

found that if the administrators reminded seniors that their opinion was important to the program and urged them to use the space provided at the end of each group of items to express additional thoughts and feelings, the students contributed more written, open-ended responses than when the surveys and scantrons were simply handed to them with brief directions.

Another alternative to a survey is to hold group forums with graduating seniors that are hosted by peers. Various aspects of advising could be discussed, recorded, and submitted to faculty and administrators. Without faculty present, students may provide more candid information. An appropriate time for such a forum is the end of a senior seminar class or capstone course.

Ware et al.'s (1993) analysis revealed that successful advising goes beyond providing information to students by challenging them to examine their values, interests, abilities, and skills and to develop decision-making skills. Perhaps future assessments of departmental advising should include items designed to determine how psychology departments are incorporating these added dimensions into their advising strategies. If the data reveal that advisers are only conveying information, then new techniques for adviser training will be needed. Advising students at a deeper, mentoring level may be perceived by faculty as more interesting and essential to student development, thereby enhancing the overall quality of services provided.

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Notes

1. We appreciate the contributions of other members of the Department of Psychology Assessment Committee: Lennis Echterling, Joann Grayson, Arnie Kahn, and Donna Sundre.
2. Correspondence concerning this article, including requests for a copy of the exit survey, should be sent to Eileen S. Nelson, Department of Psychology, James Madison University, Harrisonburg, VA 22807; e-mail: nelsones@jmu.edu.

Increasing Student Participation and Productivity in Small-Group Activities for Psychology Classes

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This article consolidates suggestions about ways to increase individual student involvement in small-group activities for psychology classes. First, the literature on group productivity and social loafing is reviewed. Findings are organized through the discussion of 3 critical domains for increasing effectiveness of small groups. Second, articles published in Teaching of Psychology that describe small-group activities are reviewed, giving attention to techniques that authors have recommended to ensure student participation.

Many researchers, theorists, and instructors have described and advocated the use of small groups in the classroom. Whether under the rubric of cooperative learning, student collaboration, or peer tutoring, small-group work has been gaining acceptance among teachers at elementary, secondary, and college levels (Slavin, 1987). In general, proponents of small-group learning have suggested that knowledge is best acquired in a social context in which students attend to and

gain information from each other (Olmstead, 1974; Sharan & Sharan, 1976). Definitions of group participation generally include active student communication, student cooperation, and faculty guidance through structured tasks (Bouton & Garth, 1983; Smith & MacGregor, 1992). Some researchers have stated that students in collaborative-learning groups must (a) perceive that their goals and rewards are interdependent with those of other students (i.e., the success of one student is connected to the success of others in the group), (b) have substantive interaction with other group members, (c) be individually accountable for their performance, and (d) use positive interpersonal skills (Johnson & Johnson, 1992; Johnson, Johnson, & Smith, 1991).

The effectiveness of cooperative-learning techniques that rely on small-group activities has been documented by greater student achievement and enhanced social relationships (Slavin, 1985). A meta-analysis of more than 375 published studies indicated that student participation in cooperative group activities is associated with enhanced performance compared to competitive (i.e., individuals working against each other to achieve mutually exclusive goals) and individualistic (i.e., individuals working by themselves to accomplish goals unrelated to those of others) learning efforts (Johnson et al., 1991). Benefits have included students' greater achievement, productivity, critical-thinking abilities, social support, and self-esteem.

Although many studies have described the advantages of small-group work for students, collaborative-learning exercises can pose difficulties for instructors. For instance, some instructors may fear that small-group activities will not provide a successful learning experience for students or that some participants will not do their fair share during the exercise. Such concerns are well-founded, as research has documented that individuals may become less productive in group contexts than if they complete their work independently. This reduction in motivation and effort by individuals working in group contexts has been termed social loafing (Latané, Williams, & Harkins, 1979).

Although many illustrations of group activities and demonstrations for psychology classes are described in the literature, few resources consolidate suggestions about ways to maximize individual student involvement in small-group work. In this article, I address instructors' need for additional resources in two ways. In the first major section, I review the research literature on group productivity and social loafing and organize findings through the discussion of three critical domains for enhancing the effectiveness of small groups. Potential pitfalls of conducting group activities are identified so that instructors may avoid them. In the second major section, I present a review of small-group activities for psychology classes that have been published in *Teaching of Psychology (ToP)*. Moreover, I examine in detail techniques that these authors have recommended to ensure student participation.

Suggestions and Considerations for Enhancing Effectiveness of Small Groups

The work of social psychologists and other investigators of small-group processes may offer guidance to college instructors who wish to incorporate group activities into their

courses. Numerous studies have explored the group- and environmental-level variables that influence an individual's participation in group activities (Nijhof & Kommers, 1985). Although social loafing has seldom been studied in classroom contexts, group productivity during cognitive tasks (e.g., essay evaluation and solving mazes) has received research attention and may have implications for understanding group processes in educational settings (Hertz-Lazarowitz, Kirkus, & Miller, 1992). Variables that may affect student participation and social loafing in small groups can be categorized into three domains: task structure (i.e., the nature of the group activity and perceived dispensability of each student's contributions), student evaluation (i.e., the identification/grading of student contributions and incentives for participation), and group structure (i.e., the assignment of roles and students' perceptions of the group and the other group members). Instructors can evaluate each of these areas when devising strategies to promote student involvement in their group activities.

Task Structure

Is task structure amenable to small-group work? One important determinant of students' productivity in groups is the nature of the task. Steiner (1972) described a task typology that instructors may want to consider when designing small-group activities for their psychology classes.

First, is the task divisible or unitary? Whereas divisible tasks can be broken down into subtasks (e.g., participating in a debate), unitary tasks cannot be divided into smaller parts (e.g., reading a case study). Unitary tasks typically hinder mutual assistance and are less appropriate for group work (Sharan & Sharan, 1976).

Second, how must students combine their efforts when they work together? For disjunctive tasks, the group must decide on one contribution as the group answer (e.g., a group of four students is told to solve a mathematics problem that has only one correct answer). The potential of the group is, therefore, established by the most competent member. For conjunctive tasks, the group product reflects what members can accomplish when acting together (e.g., group members participate in a relay race); the outcome is mainly determined by the least competent member, or the "weak link" in the chain. For conjunctive and disjunctive tasks, the group product largely reflects the contribution of a single member; in additive tasks, the group product is equal to the sum of each group member's contribution (i.e., all members contribute to the product; group members must pull on a rope together). For discretionary tasks, group members can combine their contributions in any way they choose.

Knowledge of these "combination rules" may assist instructors in creating group activities and deciding on group size. For instance, for a difficult, disjunctive activity, instructors may place students in larger groups because the relatively small number of "solvers" will be able to explain the activity solution to the relatively larger number of "nonsolvers" in a group. By increasing the size of the group in this scenario, instructors increase the likelihood that each group will contain at least one member who understands the problem presented to the group.

Alternatively, if all students must understand a particular concept, then instructors may choose to implement conjunc-

tive group activities in which students who understand the particular activity will be especially committed to teach and explain concepts to other students who are experiencing difficulty. For example, Cumming (1983) used a conjunctive activity in an introductory statistics course. In this class, groups of four students were assigned a study guide and exercises to complete. When all members of the group completed the exercises for a particular unit, they were evaluated individually by a proctor. If the proctor was not satisfied with the performance of every student, the entire group had to complete additional problems and return to the proctor at a later time.

Other aspects of task structure have also received research attention. For example, undergraduates tend to perform better on difficult tasks in group contexts than individually (Jackson & Williams, 1985), thus social loafing may be reduced by increasing the difficulty of the task (Harkins & Petty, 1982). Social loafing has also been eliminated in tasks that require high personal involvement, such as generating counterattitudinal arguments (Brickner, Harkins, & Ostrom, 1986). Other examples of small-group activities that are personal in nature include participating in personal growth groups or group therapy exercises (e.g., DeVoge & Varble, 1976), pretending to solve marital or family problems (e.g., Gardner, 1991), and reflecting on students' cultural backgrounds (e.g., Enns, 1994).

Do students believe that their contributions are important? Individuals exert less effort in groups when they believe that their work is not critical to the success of the collective. When students feel that their contributions are dispensable, they are more likely to "free ride" off of the efforts of other group members (Kerr & Bruun, 1983). More specifically, if students perceive their contributions to be redundant with those of other students, they feel less accountable and are more likely to generate fewer or less complex responses (Weldon & Gargano, 1988; Weldon & Mustari, 1988). When students believe their contributions are original, however, they continue to participate even if their work remains anonymous (Harkins & Petty, 1982).

An illustration of how to provide students with unique responsibilities in small-group activities was outlined by Carroll (1986). When teaching research design, the author ensured that students contributed complementary information to the group by having them select interdependent subtasks to complete. For instance, each student in a given group performed only one of several tasks that were essential in the execution of a study (e.g., running subjects and statistical analyses) and writing the final report (e.g., drafting the introduction, method, results, and discussion sections). Similarly, Bossley (1978) described assigning related but contradictory paper topics for students to complete independently. Students later worked in small groups to compose a coherent statement that synthesized perspectives of the individual papers.

Student Evaluation

Can each student's contribution be identified and evaluated? Many students reduce their efforts in small-group activities because their contributions to the collective

effort remain anonymous and unevaluated. Students may feel that their accountability is lessened because the instructor will not identify or assess their individual work.

To remedy this situation, instructors may use formal or informal evaluation strategies. Many teachers informally assess the progress of individuals and groups by circulating around their classrooms, listening to group discussions, and offering assistance when it is requested. More formal methods of evaluation that can mitigate social loafing include grading by the instructor, other group members (i.e., peers), and the students themselves. Instructors often evaluate students' understanding of activities and conversations that have occurred in the group context and in subsequent discussion (Bruffee, 1993). However, instructors have alternative strategies to evaluate students in small groups. For instance, self-evaluation has been found to minimize the effects of social loafing. Even when an experimenter could not evaluate the contributions of individual group members, the opportunity for participants to evaluate themselves reliably enhanced the performance of group members (Harkins & Szymanski, 1988; Szymanski & Harkins, 1987). However, students must believe that there is a standard against which their work can be judged, such as the performance of other group members or a set standard to evaluate the group product (Harkins & Jackson, 1985; Harkins & Szymanski, 1989).

One illustration of a comprehensive evaluation policy is described by Kottke (1984). After students in small groups constructed an assessment instrument designed for organizations, each student rated the performance of all group members, including his or her own performance. To assist students in their evaluations, the instructor established and provided students with grading criteria before the exercise. In addition, the instructor evaluated a final report written collaboratively by the group.

Do students have incentives for contributing to the group? The reward structure for an activity refers to the consequences of the completion of the small-group activity (Kagan, 1985). The influence of rewards depends not only on the amount and type of the incentive but also on the method of determining group scores, methods of combining individual scores to create a group score, the weight of the total group project grade in the course grade, or all of them (Kagan, 1985).

Research has shown that rewards or incentives can reduce social loafing in small-group contexts. For instance, Zaccaro (1984) reported that all group members actively contributed to small-group activities when the incentive of extra course credit was given. Similarly, Shepperd and Wright (1989) found that social loafing did not occur in groups that were promised incentives for good performance even when individual members' contributions were unidentifiable.

Johnson and Johnson (1985) described several systems for the reinforcement of groups. Rewards can be distributed cooperatively (i.e., individuals are rewarded based on the performance of the entire group), competitively (i.e., only those members who perform "best" are rewarded), or individually (i.e., each member is rewarded only for his or her contribution to the group product).

Gnagey (1979) illustrated numerous reward strategies in his description of a small-group project in which students collaboratively produced research projects for an introductory psy-

chology course. Team members collectively received points for acceptable projects, elected team leaders were rewarded with extra points for their responsibilities, and individuals who the team leader believed made an average or above average contribution to the project received additional credit. Gronlund and Lewandowsky (1992) described another small-group exercise in which students developed television commercials demonstrating cognitive psychology principles. Half of each student's grade was determined by the instructor's rating of the group project as a whole, and the remaining grade points were anonymously determined by the other group members.

Group Structure

Does the group have a structure that encourages participation from members? Another method intended to promote students' involvement in small-group activities is the designation of roles to group members. Frequently, specific roles emerge naturally in group interaction. Bales and Slater (1955) explained that responsibilities are often assigned to different group members. Distinct leaders emerge who may focus on task-oriented concerns (e.g., initiating discussions and recording decisions) or on interpersonal issues of the group (e.g., encouraging compromise and providing psychological support).

To facilitate group participation, Sharan and Sharan (1976) recommended that a leadership role should be established and rotated among students. Moreover, another group member can be assigned the responsibility to ensure that conflicts among group members are successfully managed, cohesion is maintained, and members feel free to contribute their ideas. Other roles include a recorder, who takes notes on the activities of the group, and a speaker, who reports the groups' decisions to the remainder of the class. Furthermore, many group activities involve specific roles that are integral to the task. For instance, Brooks (1985) described a role-playing exercise in which small groups of students were assigned to the roles of well-known historical figures in psychology (e.g., Wundt, James, Pavlov, and Titchener) and then developed a 30-min scene in which these characters interact.

A cautionary note, however, is warranted when assigning roles in small-group activities. Kerr and Stanfel (1993) reported that when one group member was designated as a token leader (i.e., having a title of leader without any power, legitimacy, or formal responsibility), the remaining "nonleader" group members showed decreased personal responsibility for group performance and higher rates of social loafing. Thus, instructors should consider not only the beneficial effects of designating some students as leaders but also the unanticipated consequences of labeling others as followers.

How do group members feel about each other and the group? Students' perceptions of the group as a whole and other group members influence task performance. Cohesion, or the degree to which members of a group want to remain in that group, has been associated with the frequency of communication among group members, the degree of participation in group activities, and a lower rate of absence (Cartwright, 1968). Similarly, Lott and Lott (1965) suggested that consequences of higher cohesiveness in groups may include en-

hanced task performance, higher rates of learning, and positive self-evaluations.

Cohesion can be promoted by open discussions of expectations, dispersion of leadership, intergroup competitions, or ice-breaker activities. Some instructors require that groups remain together throughout the course and explicitly stress the importance of group cohesion (e.g., Bassin, 1974). Perceptions of closeness among group members can also be facilitated by exercises that allow self-disclosure or encourage students to introduce themselves to each other before they engage in group work (e.g., Babad, Oppenheimer, & Katz, 1978).

Similarly, students' perceptions of the extent to which capable coworkers contribute to a group activity can influence their commitment to small-group work. Many students may reduce their efforts to match the level that they believe other group members will be contributing when completing a given task (Chapman, Arenson, Carrigan, & Gryckiewicz, 1993; Jackson & Harkins, 1985). Thus, students may withdraw their participation to avoid the possibility of being exploited by others in the group (Kerr, 1983).

In summary, many of the considerations discussed earlier are interdependent. For instance, assigning specific roles to each group member may help instructors evaluate students' work. Moreover, many of these considerations may have the same outcome if implemented. For example, altering students' perceptions of the dispensability of their contributions or changing incentives for their participation may similarly minimize social loafing in group activities (e.g., Kagan, 1985). Finally, small-group activities best facilitate student learning when they are conducted with an awareness of the overarching goals for the particular course. Before implementing a group activity, instructors should identify their educational objectives (e.g., increasing students' knowledge of issues, fostering insight into possible problem solutions, and improving problem-solving skills) and then select appropriate methods to achieve these ends (Olmstead, 1974). Instructors' consideration of task structure, student evaluation, and group structure may increase the likelihood of students' participation in small groups, but this does not guarantee a meaningful learning experience.

Attempts to Increase Student Involvement in Published Small-Group Activities

One source of information for psychology instructors who seek assistance in implementing small-group activities is the journal *ToP*. Since its inception in 1974, *ToP* has published articles describing small-group activities designed for psychology classrooms.

I conducted a review of all articles published in *ToP* that describe small-group exercises. Sixty-eight articles (containing 69 studies) appeared in *ToP* between 1974 and 1995 (i.e., Vol. 1, No. 1 through Vol. 22, No. 2) that specifically described class activities designed for lectures and discussion sections requiring participation of 3 to 10 students in collaborative work. Excluded were articles depicting (a) activities that exclusively relied on whole-class discussion without dividing the class into smaller groups, (b) partner-oriented laboratory exercises (e.g., student triads examining habituation and sensitization in planarians; see Owren & Scheune-

man, 1993), and (c) demonstrations in which students' movements and behaviors were explicitly directed by an instructor to demonstrate a concept or idea (e.g., students illustrating neuronal functioning; see Reardon, Durso, & Wilson, 1994).

Table 1 presents a list of the reviewed articles. The first four columns contain information about the source and content of the small-group activity. In addition to the author, publication year, activity description, and recommended group size, the field of the exercise is provided. If the group activity was well suited for a variety of psychology courses, the term *general* appears in the field column.

The remaining columns contain information about the three critical domains for increasing effectiveness of small groups (i.e., task structure, student evaluation, and group structure). The Preparation column lists how authors prepared students for the group activity. Common preparation strategies included lecturing, conducting class discussion, supplying pertinent readings, and providing related examples. Although several authors noted that they lectured or facilitated discussion after the collaborative activity, this information is not listed because it is unrelated to the success of the group's functioning during the particular activity. Other authors may have presented pertinent material through lecture or discussion before group activities but did not state this in their articles.

Table 1 also presents information about the evaluation of these group activities. The Graded column illustrates whether students receive individual, group grades, or both; the Evaluator column lists whether the instructor, peers (i.e., other group members), students, or a combination of these individuals determined the grade for the small-group activity. Specific roles were assigned to group members in many studies. Some groups appointed leaders, recorders, and speakers who reported to the class. Other groups assigned several specific roles related to the particular activity. For these studies, the term *various* is listed in the Roles column.

Finally, the Other column lists variables that were occasionally addressed by the authors to enhance student participation in the small-group activity. These included consulting with students throughout the activity; explicitly fostering group cohesion by devising specific activities; and specifically arranging groups by student sex, dormitory location, racial background, student interest, or birth order. These techniques also included devising activities in which the task is of a personal nature, devising activities in which each student has a unique contribution, providing grading criteria for the activity in advance, and explicitly facilitating a class critique during the group exercise.

Analysis

Many studies reviewed did not address the problem of students' social loafing or subtle withdrawal during small-group activities. A substantial minority of authors (22%) listed only one or no measure that would effectively enhance student participation. Several of these activities that did not incorporate strategies to ensure student participation can be considered "participatory demonstrations" that do not involve a large time commitment from instructors and students (e.g., Kite, 1990) or are quasi-therapeutic experiential groups

(e.g., Halgin, 1982). Others that fall into this category are intensive small-group activities that may present difficulties for instructors who are concerned about social loafing and equitable student involvement.

The most common technique used to promote successful group functioning was to provide task structure before the collaborative activity. Seventy-four percent of authors explicitly stated that they provided relevant information through lecture, discussion, pertinent readings, or examples before students engaged in small-group work. Tasks were also clearly delineated through designing highly structured activities, providing explicit instructions, and modeling the activity beforehand. Authors seldom ensured that students' contributions were not redundant or dispensable in small groups. Three articles (i.e., 4%) listed strategies that provided students with unique responsibilities in group activities, including assigning different, interdependent subtasks to students. More frequently, tasks were disjunctive, and group performance could have been established by the most competent group member. The only mechanism to prevent one student from completing most of the group work was often the requirement of individual written products or peer evaluation at the end of the exercise.

The second most common strategy was to evaluate students in group activities. Fifty-five percent of authors formally evaluated students' group work. In these cases, instructors most often issued grades to individual students or to each student and the group as a whole; relatively fewer authors graded the group product without additional evaluation of individual students. Moreover, for those exercises in which student performance was assessed, instructors were responsible for evaluation in virtually all of the studies reviewed. Several authors stated that they complemented instructor-issued grades with peer assessments ($n = 6$), whereas only two authors used self-assessment in evaluation practices. Thus, instructors tended to be fairly traditional when evaluating student learning, and they relied on instructor assessment of individual performance in small-group contexts. Most authors avoided self-evaluation and peer assessments, which have been shown to be effective in reducing social loafing and enhancing participation in group activities.

Although most authors addressed how they provided task structure and evaluated students for small-group work, fewer authors commented on the structure of the small groups. Thirty-six percent of authors assigned roles to students in group activities. These roles were most often leader, recorder, and speaker; in other exercises, students were cast into specific parts for role-plays or debates. The least used strategy to facilitate student participation was to promote group cohesion. Only 7% of the authors encouraged students to familiarize themselves with other group members.

In summary, most authors of small-group activities published in *ToP* during the past 20 years have tried to increase student participation and minimize social loafing in their exercises, but a sizable minority have not. Authors most often described preparing students for group activities through lecture, discussion, or exemplification that may facilitate group functioning. In addition, many authors evaluated students' small-group work or assigned specific roles to group members to enhance students' involvement in small-group work. However, several strategies that have been found to enhance

Table 1. Articles Published in *Teaching of Psychology* That Describe Small-Group Activities

Author and Year	Field	Brief Description	Size	Preparation	Graded	Evaluator	Roles	Other
Anderson (1981)	Group	Design and conduct intervention groups	2-4	Readings and examples	—	—	—	Groups arranged and instructor consults
Babad, Oppenheimer, & Katz (1978)	Group	Participate in experiential group	—	Lecture	—	—	—	Cohesion fostered
Baird (1991)	General	Develop poster for poster session	2-3	Discussion readings, and examples	Group	Instructor and peers	—	Instructor consults, class critique, and grade criteria given
Baldwin (1978)	General	Describes general approach to group work	—	—	—	—	Speaker	—
Balleweg (1990)	Clinical/counseling	Role-play clinical interview	10	Lecture, readings, and examples	—	—	Various	Instructor feedback and class critique
Bassin (1974)	General	Describes a general approach to group work	10	—	Individual and group	Instructor	Leader	Cohesion fostered
Beers (1986)	Personality	Evaluate personality theories	—	Lecture	—	—	—	—
Benjamin (1983)	Personality	Create items for personality inventory	2-4	Lecture and examples	—	—	Recorder	—
Bernstein (1995)	General	Describes a general approach to group work	4	Discussion and readings	Individual	Instructor	Various	—
Berrenberg (1987)	General	Demonstrate impression formation strategies	4-6	Lecture	—	—	—	—
Bögels (1994)	Clinical	Practice interviewing skills	3	Lecture	—	—	Various	Instructor consults and class critique
Bossley (1978)	General	Reconcile and synthesize related issues	5-6	Reading	—	—	Leader	Unique contributions and groups arranged
Bowman & Ware (1984)	Personality development	Various experiential activities	5	—	Individual	Peers	—	—
Brooks (1985)	History of psychology	Role-play historical figures	6-7	Lecture	Individual	Instructor	Various	Equal parts required
Brothen (1995)	Introductory	Participate in a difference threshold exercise	6	Lecture and readings	Group	Instructor	—	—
Carroll (1986)	Experimental	Conduct and write up an experiment	4 ^a	Example	Individual and group	Instructor	Various	Unique contributions
Chamberlain (1986)	Research methods	Conduct research project	—	Lecture	—	—	—	—
Charlesworth & Slate (1986)	Developmental	Write letter to boy and girl	4-6	Discussion and readings	—	—	Speaker	Class critique
Chrisler (1988)	Learning	Modify instructor's behavior	—	Lecture	Individual	Instructor	—	—
Connor-Greene (1993)	General	Critique research reports in newspapers	4-5	Readings	—	—	Recorder	—
Cumming (1983)	Statistics	Solve exercises and study guide problems	4	Lectures	Individual and group	Instructor	—	Instructor consults
Desforges (1994)	Developmental	Apply developmental theories to movie	—	Lecture	—	—	—	—
DeVoge & Varble, Study 1 (1976)	Personality	Participate in personal growth groups	7-8	—	—	—	Various	Personal nature
DeVoge & Varble, Study 2 (1976)	Counseling	Participate in mock-family exercises	8-9	—	Individual	Instructor	—	Personal nature
Dillbeck (1983)	Statistics	Solve statistics problems	—	—	—	—	—	Instructor consults

Dollinger & Brown (1979)	Developmental	Simulate parent-child interactions	3	—	—	Various	Class critique
Eichler (1987)	Clinical/counseling	Participate in group therapy exercise	—	Lectures, readings, and examples	Instructor	Leaders	Personal nature
Elias (1993)	Community	Analyze community mental health problem	6*	Lectures, readings, and examples	Instructor	—	Instructor consults
Elliott (1993)	Psychology of women	Participate in debates	—	Lectures and readings	Instructor	Various	—
Enns (1994)	Personality	Reflect on cultural background	—	—	—	—	Personal nature
Ferraro (1990)	Introductory	Design personal space invasion study	4-6	Lectures	Instructor	—	Instructor consults
Fried (1988)	Aging	Develop list of stereotypes about the elderly	4-7	Examples	—	Recorder	—
Gardner (1991)	Marriage and family	Solve marital and family problems	6	Lectures	Instructor	Leader and recorder	Personal nature and groups arranged
Gnagey (1979)	Introductory	Produce research projects	6-10	Lectures and readings	Instructor and peers	Leaders	Groups arranged and instructor consults
Goethals & Demorest (1979)	Social	Participate in demonstration of risky shift	3-7	—	—	—	—
Goldstein (1993)	Counseling	Design/present workshop on an intervention	4-5	—	Instructor	—	Instructor consults and cohesion fostered
Gorman, Law, & Lindgren (1981)	Introductory	Apply theories to understand aggression	—	Lectures and readings	Instructor	—	—
Grigg (1974)	History of psychology	Conduct a research project	2-4	—	Instructor	—	—
Gronlund & Lewandowsky (1992)	Cognitive	Design television commercial	4-5	Lectures and readings	Instructor and peers	—	Instructor consults
Halgin (1982)	Group therapy	Participate in an experiential group	—	—	—	—	Cohesion fostered
Harper (1980)	Developmental	Develop research proposal	5-8	Lectures, discussion, and readings	Instructor	—	Instructor consults
Harris & Bechtold (1987)	Mass media	Discuss a list of provocative questions	5-8	—	—	Leader	—
Herzog (1990)	General	Role-play participation on ethics committee	5-7	—	—	—	—
Hess (1976)	Personality	Role-play personalized personality traits	8-9	Lectures	—	Various	—
Kite (1990)	Human sexuality	Discuss questionnaire	—	—	—	—	—
Kottke (1984)	I/O	Develop assessment instrument	5-8	Lectures, readings, and examples	Instructor, peers, and self	—	Instructor consults and grade criteria given
Lane (1988)	Clinical	Role-play clinical interviews	4	Lectures and examples	Instructor	—	Class critique and instructor consults
Lippman (1990)	General	Conduct literature review and research study	—	—	Instructor	—	Unique contribution
McCallum (1979)	Exceptional children	Devise three experiences for the class	4-5	Lectures	Instructor and peers	—	Grade criteria given

(Continued)

Table 1 (Continued)

Author and Year	Field	Brief Description	Size	Preparation	Graded	Evaluator	Roles	Other
Millard (1983a)	I/O	Survey morale of organization	4-8	Lectures and readings	Individual and group	Instructor and peers	—	Instructor consults
Millard (1983b)	I/O	Review literature and conduct interviews	5	—	Group	Instructor	—	—
Moeller (1985)	Developmental	Participate in debates	4	Lectures and readings	Individual group	Instructor	—	Groups arranged
Nigro (1994)	Developmental	Design children's game	2-4	Examples	Individual	Instructor	—	Grade criteria given
Ortman (1993)	Learning	Summarize and analyze book	4-5	Readings	Group	Instructor, peers, and self	—	Grade criteria given
Parrott (1992)	Personality	Discuss early recollections/birth order	—	Lectures	—	—	Recorder	Groups arranged
Rocklin (1985)	Research methods	Demonstrate two rating techniques	3-4	Lectures	—	—	—	—
Rosnow (1990)	Ethics	Evaluate research studies	—	Lectures and readings	Individual	Instructor	—	—
Shatz (1985)	Statistics	Analyze data	—	Lectures	—	—	—	—
Stevenson (1989)	Psychology of women	Review and evaluate recent books	2-3	Discussion and examples	Group	Instructor	—	—
Ulman (1980)	Abnormal	Develop and evaluate intervention program	4-6	Lectures	—	—	Leader, recorder, and speaker	—
Walton (1987)	Developmental	Develop consensus response to questions	—	Lectures and readings	—	—	—	Groups arranged
Wann (1993)	I/O	Apply concepts to fantasy organization	6	Lectures	Group	Instructor	—	Instructor consults and cohesion fostered
Wann (1994)	Social	Develop dramatic scripts describing research	4-6	Lectures and readings	—	Instructor	Various	—
Ward (1985)	Developmental	Analyze and critique media	6	Lectures, discussion, and examples	Group and individual	Instructor and peers	—	Instructor consults
Wesp (1992)	General	Design activity for introductory psychology	2-5	—	Group	Instructor	—	—
Whitten (1993)	Introductory	Describes cultural awareness activities	—	Lectures	Individual	Instructor	—	Groups arranged
Williams & Kolupke (1986)	Psychology and literature	Simulate conversation among theorists	5-6	Lectures and readings	—	Instructor	Various	—
Yoder (1979)	Research methods	Practice interviewing skills	3	Lectures and film	—	—	Various	—
Zeren & Makosky (1986)	General	Observe behavior using various methods	3-5	Lectures	—	—	—	Instructor consults

Note. A dash indicates that no information was presented in the article for this particular area. I/O = industrial/organizational.

^aMaximum.

involvement and reduce social loafing in group activities were not outlined in these articles. Authors seldom described complementing their evaluation of students' group work with peer- and self-assessment, promoting group cohesion, or designing activities in which students' unique contributions are necessary for successful task completion.

Finally, limitations of this study should be emphasized. Conclusions drawn from the review of articles published in *ToP* are restricted to the authors' written descriptions of strategies used to ensure group member participation. These authors may have tried to reduce social loafing, but they did not include this information in their descriptions. In addition, this review focuses only on possible social loafing during the activity; evaluation of the educational value of the group activities was beyond the scope of this article.

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Notes

1. I thank Lawrence Messé, Elaine Allensworth, Margaret A. Lloyd, Charles L. Brewer, and several anonymous reviewers for their helpful comments on a draft of this article.
2. Correspondence concerning this article should be sent to Steven A. Meyers, Roosevelt University, School of Psychology, 430 South Michigan Avenue, Chicago, IL 60605.