit of the four-factor model (Table 1) is clearly better than the three-factor model ($\Delta \chi^2 = 67.29, \Delta df = 3, p < .05$) or the two-factor model ($\Delta \chi^2 = 477.17, \Delta df = 6, p < .001$).

Table 1. Confirmatory factor analysis.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>RMSEA (90% CI)</th>
<th>$p$ (RMSEA &lt; 0.05)</th>
<th>AIC</th>
<th>CFI</th>
<th>NNFI</th>
<th>RFI</th>
<th>$\chi^2/df$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four factors</td>
<td>575.58</td>
<td>203</td>
<td>.00</td>
<td>.065 (.058–.071)</td>
<td>.00</td>
<td>665.06</td>
<td>.97</td>
<td>.96</td>
<td>.95</td>
<td>2.83</td>
</tr>
<tr>
<td>Three factors</td>
<td>642.87</td>
<td>206</td>
<td>.00</td>
<td>.071 (.064–.077)</td>
<td>.00</td>
<td>736.87</td>
<td>.90</td>
<td>.89</td>
<td>.84</td>
<td>3.12</td>
</tr>
<tr>
<td>Two factors</td>
<td>1052.75</td>
<td>209</td>
<td>.00</td>
<td>.097 (.092–.010)</td>
<td>.00</td>
<td>1140.75</td>
<td>.81</td>
<td>.79</td>
<td>.75</td>
<td>5.03</td>
</tr>
</tbody>
</table>
Table 2. Latent factor loadings of NGWE items.

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of group commitment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A member of your group not turning up to group meetings arranged outside timetabled sessions without explanation</td>
<td>.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A group member always making excuses for not making group meetings or completing work</td>
<td>.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group member not completing their allocated work</td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty in contacting a group member</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other group members not doing their share by the agreed deadline</td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other group members never being available to meet</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task disorganisation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty finalising a piece of work</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty dividing up the work for the group task fairly</td>
<td>.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty in keeping the whole group focused on the task</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always doing things late</td>
<td>.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group problems seem to arise as deadline stress looms</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storming group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arguments (including, e.g., shouting) in the group</td>
<td>.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other members falling out with each other</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gossiping in the group about another group member behind their back</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other group members being inflexible when their work needs to be changed</td>
<td>.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You falling out with another group member</td>
<td>.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fractionated group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You feeling isolated or excluded by your group</td>
<td>.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty in deciding roles (e.g., who leads)</td>
<td>.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of factions in the group</td>
<td>.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusion of another group member</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Members of your group turning on you or picking on you</td>
<td>.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group members not talking to each other over a sustained period</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Factor correlation matrices for latent factors.

<table>
<thead>
<tr>
<th></th>
<th>Factor 1: Lack of group commitment</th>
<th>Factor 2: Task disorganisation</th>
<th>Factor 3: Storming group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 2: Task disorganisation</td>
<td>.78</td>
<td>.68</td>
<td>.83</td>
</tr>
<tr>
<td>Factor 3: Storming group</td>
<td>.58</td>
<td>.68</td>
<td>.83</td>
</tr>
<tr>
<td>Factor 4: Fractionated group</td>
<td>.47</td>
<td>.65</td>
<td>.83</td>
</tr>
</tbody>
</table>
Cross-validation of factor structure: invariance analysis

The invariance of the structure of the NGWE was tested using a multi-step procedure (Bollen, 1989; Motl et al., 2000). Two nested models were tested. These involved invariance in factor loadings (i.e., equality of coefficients linking the items with latent variables; Model 1) and invariance in overall structure (i.e., same pattern of fixed, freed, and constrained factor loadings and factor variances-covariances; Model 2). The invariance was evaluated by a $\chi^2$ difference test, RMSEA with 90% CI, CFI, and NNFI. Table 4 shows the results of the invariance analysis in the first-year sample.

Model comparison shows ($\chi^2_{\text{diff}} = 21.08, df = 10, \text{n.s.}$) that Model 2 fits the data well and can be accepted. The structure of the NGWE is invariant across the first-year and second-year samples.

Psychometric properties of the NGWE and its subscales

Table 5 shows means, standard deviations, and Cronbach’s alphas for both samples. All subscales showed good reliability in both samples. Mean scores are relatively low, indicating low levels of negative experiences, particularly on the storming and fractionated group subscales. Students in their second year yield lower means across all subscales than students in their first year. Although there is evidence that the whole range of all scales was used, the score distributions on all subscales and the total scale are positively skewed in both samples.

Results: study 2

Validity of the NGWE

Gender and age variables were examined in relation to NGWE scores. There were no gender differences in this sample ($t[284] < 1.1, \text{n.s.}$). Age was correlated with lack of commitment ($r[300] = .13, p = .026$) and task disorganisation ($r[295] = .14, p = .014$), but not with storming or fractionation ($r[291] < .1, \text{n.s.}$). The criterion validity of the NGWE was therefore examined
for the whole sample in relation to group outcome, how problems were dealt with, and, in the case of group problems, the success of intervention.

Group outcome was measured by asking participants \((n = 346)\) to rate group status during evaluation on a three-point scale. Participants indicated whether their group was working together with minor problems, working together with major problems, or had broken up. All subscales and the total NGWE correlated highly with this measure \((p < .0005)\). Higher levels of negative group experiences were associated with less favourable group outcomes.

Participants who reported experiencing group problems \((n = 254)\) also indicated how group problems had been addressed. A measure assessing levels of intervention (problems not addressed at all, problems resolved within the group, or problems resolved with tutor intervention) revealed small but significant negative correlations with the extent of negative group work experiences reported, across all subscales and the total score, indicating that more negative experiences were reported when problems were not addressed, compared with internal group resolution and tutor-mediated resolution.

Finally, participants who had experienced group problems \((n = 264)\) were asked to rate the extent to which they felt the problems had been resolved successfully. High positive correlations with this measure indicate that the higher the level of negative group experiences reported, the less successful attempts at problem resolution were perceived to be. Table 6 shows Spearman’s correlations between the criterion questions and NGWE scores.

### Discussion

The principal aim of this research was to develop and validate a research and evaluation instrument to measure negative group work experiences. Confirmatory factor analysis revealed four interpretable components. Negative group experiences were thus captured along four dimensions: two relating to motivational/logistical group problems (lack of group commitment and task disorganisation) and two to interactional group problems (storming and group fractionation).

The lack of commitment factor includes items that relate to both motivational (failure to complete work) and logistical problems (inability to meet up as a group), indicating that although failure to contribute to the group task may have different causes these are not differentiated in terms of negative group work experiences. Social loafing (Daly & Worrell, 1993; Karau & Williams, 1993) and genuine difficulties in organising group work (Edgerton & McKechnie, 2002) are not differentiated as antecedents of negative group work experience. The indication is that both are interpreted as unwillingness to engage with the group.

In comparison, the second factor, task disorganisation, appears to have a purely motivational basis. The focus seems to be inability to address the task appropriately. Group conflict does not
necessarily play a major causative role. The problem is entirely associated with disorganisation with respect to the group task. It could be argued that this is the type of problem experienced by groups who never move beyond Tuckman’s (1965) forming stage of group development. Problems may be due to lack of leadership in the group and/or ineffective communication skills. The outcome is a lack of task focus, leading to pressure on the group when the group task needs to be delivered. This is a relatively common source of negative group experiences.

The group fractionation factor comprises items indicating severe interactional and communicative difficulties in the group. Furthermore, there is some indication that group members may be unable to address the issues arising in the group. This factor can be interpreted in relation to Desivilya and Eizen’s (2005) avoiding/destructive type of group management. There is a general lack of communication, leading to factions and/or isolation of individual group members, and resulting in potentially destructive tendencies which manifest themselves in negative group experiences. Such difficulties with communication in the group may well be related to previous group work experience and the extent to which group members know each other prior to being asked to work in a group. However, it is difficult to see how groups reporting these types of problems could work effectively on a group task.

In comparison, the final factor, storming, is characterised by communication between group members—albeit dysfunctional communication. This factor encompasses items indicating volatile group interaction which may be destructive (engaging/destructive in Desivilya and Eizen’s 2005 terms). Individual needs take precedence over the group task, conceptualised by Tuckman (1965) as the storming stage of group development. Whether this represents intrinsic dysfunctionality, or whether this is a normal stage of group development as conceptualised by Tuckman (1965), remains in question. However it is clear that this kind of dysfunctionality has an impact on task performance, which cannot be optimal unless conflict can be resolved appropriately.

Confirmatory factor analysis demonstrated that the four-factor model yielded the best fit. While it is possible to conceptualise a theoretical two-factor model based on Desivilya & Eizen (2005), or a three-factor model based on the distinction between interactional, motivational, and logistical difficulties (Slavin, 1996), our data clearly demonstrate that these are not viable alternatives. Furthermore, the structure of the four-factor model was invariant in multi-sample analysis, providing further evidence for the stability of this model. In summary, there is good evidence in our data for the internal validity of the claim that negative group experiences can be conceptualised in terms of four factors. It must be noted, however, that the four factors show high intercorrelations—indicating that the factors may not be independent. Further research is required to examine how the negative group experiences captured by the four factors interact.

The external validity of the four factors was examined in relation to group outcome, level of intervention in group problems, and perceived success in resolving group problems. The pattern of observed correlations was as expected. Higher levels of negative experiences were associated with worse group outcomes and less successful perceived conflict resolution, particularly in the two motivational/logistical subscales. Level of intervention was inversely related to negative group experiences, indicating that high levels of negative experience were associated with lower levels of intervention to address group problems. Thus, there is some evidence for the criterion validity of the scale; however, further research needs to address the convergent and divergent validity of the scales in relation to cultural, social, and cognitive factors (Cantwell & Andrews, 2002), as well as personality and emotional variables (Mohiyeddini, 2001). Criterion validity could usefully be examined further in relation to group performance variables.

A further issue arises with respect to gender. No gender differences were found in this study. However, the sample in this study was heavily biased towards female participants, which is entirely consistent with the population from which the samples in this study were drawn. This means that the conceptualisation of negative group work experiences arising from this study may
only be representative of females working in predominantly female groups. Further studies need to address the question of whether the factor structure reported here is stable across gender-balanced groups and predominantly male groups.

Scores on the four subscales were relatively low and positively skewed in this sample, especially on the two interactional subscales. This might be expected as the constructs measured are by nature relatively rare in well-constructed group work environments. Tutors implementing group work in higher education are usually very aware of potential difficulties and endeavour to design group tasks and associated assessment in a manner that minimises potential problems. In addition, students’ previous experience with group work could be expected to reduce problems on subsequent occasions. In this study, the means of all scales were lower in the second-year sample than in the first-year sample, indicating good sensitivity of the scales to subtle differences based on learning processes.

The NGWE is thus presented as an empirically-derived instrument demonstrating factorial stability, internal validity, and external validity, and capable of measuring negative group work experiences in four dimensions. It is a useful tool for monitoring and evaluating group processes in the context of large group teaching. While further validation is desirable, it is anticipated that the NGWE could be used to investigate the impact of negative experiences in small group work on individual student grades. It could also be used to investigate the antecedents of negative experiences—such as cognitive, psychological, and cultural factors (Cantwell & Andrews, 2002; Gatfield, 1999)—and to evaluate interventions/training in the context of group work.

Note
1. The factor loading matrix for the exploratory principal components analysis is available from the first author.

References


