

Research Results

San Francisco Unified School District's Summer School, San Francisco, CA, 2000

Abstract

In the summer of 2000, San Francisco Unified School District used Cognitive Tutor Algebra I in six schools as part of their summer school program. Results showed a high rate of success, and the program proved to be equally effective with students from different ethnic backgrounds.

Study Design:

No comparison group

Measures:

Teacher report/course grade

Study location:

Summer schools; San Francisco Unified School District; San Francisco, CA

Study conducted by:

San Francisco Unified School District

Course assessed:

Cognitive Tutor Algebra I

Data collection date:

2000

District Information:

Type: Public, urban
 Students Enrolled: 63,305
 % of Students Qualifying for Reduced Lunch: N/A

Ethnic Breakdown:

African American: 16%
 Asian: 48%
 Caucasian: 13%
 Hispanic: 21%
 Indian: 1%

Participants

Participants were students in San Francisco Unified School District, who attended summer school at one of six high schools. Some students were placed in summer school after having failed the first year of College Preparatory Mathematics during the regular school year. Other students attended the summer school as an intervention after having failed Advanced Algebra (a second-year algebra course) during the regular school year. In all, 245 students participated in the program. Data was not received from three classes, leaving a total of 212 students.

Method

All students took Cognitive Tutor Algebra I as their summer school curriculum. Pass rates were reported and categorized by ethnic group.

Results

Overall, 76% of students passed the summer school course with a grade of "C" or better. Results for different ethnic groups are shown in Table 1. A χ^2 analysis provides no evidence for statistically different performance among the different ethnic groups, $\chi^2(5)=3.4$, $p>.1$.

	African-American	Hispanic	White	Chinese	Filipino	Other
# of Students	68	69	12	25	25	13
Passing Rate	75%	64%	75%	96%	84%	92%

Table 1: Passing rates for different ethnic groups

Discussion

The fact that 76% of students who had previously failed an Algebra or Advanced Algebra course were able to pass the summer school course suggests that Cognitive Tutor Algebra I was an appropriate course for the summer school. Our analysis found no differences among Ethnic groups, but we were limited by the fact that only group means data was available. A more powerful analysis may have found statistically significant differences among the groups. Additionally, pass rates for previous years were not available as a basis for comparison. Even so, the pass rate for all groups was high enough to suggest that the program was successful with all ethnicities.

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