# Online Groups and Social Loafing: Understanding Student-Group Interactions

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## Abstract

This paper presents an overview of the psycho-social aspects of social loafing and free riding in a traditional and distance learning environment. A brief literature review and summaries of frequently cited antecedents and their mitigating factors are reviewed for application by instructors, designers, and administrators in distance education. Distance learning administrative issues related to providing support to instructors to address the cited antecedents are discussed.

As distance learning continues to grow in popularity with both traditional and non-traditional students, instructors and administrators are seeking ways to improve the online learning experience. One means of achieving this aim, and better prepare students for the corporate environment, is through the utilization of collaborative groups. Proponents of group work purport that students can learn valuable lessons regarding group communication and problem solving that are easily transferable to the work environment (Becker & Dwyer, 1998). Virtual groups are becoming a common component of the corporate structure. As work tasks become too complex for individual organizations or branches to manage, organizations are increasingly turning to virtual work groups to bridge the gap (Black, 2002). Working in groups is thought to significantly increase learning perceptions, problem solving skills, and help students achieve a higher level of learning than individual learning alone (Hiltz, Coppola, Rotter & Turoff, 1999). This is based on the theory of *social facilitation* . Social facilitation is simply the concept that people often perform better in the presence of others than alone (Cook, 2001). However, when discussing social facilitation, it is important to understand that the term has been used to summarize both the positive and negative aspects of groups. It is much more accurate to refer to *social facilitation effects* . Social facilitation effects refer to both social facilitation (better performance) and social impairment (worse performance) (Parks & Sanna, 1999).

Although distance education courses are increasingly incorporating various versions of cooperative and collaborative learning exercises, these group activities do not always meet with great student appeal or result in the higher learning expectations of the designers. It is not unusual to find that group work is often much more popular with teachers than with students (Mason, 1998). Group work requires increased time and dependence on others which is often in direct conflict with student perceptions of distance education and online learning as being an environment for independent learning. In fact, group work presents a set of problems for students

that include, but are not limited to, non-contributing group members, unequal workload, scheduling, and personal/social conflicts between group members (Becker & Dwyer, 1998). These problems occur in both the face-to-face and online environment.

It is precisely the nature of this social and psychological phenomenon that should inspire researchers and educators to pursue the impact and possible mitigating factors for their occurrence. In addition, administrators should consider what support can be provided to distance learning instructors who are utilizing groups in their curriculum. What follows is an examination of two specific psycho-social phenomena that occur within the group relationships: social loafing and free riding.

**Review of Literature**

*Social loafing* is the tendency to reduce individual effort when working in groups compared to the individual effort expended when working alone (Williams & Karau, 1991). *Free riding* occurs when an individual does not bear a proportional amount of the work and yet shares the benefits of the group (Albanese & Van Fleet, 1985; Jones, 1984). Kidwell and Bennett (1993) argued that social loafing and free riding actually shared a similar characteristic, in that each describes a person who is not providing the maximum effort due to either motivation or circumstance. They further claim that the significant difference between the two is the actual reason for the drop or lack of group participation.

Research on social loafing has revealed that individuals frequently exert less effort on collective tasks than on individual tasks (Karau & Williams, 1993; Latane, Williams, and Harkins, 1979). One of the first recorded reports of social loafing was by the German researcher Ringelmann in 1913. The *Ringelmann Effect* describes the inverse relationship between the size of the team and the effort expended. In a rope pulling experiment, Ringelmann noted that as the number of group members was increased, there was a decrease in overall performance. Ringelmann also discussed an experiment in which prisoners provided motive power for a flour mill. He reported that as more men were added, each man began to rely on his neighbor to furnish the desired effort. Some prisoners became content to let their hand follow the crank and some went as far as letting the crank pull their hand. He attributed this to a motivational loss (Kravitz & Martin, 1986).

Subsequent research confirms the existence of the social loafing phenomenon (Mulvey & Klein, 1998; Kerr, 1983; Williams and Karau, 1991; Weldon, Blair, & Huebsch, 2000; and Liden, Wayne, Jaworski, & Bennett, 2004). These researchers suggested that social loafing is a type of social disease which can have negative consequences for participants. It is perhaps this viewpoint that inspired the focus upon identifying the mitigating factors of social loafing.

Several schemas of categorizing social loafing antecedents have been developed over time (Kidwell & Bennett, 1993; Karau & Williams, 1993; George, 1995; and Comer, 1995). However, regardless of the research models developed or schemas employed, there appears to be a consistent list of variables that are associated with the social loafing literature. What follows is a brief explanation of some of the most frequently cited antecedents to social loafing and suggestions on how these antecedents may be mitigated to reduce the overall occurrence of social loafing in the online environment.

**Social Loafing Antecedents in Online Learning Groups**

**Creating Task Interdependence Among Group Members**

Creating a high level of task interdependence among group members is crucial to the success of any online group. Unfortunately, as an individual's work becomes more interdependent with another individual or group of individuals' work, students may find it more difficult to determine a sense of personal achievement. Karau and Williams (1993) suggest that individuals will be unlikely to exert extraordinary effort unless they view their individual task as meaningful. Research has also demonstrated a significant correlation between goal difficulty, group goal commitment, and group performance (Mulvey & Klein, 1998). Individuals will withhold effort, achieve rewards, and calculate greater benefits as long as they perceive that doing so will not affect their outcomes (Liden et al, 2004). Therefore, it is reasonable to infer that online group effectiveness will increase when members work on tasks that are mutually important to the group; each member believes that he or she is contributing to the end goal and all group members are cooperating.

Communicating and collaborating in a distance environment can be more difficult than face-to-face. Clarifying roles, responsibilities, and closely tracking/publicizing individual contribution to team efforts will allow online group members to gain a sense of personal achievement. In addition, instructors should emphasize that group members must share an understanding that teamwork is a prerequisite for accomplishing the end goals of the team. Instructors must ensure that all group members understand that their individual tasks are critical to the success of the overall group goal.

**Increasing Task Visibility Online**

Task visibility is simply an individual's belief that his or her effort is being observed by the supervisor (Kidwell & Bennett, 1993). Mullen (1983) proposes that individuals working on a collective task will lead to a decrease in self-awareness. He suggests that this lack of self-awareness will result in an individual's disregard of performance standards and engagement in less self-regulation. Black (2002)

suggests assigning team leaders and clearly defining individual roles within the group. Ensuring that distance learning group members establish performance targets, communication procedures, and methods for solving problems are methods used to increase task visibility and the individual's perception that others are pulling their fair share of the workload. Novice learners may particularly find it beneficial for the instructor to provide this guidance. This can be achieved by the creation of weekly milestones for large group projects, restriction of communication methods to ones that can be monitored by the instructor for participation (i.e., discussion boards), assigning roles with clearly defined responsibilities (i.e., leader, editor, researcher), and online peer evaluation of group members.

Peer evaluations can be utilized as a method of increasing self-awareness and awareness of performance standards throughout the life of the group project. A large majority of peer evaluations are conducted after the conclusion of group activities. Employing this type of

feedback may actually encourage negative behaviors by group members. Group members may seek to retaliate against non-performers at the end, rather than confront poor performers during the group exercise (Brooks & Ammons, 2003). Druskatt and Wolff (1999) reported that the benefits derived from group assessments are dependent upon timing. Therefore, Brooks and Ammons (2003) developed recommendations for assessments that include early implementation, multiple evaluation points, and specific evaluative criteria. By including multiple evaluation points, group members are aware that their contributions are salient and being observed by others. In addition, group members who are performing poorly are given several opportunities to increase their performance throughout the group experience. The results of Brooks' and Ammons' (2003) research indicated that students perceived a drop in free rider problems and viewed group experiences in a more positive light.

The distance learning administration can support faculty by providing sample evaluation forms and the technology support necessary to administer peer evaluations. Online task visibility can be further addressed through the establishment of group discussion boards where members are required to post scheduled personal contributions as outlined by the instructor or group. Group members could then evaluate their peer's work and provide feedback. Alternatively, each group could maintain a weekly log that outlines milestones, group/individual progress, and completion dates. Additional evaluation options include employing distance learning tools such as TeamSite or providing alternate peer evaluation options that are accomplished at multiple occasions throughout the life of the project. The overall idea of multiple evaluation points is to allow all group members an opportunity to identify and improve upon individual weaknesses throughout the project rather than be surprised at the end by negative peer evaluations.

It is vital that distance learning administers provide the technical support, and associated training, for faculty to enable them to increase task visibility. Utilizing supplemental or standard software options such as TeamSite, provides instructors with the means to organize students into groups and obtain useful statistics to determine the participation level and contributions of each student. It also provides students the ability to collaborate on group projects such as a jointly authored dynamic website with multi-media content. Other examples of collaborative technology that can increase task visibility are online journals, iChat, and synchronized Voice Chat. All of these provide recording features to determine participation and content. Simply providing technology to faculty is insufficient. Training and workshops must be provided by administration on how these technologies can be implemented to facilitate collaboration and cooperative learning.

**Student Perceptions of Distributive Justice**

Distributive justice is the perception of a fair distribution of rewards and compensations (i.e., money, grades) among group members. A belief that the distribution of awards is fair has been shown to be negatively related to social loafing (Liden et al, 2004). In the workforce, employees are rewarded for their task performance with a paycheck, promotion, and other non-monetary entitlements such as employee benefits. In the academic world, group participants are often limited in the rewards they receive for group participation and contributions. Grades and positive feedback may become a type of reward system for group performance. If individuals perceive an unfair distribution, they may adjust their individual work effort when considering the group size,

task visibility, and perceived loss of wages if dismissed (Kidwell & Bennett, 1993). Individuals will choose to withhold effort because they believe that the benefits of social loafing outweigh the cost of their lack of participation (Murphy, Wane, Liden, & Erdogan, 2003).

George (1995) studied the effects of rewards and punishments. She determined that rewards and punishments do not have a symmetrical effect on individual behaviors. Surprisingly, her research showed that a supervisor's contingent punishment did not appear to be a deterrent. Therefore, first stage deterrents such as reprimanding substandard performance are not very effective at deterring social loafing. In fact, noticing and reinforcing desirable behaviors was found to be much more effective in deterring social loafing. However, when group members are physically separated from the supervisor, it is difficult to observe individual contributions.

In the academic setting, possible methods for increasing a student's perception of distributive justice are: (a) utilizing a combined grading system of group, peer assessment and individual grades, (b) adding individual milestones that constitute a portion of an individual's grade, and (c) including group participation as a portion of an individual's grade.

Whether faculty are concerned about learning community collaborative efforts or group activities for individual courses, distance learning faculty will greatly benefit from additional administrative support in the form of: (a) workshops related to the assessment of online groups, (b) access to online examples of group evaluation rubrics, and (c) suggested resource articles on assessing students participating in online group activities.

**Student Perceptions of Procedural Justice**

While distributive justice refers to the distribution of rewards, procedural justice is the perceived fairness of the procedures or policies that surround distributive justice. Accounts of free riding in group projects are a common complaint among students who report dissatisfaction with group work experiences (Brooks & Ammons, 2003). Research has demonstrated a significant correlation between social loafing and procedural justice. An individual's perception of fairness in distribution procedures may influence the effort expended on task behaviors (Karau & Williams, 1993; Liden et al, 2004). One possible means in which procedural justice could be addressed in the distance learning environment is assigning individual grades to group members. These grades could be determined by a combination of the group grade, individual contribution to the final project, group meetings attendance, and the ability to meet scheduled individual submission requirements as assigned by the instructor or group. In addition, administrators should ensure that distance learning procedures are fair, equitable, and equally applied across all distance education courses.

**Selecting Online Work Group Size**

When determining an appropriate group size for online learning, instructors should consider the group goals and purpose (i.e., brainstorming, decision making, problem solving). Research has suggested that with the exception of brainstorming, computer-based groups are not more productive than face-to-face groups (Parks & Sanna, 1999). Although most computer-based groups are not demonstrating increased performance, it has not affected the popularity of these

groups within industry. This popularity may be due to travel cost savings and lost work time more than an increase in productivity.

When considering the group's purpose, it is imperative that one consider how group size may impact group outcomes. For instance, research in brainstorming groups has demonstrated that productivity is positively correlated to group size. A larger group size produces a more productive brain storming session (Dennis & Valacich, 1993; Valacich, Dennis, & Connolly, 1994). However, most other cases studies have suggested that increasing group size can have detrimental effects on student perceptions and group goal achievement.

In larger groups, individuals generally believe they make less of a difference, are less effective, and their individual contributions are less visible (Kerr, 1989; Kerr & Bruun, 1983). In addition, increased group size makes it more difficult to assess each individual's contribution to the group (Jones, 1984; Kerr & Bruun, 1981). Another detrimental effect of large groups is that cooperation tends to decline as groups grow (Kerr & Bruun, 1983; Komorita, Parks, & Hulbert, 1992) and feelings of self-efficacy decline (Kerr, 1989).

Studies suggest that in smaller group sizes, individuals may feel their contributions are more crucial to the success of the process than when they work in larger groups (Kidwell & Bennett, 1993; Hindriks & Pancs, 2001). As the visibility of each group member's effort decreases, that group member is more likely to reduce his or her effort. Studies manipulating the visibility of group members suggest that the propensity to hide in the crowd can be reduced by making tasks more identifiable with each group member (Williams & Karau, 1991). Other studies suggest that group members who believe that their group members are unable to perform the task to standard will increase their workload to compensate. It is important to realize that group size does not work in isolation, but rather in association with other factors such as feelings of enjoyment or feeling that one is making a difference (Parks & Sanna, 1999).

When considering how large groups should be, research studies suggest that unless the group is brainstorming, there is no significant gain in small groups larger than six. Hare (1981) suggests that an optimal small group size may be five. His research indicates that group satisfaction becomes an issue for even numbered groups due to the development of subgroups. For groups larger than five, group members may have fewer opportunities to contribute. In addition, Hare suggests that groups should be no larger than required to accomplish the group goals.

**Creating a Cohesive Group**

Group cohesiveness refers to the ability of the group to bond as a whole. Research suggests that individuals may exert less effort when working collectively because they feel their input is not essential to a high-quality group product (Kerr, 1983; Weldon, Blair, & Huebsch, 2000). The more cohesive the group, the more likely it is to accomplish its goals. According to the social exchange theory, when individuals perceive they are participating in a high-quality relationship, they will engage in reciprocal behavior (Murphy et al, 2003). If group members do not feel like they are close-knit they may be more inclined to engage in social loafing. However, if the group has a feeling of cohesiveness, the members may interpret social loafing as letting their fellow group members down (Liden et al, 2004). Black (2002) suggests that team building strategies

should be incorporated into team tasks and assignments. Online teams need to consciously strive to create an atmosphere in which the values and contributions of all members are encouraged and valued. Several methods that have been suggested to increase group cohesiveness are: (a) require high levels of individual accountability, (b) encourage group discussions, (c) ensure individuals receive meaningful and immediate feedback, (d) provide rewards for group performance, (e) provide performance data for comparison with other groups, and (f) make provisions for social validation (Michaelsen, Fink, & Knight, 1997). In addition, when online groups maintain the same members for a semester, group roles (i.e., leader, recorder, editor) can be rotated for each assignment. This provides all group members an opportunity to experience the unique requirements and contributions of each role.

## Reducing Perceived Coworker Loafing

Perceived coworker loafing refers to the extent that group members believe other group members are engaging in social loafing (Comer, 1995). Group members will base their actions on the perceived actions of their fellow group members whether or not the actions are actually occurring (Mulvey & Klein, 1998). If fellow group members are not perceived to be loafing, negative influences on other group members would not be expected. On the other hand, the mere perception of another member's social loafing (whether accurate or not) may result in negative effects on a group member's motivation and could result in social loafing (Mulvey & Klein, 1998).

The act of group members carrying a free rider or social loafer has been termed playing the *sucker role* . Avoiding playing the sucker role by reducing one's individual effort has been termed the *sucker effect* (Kerr, 1983). Evidence for the sucker effect was supported in research by participants who were led to believe that their partner, who had the ability to perform, was failing to do so (Kerr, 1983; Williams and Karau, 1991). These individuals subsequently reduced their individual efforts and performance. There are numerous references in the social psychological literature to support the notion that individuals tailor their personal behavior in light of their personal interactions and individual perceptions (Plaks & Higgins, 2000). In fact, research into stereotyping has revealed that group members may adjust individual behaviors in response to perceived stereotypes of fellow group members (Plaks & Higgins, 2000). Research findings suggest that, regardless of whether a task is interpersonal or individual, individuals seek to optimize their effort by accounting for contextual factors, whether perceived or actual (Plaks & Higgins, 2000).

## Controlling Group Domination

Under certain conditions, one or more group members may become more vocal and assertive than other more reserved group members. This can result in less assertive group members feeling intimidated and more likely to engage in social loafing. These members may feel that their contributions are not welcome, or that their content knowledge is insufficient to be useful to the group (Michaelsen, Fink, & Knight, 1997). Assigning group roles (i.e., leader, researcher, and editor) may mitigate this by providing defined contributions by each member.

## Conclusion

Although there are other possible antecedents and contributing factors to the psycho-social phenomenon of social loafing, the aforementioned antecedents should be considered by educators, designers, and administrators alike. Social loafing has a far-reaching impact on both traditional and distance education courses. However, special attention should be given to distance education courses where group interaction becomes a larger issue. Due to the physical separation, social isolation, and temporal distance associated with distance education courses, online group activities are much more difficult to organize and operate on a high-efficiency level. For instructors and designers who choose to utilize group activities, it will become imperative to learn how to optimize the learning experience for those involved. Administers can assist instructors in designing and implementing successful online collaboration by providing them with the technology to address these antecedents and the training necessary to effectively use the technology. In addition, faculty will benefit from online access to methods for: (a) organizing online groups, (b) assessment methods and rubrics, (c) supporting documentation that may be beneficial for students (i.e. role definitions), (e) samples from fellow faculty members, (f) peer evaluation forms and technology support for administering them, and (g) suggested resources for learning about online collaboration. This paper includes several recommendations that may be applied in the online environment to mitigate the occurrence of social loafing and free riding. Those recommendations include:

• Clarify roles and responsibilities

• Make tasks more meaningful for individuals

• Emphasize the importance of teamwork

• Ensure individuals feel they are contributing to the end goal

• Establish an "open door" policy

• Do not punish individuals for reporting team member's poor performance

• Utilize combination grades

• Group project

• Participation

• i. Attending group meetings

• ii. Discussion board

• iii. Chats

• Meeting group schedules/deadlines

• Require high levels of accountability

• Alternate group roles (i.e., leader, recorder, editor)

• Balance group members' skills and knowledge

• Encourage group discussions

• Ensure individuals/groups receive meaningful and immediate feedback

• Provide performance data for comparison with other groups

• Make provisions for social validation

• Required reading on group cohesion, cooperation techniques, and effective collaboration techniques

• Provide opportunities to increase collaborative efforts and publicize results

• Avoid even numbered groups and limit small groups to five members

• Limit group numbers to the minimum number required to accomplish group goals

• Consider group member schedules and time zones when establishing groups

• Ensure a strong instructor presence

Understanding the phenomenon of social loafing and free riding, its antecedents, and ways to mitigate the behavior is the first step to providing a positive learning experience. Utilizing these recommendations within the online learning environment is a first step in this direction. After all, the participants will be the final determinants of whether or not the event was a successful learning experience or a frustrating experience that they will attempt to avoid in the future. Social loafing is a contagious and culminating behavior. Those who have found occasion to participate in social loafing or free riding may indeed be more likely to repeat these behaviors when faced with similar situations. Therefore, it is imperative that instructors and designers learn to mitigate these behaviors before they become self-sustaining behaviors for all group work. In order to create a positive approach to corporate team work, instructors must create effective strategies to help learners develop the needed skills and acquire the necessary knowledge. Most importantly, instructors should strive to create positive group learning experiences while achieving these goals.

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