

# Free-riding in Group Work - Mechanisms and Countermeasures

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**Abstract** — Studies have shown that group work offers great possibilities for deeper learning compared to some more traditional teaching formats [1], but it can also lead to some new problems such as free-riding. Different aspects of group psychology and behaviour as well as inappropriate group sizes can be used to explain why and how free-riding develops in groups. With careful course planning teachers can seriously discourage students from free-riding. Especially the grading system should be carefully chosen not to promote free-riding but to stimulate deeper learning

**Index Terms** — group work, group assessment, free-riding

## I. INTRODUCTION

“Free-riding” in group work occurs when one or several members of a group contribute so little to a group project that if the same grade is given to all members of the group, the grade would be misleading and unfair.

In group work, two questions regarding the knowledge and contribution of each individual student arises:

- Has the student sufficiently understood the material?
- Have all students (equally) contributed to all the work?

As such, a student’s learning is perhaps more central to the educational system than a student’s contribution to a task. However, learning only by studying other’s work would indicate a superficial learning strategy rather than a deep learning strategy.

In this paper we first discuss the group psychology mechanisms behind free-riding and in a second part we discuss some possible countermeasures that can help teachers to prevent free-riding.

## II. GROUP PSYCHOLOGY IN FREE-RIDING

### A. Role models

The roles in which group members sort themselves and others are built mostly unconsciously according to the members’ “social map”, giving a feeling of orientation and safety. Some examples of roles are:

**The one with the attention monopoly** is very active and dominating. He is practical to have and therefore accepted by the group, but irritations are likely to occur.

**The ambitious** is very diligent, likes to steer and give protection to those sharing his opinions. Frustration of the other members can be an effect.

**The victim** thinks it is better when others do the work, because they know and are able to do much more. The group members can react e.g. with feelings of guilt.

**The punching bag** personalizes conflicts more than others. By that he/she makes a complex conflict clearer and releases the others of responsibility.

Which role people take is very dependent on their view of their ego. On one side there are people with a weak ego (“I-weakness”) and often low self-confidence, tending to take the role of the victim or punching bag and taking less workload. On the other side, there are people with a strong ego (“I-strength”) who are conscious of their knowledge, tending to take the role of the one with attention monopoly or the ambitious and taking more workload. This effect can be so strong that group members with “I-weakness” are unconsciously forced to free-riding. The supervisor should be aware of this and e.g. instead of only asking for results also ask the group about their own opinion of how the group works and “functions” together.

### B. Regressive Behaviour in Groups

In the context of group work, regressive means a non-constructive behaviour that often leads to that the group spends more time on something else than fulfilling the given goal. This often causes some of the group members to free-ride. Research shows that a considerably large part of the time in a group is spent on regressive behaviour. The authors of [5] identify four types of regressive group behaviour:

**Dependence.** The group has stopped working actively and is waiting for e.g. a supervisor to lead it to the goal or to give them more information.

**Fight.** The group identifies an outside enemy and direct their energy toward the fight against it. The enemy can be the teaching system, a teacher, etc.

**Escape.** This is often an unconscious cooperation between group members in order to make the secondary things to primary and in this way pushing the actual task to the background.

**Formation of pairs.** The focus is on the relations within the group. Group tasks loose importance to the group’s internal life aspects.

Supervisors can help by giving group members an opportunity to discuss the obstacles for them to function as a group and/or help each group member to regain individual responsibility for the work, and in that way prevent free-riding.

### C. The Influence of Group Size

From our own experience we know that the size of a group that we belong to has a great impact on our participation level.

**Table 1 Changing characteristics of groups [6]**

Number of members	Changing characteristics
2 – 6	Little structure or organization required; leadership fluid.
7 – 12	Structure and differentiation of roles begins. Face-to-face interaction less frequent.
12 – 25	Structure role differentiation vital. Subgroups emerge. Face-to-face interaction difficult.
25 - ...	Positive leadership vital to success, sub-groups form; increased anonymity. Stereotyping, projections and fight/escape occur.

Table 1 shows that small groups require little organization and the leadership tends to be fluid and interchangeable [6]. Everyone can make his/her voice heard and there are good possibilities to give feedback. As the group size increases, the need for organization increases and face-to-face interaction becomes less frequent. Role differentiation becomes more important since the group becomes more anonymous and the responsibilities of the members less obvious. Consequently, the solidarity and motivation in the group starts to decrease. In large groups, fight/escape situations (see Section II) are likely to occur. Moreover, it is interesting to note that the contribution level decreases exponentially as the number of group members increases [6]. In other words, the difference between the contribution of the highest contributor and the lowest contributor increases.

The conclusion is that free-riding becomes easier as the group size increases – unless there is a positive leadership with the ability to delegate the tasks in a fair way and keep the group united.

### III. PREVENTING AND DISCOVERING FREE-RIDING

#### A. Discovering and Preventing Free-riding Early

Though it is important that free-riding is discovered before grading group projects, it is much better to detect free-riding early in the project so that measures can be taken to get the whole group involved in the project again.

In [7] it is recommended to start all group projects off with a session of individual student self-reflection on group coordination issues. After this self-reflection, the students compare their views on the most important group coordination issues in a group and a classroom discussion. In larger projects with a strict work division it can be very useful for students to write down all the working time spent on the project in time sheets. The main goal is not to discover free-riders, but to be able to detect unfair work divisions early in

the project and to be able to make adjustments. This can also prevent conflicts in the group because some students do not see the amount of work put down by their co-workers.

The best form of follow-up is usually for the teacher to have regular short meetings with the different groups. In case of problems, it is important for the teacher to guide the group towards finding a solution for the problem themselves, without trying to impose a solution.

#### B. Discouraging Free-riding through Fair Group Project Assessment

For many students, achieving a good grade is the daily motivation for studying. When group work is graded on a written report, the students' optimal strategy is to let every student do the part he is best at, which is usually the part where he will learn the least. For everybody to get the best possible grade, the weaker students are encouraged to free-ride. In this case the assessment method actively discourages students from deeper learning.

To stimulate deeper learning and to discourage free-riding, the assessment method should check that all the students have understood the whole project. Another option is to use peer assessment within the groups [4, 8], which usually leads to a deeper understanding and to better work since most students are concerned about appearing foolish to their classmates [1].

The precise assessment methods should be clear from the start of the course and it should be clear if all students carry individual responsibility for the whole project or if it is acceptable that students are only responsible for some parts. Not only will this avoid discussions later on, it will also seriously discourage students from free-riding [9].

Most papers agree that a group project assessment should contain some individual component. But it is also important [3] that an absolute, and not a relative, grading system is used. In good group work, all students should stimulate the whole group to learn as much as possible, and not feel that they are competing for grades.

### IV. SUMMARY

We have studied why and how free-riding occurs in groups, and some means of preventing this. Many aspects of group psychology and behaviour can be used as an explanation or a help to understand why and how free-riding develops, is encouraged or even enforced in groups.

With good project follow-up from the teacher, group problems such as free-riding can be detected and prevented early.

Also the grading system is worth special attention. A poor grading system can sometimes promote free-riding and shallow learning, and is often unfair towards the students. For many students the highest motivation for studying is "achieving grades". Using assessment that stimulates deeper learning can use this motivation in a positive way.

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