What is this study about?

This study examined the effects of different reward systems used in group learning situations on the math skills of African-American and White students.

The study analyzed data on 75 African-American and 57 White fourth- and fifth-grade students from urban schools in the northeastern United States.

All students participated in a 15-minute study session that involved learning about multiplication estimation. The study sessions occurred in three-person, racially-homogenous, gender-mixed groups.

The key outcome was the score on a 15-item multiple choice test that involved estimating answers to multiplication problems.

Students were randomly assigned to three different reward-system groups. The study measured effects by comparing the scores of students in these three groups.

What Different Reward Systems Were Contrasted?

- **Reward based on individual performance**: Students were told they would receive a reward if their individual performance was better than other students.

- **Reward based on group performance**: Students were told they would receive a reward if their group’s performance was better than other groups.

- **Communal learning, no reward**: Students were encouraged to work hard and help each other because of their common bond; no reward mentioned.

What did the study find?

African-American students who participated in the communal learning intervention scored statistically significantly higher than those offered a reward based on individual performance. There were no significant differences in test scores between African-American students offered a reward based on group performance and the other two research groups (those offered an award based on individual performance and those offered communal learning).

White students offered a reward based on individual performance scored statistically significantly higher than those in the other two research groups (those offered a reward based on group performance and those offered communal learning). The difference in test scores for White students offered a reward based on group performance and those offered communal learning was not statistically significant.

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2. This is a revised version of a quick review released in March 2010. The language used to describe the communal learning intervention and its accompanying results has been modified to more accurately reflect the intervention content.

Quick reviews examine evidence published in a study (supplemented, if necessary, by information from author queries) to assess whether that study’s design meets WWC evidence standards. Quick reviews rely on the effect sizes and significance levels reported by study authors. The WWC rating applies only to the summarized results, and not necessarily to all results presented in the study.