

Ninth Grade Performance Comparison Between Traditional Curriculum and Synergistic Systems

Synopsis of Study Review by Brenda LeTendre, Ed.D.

Data Provided by: Curriculum Research and Evaluation, Inc.

Location: Hartford Public High School, Hartford, Conn.

Date: 1998-1999

Number of Participants (N) = 1998 Cohort: 435, 1999 Cohort: 326/330

Study Overview

Curriculum Research and Evaluation, Inc. (CRE), commissioned by the Connecticut Business and Industry Association, examined the first-quarter grade scores in English, math, and science of both the 1999 cohort of ninth graders who experienced Synergistic Systems and the previous year's (1998) cohort of ninth graders who did not experience Synergistic Systems. CRE also conducted interviews and reviewed school documents and records.

Significant Findings

CRE researchers compared the English, math, and science grades for students in the two cohorts: the 1998 ninth graders who did not experience Synergistic Systems and the 1999 ninth graders who did experience Synergistic Systems. Statistical analysis found significant differences between the mean grade scores for the 1998 and 1999 cohorts in English, math, and science, with significantly higher means for the 1999 cohort that experienced the Synergistic Systems at Hartford Public High School. These findings indicate the changes at HPHS had a positive impact on students. The 1999 cohort included scores for all ninth graders, 237 of whom experienced the Synergistic Systems lab and 93 who did not.

Strengths Identified by This Study

"CRE's preliminary analysis of 9th grade student performance data shows that in fall 1999, 9th grade students on average realized higher grades in English, math, and science – with substantially higher grades in science. On the basis of these results, it is plausible to conclude that the increase in grades is due at least in part to the newly implemented curriculum – especially the science curriculum." Synergistic Systems was implemented as a science curriculum at HPHS.

Teachers, staff, and other observers indicated that "students find the Pitsco labs to be highly motivational." Furthermore, the researchers note that "Preliminary analysis of student performance data suggests that the students not only like the new science labs, but also that they are learning English, mathematics, and science."

The researchers conclude "Thus, it is plausible to assert that the Pitsco curriculum – because it is a highly motivating and integrated-disciplines approach to teaching science – is a main contributing factor to overall improvement in mean scores for all 1999 students in English, math, and science."

	English			Math			Science		
	n size	Mean	Standard Deviation	n size	Mean	Standard Deviation	n size	Mean	Standard Deviation
1998 Cohort	435	65.32	23.39	435	57.23	26.54	435	59.16	24.37
1999 Cohort	330	70.91	20.85	326	63.06	20.17	330	73.90	15.18