

## Psychological Implications of Game Use as an Instructional Method

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In “The Use of Games as an Instructional Method,” McLeod (2002) argues for the use of games as an instructional tool, discussing his use of the method in his mathematics classes. He rightfully points out that games are adaptable, can mimic features of the “real” world, can encourage cooperation and communication, and can provide opportunities for students to become active participants in their learning process. He also provides evidence that the use of games can help to generate new connections between the material and the world outside the classroom.

There are, however, several assumptions that McLeod makes that should be examined. Perhaps the most important is his statement that in games, “anxiety is replaced with competitiveness through the motivation of being rewarded,” which leads to better retention of the concept. Research suggests that this may not always be the case. For example, individuals who attribute their success to an external cause (reward) may show a decline in self-esteem and an increased risk for depression (Lord, 1997). Thus, some students engaging in the games may tend to develop a mildly depressed state, which could, in fact, increase anxiety (Benton, Robertson, Tseng, Newton and Benton, 2003). This result is further complicated by the fact that the presence of rewards can lead to decreased interest in an activity (Lord, 1997).

McLeod’s assumption that anxiety is replaced with competitiveness is important for another reason. Competition can certainly serve as a motivator, but there are inherent dangers in its use. Competition can lead to decreased trust, a lack of cooperation, and a “winner-take-all” approach to problem solving (Kulhman and Marshello, 1975), all of which might be concomitants of anxiety. In fact, the presence of competition may actually increase the risk of anxiety, rather than replacing it.

Other variables can influence approaches to a competitive solution. For example, men tend to seek out equity in reward distribution while women tend to seek equality (Mikula, 1974). There is also evidence that while “teams” cooperate more than individuals in a competitive situation, the “loudest” voices in the team tend to have the greatest influence on decision-making (Lord, 1997). Thus, when introducing a competitive situation to the classroom, the instructor runs the risk of students focusing on the “fairness” of the process and outcome rather than the concept itself.

None of these observations argues against the use of games as instructional tools. However, faculty members must be aware that the introduction of a game will activate each student’s game “schema,” or set of expectations, about games and game behavior. This schema is likely to include the student’s positive or negative perception of “self” as game player. The faculty member must take time to prepare the class for the introduction of games, and, ideally, should create a situation where no one can really “lose.”

For several years, I have used the game RISK in my social psychology classes to illustrate the concepts of cooperation, competition, aggression, helping, alliance formation, and resource distribution. While the game provides an opportunity to examine all of these concepts, it also tends to elicit very strong emotional reactions in some students, such as extreme competitiveness and anger). To counter these reactions, I introduce the concept of game playing several class sessions before the actual use of the game. In these early discussions, I emphasize the need for the students to attend to their own behavior during the event and ask them to think about their responses. In some cases, I have asked students to serve as objective observers of each team’s behavior. This structure tends to move the focus of the game away from a concern about who will win or who will lose. Rewards are also offered, but I don’t provide specifics about what they will be. Again, the aim is to move the emphasis away from the outcome to the relevant concepts emerging from the game playing process.

Perhaps the most important element I introduce is to change the rules so that no one can really lose. Prior to the game, I list several rules about how resources can be distributed and what constitutes “winning.” One rule that I list is that I, as instructor, have the right to change the rules whenever I please. The last rule I list is that nothing is forbidden unless I say it is. The first rule provides me with the opportunity to manipulate the game as it proceeds, while the second gives students a great deal of control though they usually don’t recognize that fact until later in the game.

Finally, after the game is completed, I send the students home with a list of questions to answer that focus on how the game proceeded, including a question that asks them to explain why I changed rules during the game. The first part of the next class meeting is used to discuss these questions and to tie the game process to the various theoretical concepts.

Consistently, students tell me that this is one of the most powerful experiences they have in the class. And, having used the game over repeated classes, I have been able to discern patterns of behavior that I have been able to test for in later RISK games. This has, in turn, added to discussions of the experience in later classes. More recently, I have introduced a “murder mystery” game to examine the similarity of the group dynamics that develop to those that I have seen during RISK.

In this article, I have further elaborated on an article by McLeod (2002). While he is correct to argue for the use of games as an instructional tool, faculty members who choose to use them must be aware of the psychological implications of “games.” Preparation of students for this instructional tool, a change in emphasis from outcome to process, and subsequent discussion of related concepts are key to an effective use of this method in the classroom. With the increasing use of alternative instructional delivery methods, e.g., online courses, further analysis of this instructional tool is certainly necessary.

### References

- Benton, S., Robertson, J., Tseng, W., Newton, F., and Benton, S. (2003). Changes in Counseling Center Client Problems Across 13 Years. *Professional Psychology: Research and Practice*, Vol. 34, No. 1, as reported in *Monitor on Psychology*, [http://www.apa.org/releases/student\\_problems.html](http://www.apa.org/releases/student_problems.html).
- Kuhlman, D. and Marshello, A. (1975). Individual differences in game motivation as moderators of preprogrammed strategy effects in Prisoner's Dilemma. *Journal of Personality and Social Psychology*, 32, 922-931.
- Lord, C. (1997). *Social Psychology*. Orlando: Holt, Rinehart and Winston.
- McLeod, G. (2002). The use of games as instructional method. *Learning Matters*, 1 (Vol. 1), 34-42.
- Mikula, G. (1974). Nationality, performance, and sex as determinants of reward allocation. *Journal of Personality and Social Psychology*, 29, 435-445.