

OVERVIEW

THE AUDITOR
STATE OF HAWAII

The Feasibility of Applying the Micro-Financial Analysis Model to Expenditures for Public Education in Hawaii: What Reaches the Classroom?

Summary

In FY1992-93, the Legislature appropriated almost \$1 billion or 33 percent of Hawaii's general revenue funds to support public school education for over 176,000 children. To determine the effectiveness of these expenditures, the Legislature wanted better information on where and how the moneys were spent. It requested that the State Auditor study the feasibility of applying a model to analyze expenditures for public education.

The State Auditor engaged Dr. Bruce S. Cooper, a professor at Fordham University School of Education, New York City, who has developed a Micro-Financial Analysis Model, formerly called the Cascade Model. The model is currently in use in over 50 school districts in 15 states. It tracks expenditures from administrative costs down to classroom instruction costs on a school-by-school basis.

The model separates costs by location and by function. Costs by location are separated into central office costs and school site costs. Costs by function are separated into those for (a) administration, (b) facilities and operations, (c) teacher support and development, (d) pupil support, and (e) instructional support or classroom instruction.

Using expenditure data for FY1992-93, we found that the Micro-Financial Analysis Model could be applied to Hawaii public school expenditures to generate useful information. The model could separate costs for the state office, seven district offices, and 234 schools by the five functional categories.

Excluding expenditures of \$51.98 million for adult education, A plus, summer school, and certain special schools, the analysis tracked \$940.4 million in direct costs for public education. Using a total student enrollment of 176,748, we find that the per pupil cost of public education in FY1992-93 was \$5,320 or slightly above the national average of \$5,209 for FY1991-92 reported by the National Center for Education Statistics.

Central office costs of the DOE state office and seven district offices accounted for 16.3 percent or \$152.9 million of the public education moneys tracked by the model. The DOE contended, however, that only \$56.2 million or 6 percent of the total was for central operation costs; it attributed the remaining \$96.7 million to expenditures made for the schools, such as utility costs. Dr. Cooper finds that the 6 percent is unreasonably low for a centralized school system and reports that 12 percent is the norm for central office costs.

School site expenditures were \$700.1 million or 74.5 percent of the moneys tracked. When costs attributed by the DOE state and district offices, DOH, and DAGS are

added, the schools accounted for \$884.1 million or 94 percent of the costs tracked. The analysis also showed that of the \$884.1 million about \$634.3 million or 72 percent was reaching the student and classroom.

In terms of functions, the analysis showed that of the \$940.4 million tracked, about \$81.6 million or 8.7 percent was spent on administrative functions by the state office, district office, and schools. The proportion spent on administration was higher at the state office at 63 percent of its costs than at the district offices at 36 percent of their costs. Costs for instructional support were proportionately higher at the district offices. This was expected because of their closer relationship to the schools.

Costs for administration, facilities and operations, and teacher development constituted \$1,610 per pupil or 30.3 percent of the total system per pupil cost of \$5,320. Average cost for both instructional support and classroom instruction was \$3,710 per pupil or 69.7 percent of the system per pupil cost. The average cost of classroom instruction alone at school sites was \$3,130 per pupil or 58.9 percent of the system per pupil cost. This means that about 60 cents on the dollar was reaching students in the classroom, an amount in keeping with other school systems that Dr. Cooper has studied.

We find that the analysis model would be a useful tool in tracking expenditures on a regular basis at all school levels. Decision makers could use the data to identify areas where the use of resources could be improved or to compare school site expenditures with performance outcomes. Dr. Cooper found that schools that put more resources into classroom instruction do significantly better.

We emphasize that this application of the model is only a first step to understanding and identifying school expenditures. The accuracy of the data provided and allocated by the DOE have yet to be verified.

Recommendations and Response

We recommend that further research be done at school sites to see what resources expended by the state and district offices actually translated into staff and programs on site. We also recommend that the DOE build the Micro-Financial Analysis Model into its financial management system to enable schools, districts, and the state office to track and analyze expenditures on a regular basis. We further recommend that the department use data from the analysis model to do strategic planning and to assess the relationship between the use of resources and student outcomes.

The DOE responded that it disagrees with many statements in the report. It says that it also does not concur with the recommendations to incorporate the micro-financial analysis model with its own financial management system or to use the resulting data for strategic planning or for information on student outcomes. It says it uses the U.S. National Center for Education Statistics (NCES) reporting system which it believes to be more comprehensive than the analysis model. We note, however, that the NCES system collects data on higher levels and not on a school-by-school basis. The department concurs only with the recommendation to collect good data.

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