

# ECONOMIC EDUCATION IN HAWAII: A HISTORICAL SURVEY

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## The Early Years

Attempts to systematize economic education in Hawaii date from June of 1951, when over sixty teachers, businessmen, farmers and other citizens of the Hamakua-coast region of the island of Hawaii got together for a two-week exploration of the "facts of our national and Territorial economy, the economic problems of the area, and how to develop classroom materials on these subjects."<sup>1</sup>

This two-week economic education "workshop" appears to have been a spontaneous, grassroots response to a growing concern that citizens — especially school children — did not have a clear understanding of the fundamentals which underlie the national and Territorial economies. When a second workshop on economic education was scheduled for Kona, an editorial in *The Honolulu Advertiser* (October 24, 1951), lauded Big Island teachers for going "beyond the mere fulfillment of duty" in their attempts to bring a clearer understanding of local and national economic issues to their students.

This grassroots movement on the island of Hawaii, along with encouragement from the newly-formed Joint Council on Economic Education, based in New York, sparked the creation of the Hawaii Economic Education Advisory Council (HEEAC) in early 1952. The council was composed of local business, labor, government and educational leaders, and was chaired by W. Harold Loper, Superintendent of Schools for the Territory.\*

The goals of the HEEAC, as announced in an early pamphlet, were: (1) the education of teachers to the contemporary realities of the economic system through workshops, seminars and field trips; (2) the education of business and other elements of the community to the problems and requirements of an effective economic education program in the schools, and (3) the development, by our own professional educators in Hawaii, of actual units of classroom

work for all levels in our schools to give students a realistic grasp of our productive and distributive systems.<sup>2</sup>

The HEEAC moved quickly to raise money to finance a series of economic education workshops for teachers on Oahu and the Neighbor Islands. A series of eight pamphlets was published, covering the major economic areas of the Territorial economy. In addition, an Office of Economic Education was formed within the Department of Public Instruction (DPI) and charged with integrating economics into the social studies curriculum.

Things went along so quickly and well that by early 1954, Dr. G. Derwood Baker, Director of the national Joint Council on Economic Education, was moved to report that: "I have covered a great deal of territory in this cause during the past five years and I do not hesitate to say that I feel that in Hawaii, you have the strongest organization in the country."<sup>3</sup>

During the 1950s and into the early 1960s, the HEEAC and DPI sponsored occasional day-long institutes throughout the State, as well as intermittent summer workshops under the auspices of the University of Hawaii-Manoa.

In 1959, the HEEAC and the DPI sponsored administration of the Alft Test of Economic Understanding to 12,000 high-school seniors and found that median scores for Hawaii students were well below those of Mainland students.<sup>4</sup>

## The Hawaii Joint Council on Economic Education

It took until 1964, however, when HEEAC changed its name, drew up a formal constitution and became an affiliate of the national Joint Council on Economic Education, before a comprehensive five-year plan, stressing in-service education, was developed.

The following year, the Hawaii Joint Council on Economic Education (HJCEE), as it was now called, concluded an agreement with the University of Hawaii-Manoa, and the State Department of Education (DOE), whereby HJCEE would raise \$40,000 to \$50,000 per year over a five-year period for the support of economic education. The DOE, for its part, agreed to evaluate and revise its social studies

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\*Information regarding the activities of HEEAC and its successor, the Hawaii Joint Council on Economic Education, was obtained from the files of the Center for Economic Education, University of Hawaii-Manoa.

curriculum, K-12, in order to give proper attention to economic concepts and cooperate with the HJCEE in setting up in-service courses and workshops. The University agreed to appoint a faculty member who would devote the major portion of his time to the administration of the economic education program.

The program was housed at the University as the Office of Economic Education, and during the period 1965-1970, over 200 elementary and secondary teachers received in-service training through a series of three-week workshops. Emphasis in these workshops was placed on acquainting teachers with the basic concepts of economics and familiarizing them with economic policy issues, such as inflation, unemployment and balance of trade. Workshop staffs were composed of economists from Hawaii and the Mainland.

In 1968, a second standardized economics test was administered to 2,151 high-school seniors who had not had a course in economics. The mean scaled score for Hawaii students was 14 out of a possible 32 points. On a national basis, the mean ranked at the 26th percentile.

In light of the obvious need for more economic education, the HJCEE, University of Hawaii-Manoa, and the DOE renewed their agreement to support economic education for another five years.

As part of its revision of the secondary social studies curriculum, the DOE specified economics, along with U.S. History and American Problems, as one of three "minimum electives" which should be "considered for inclusion in a school's total offering of courses" at the 11th- and 12th-grade levels.<sup>5</sup>

Both HJCEE and the University shifted the focus of their programs away from teacher education toward developing inexpensive, innovative teaching aids. Informal follow-up surveys conducted in 1969 and 1970 had indicated that many of the teachers who had taken economic in-service courses were *not* teaching a significant amount of economics in their classrooms. According to these teachers, the main reason for this was a lack of available teaching materials.

### Recent Programs

In an attempt to overcome this problem, the Office of Economic Education developed a short economics "textbook" entitled *The Adventures of Primero Dinero*. Using a comic book format, *The Adventures of Primero Dinero* covered basic concepts such as scarcity, costs,

supply, demand and the role of prices and profits in a market economy. It was billed as "an extremely flexible vehicle for the transmission of knowledge about economic concepts" which "can be used on any grade level, 9-12".<sup>6</sup>

The publication was very well received. Over 12,000 copies were sold or otherwise distributed to local intermediate and high schools during 1970-71. A Mainland publisher bought the copyright in 1972 and *Primero Dinero* has since sold over 100,000 copies nationally.

The success of this first curriculum development endeavor encouraged the Office of Economic Education to undertake the development of a curriculum resource guide entitled *Hawaii's Economy* in 1972. *Hawaii's Economy* was published and distributed by the DOE and is currently undergoing revision. During the summer of 1972, a three-week in-service workshop for elementary school teachers was conducted by Dr. Lawrence Senesh, author of the popular social studies program, *Our Working World*.

Early in 1973, the Office of Economic Education became the "Center for Economic Education" when it met national JCEE criteria of program effectiveness. These included research, preparation of teaching materials, teacher training and overall budget.

That very same year, HJCEE ran into financial problems and failed to raise any additional monies to support the programs of the Center for Economic Education (CEE). As a result, plans for a summer in-service workshop were dropped and no new educational development activities were undertaken.

The following year, however, the program rebounded behind strong leadership from the HJCEE finance committee which raised over \$23,000. Day-long teacher "institutes" were held on Oahu and the Neighbor Islands, a three-week summer workshop was conducted for 35 teachers, and the development of a new economics comic book entitled *Superheroes of Macroeconomics* was begun.

By 1976, the programs being implemented by the CEE included one-day teachers institutes on Oahu and each of the Neighbor Islands, stressing teaching activities and methodology, a summer workshop for 97 teachers, and the development of an economic history of Hawaii, in comic book form, entitled *The Saga of Ihu Nui*.

More teacher in-service programs were offered

throughout 1977, including day-long institutes on "Teaching Economics in American History" and "The Economics of the Energy Problem," and a summer workshop for 64 teachers. In addition, the CEE developed an instructional-aid package for 11th- and 12th-grade economics classes entitled the *Hawaii Economics Project*.

Current CEE plans are for two three-week workshops during June and July 1978. One will be exclusively for elementary teachers; the other, for secondary teachers. Participating teachers will receive extensive follow-up from the CEE in establishing courses and in obtaining and utilizing appropriate teaching materials.

### Recent Empirical Findings

In the fall of 1977, the CEE embarked on a project to measure the level of economic literacy among high school students in the State of Hawaii. For that purpose, the Test of Economic Understanding (TEU) was administered to nearly 1,500 high school students, both in private and public schools on Oahu and the Neighbor Islands, before and after they took a course dealing entirely — or, in part — with economics. Information was also gathered about the socio-economic background of the students, the level of economic training received by their teachers, the nature of the classes taught (Economics, General Business, Consumer Education, etc.) and the type of instructional aids used.

Table 1 reports on the scores of the TEU before (pre-test) and after (post-test) students took a course covering economics.\* The national averages are reported as well. Hawaii's mean on the pre-test is about 4 points below the national average. Our sample, however, included students from 9th- to 12th-grade, while the national average is based on 12th-graders only. Looking only at Hawaii's 12th-graders, the difference is reduced to about 3 points. On the post-test the difference between Hawaii's and the national average increased to more than 5.5 points, or about 5 points for 12th-grade students.\*\*

The results point to two problems. First, the degree of economic literacy in Hawaii is below the U.S.

\*Since both test forms A and B of the TEU were administered, the reported scores in this article are scaled scores (maximum possible: 32). This way, the results on both test forms are comparable and can be combined for analysis. The conversion table can be found in the TEU Interpretative Manual. 7

average to a considerable extent. On a percentile scale, Hawaii would figure in the lowest 20 percent. Secondly, the effectiveness of economic instruction is also below national average, since Hawaii trails more below the U.S. mean for the post-test than for the pre-test. These two problems are quite distinct and require different actions to remedy the situation. The CEE project investigates both aspects. In this part of the article we would like to report some findings only with respect to the instructional effectiveness issue, as this is an area where the CEE has been active for some time, and, as we hope the results will suggest, with some degree of success.

Table 1  
TEST OF ECONOMIC UNDERSTANDING SCORES  
HAWAII AND NATIONAL AVERAGES

	HAWAII			U.S. MAINLAND		
	Number of Subjects	Mean	Standard Deviation	Number of Subjects	Mean	Standard Deviation
Pre-test	1423 (402)*	12.52 (13.62)*	4.06	1834	16.60	4.29
Post-test	1233 (402)*	14.33 (15.08)*	4.70	4601	20.01	5.03

Student's learning performance, as measured by the difference between post-test and pre-test scores (hereafter called "gain score"), is influenced by the nature of the course to which they are exposed in studying economic principles. In our sample, students who took a specific economics or a general-business course had higher gain scores than average. Table 2 lists the gain scores per type of course. The difference between those is statistically significant at the .01 level (F-ratio = 11.37).

Teaching experience is another important variable

\*\*The national post-test average is based on twelfth-graders who completed a minimum of 12 weeks of instruction on economics. In our sample, not all students met the criterion. The average post-test score for students who took a 12-week course in economics was 16.76, a little more than 3 points below the U.S. average.

determining students' gain scores on the TEU. In Table 3 students were grouped according to the number of years their teachers had taught economics courses. Clearly, teacher experience is beneficial to student learning. We tested for the difference in gain scores between students who had teachers-with-x-years-or-less experience and those who had teachers-with-more-than-x-years experience. At  $x = 3$  years, the difference ceased to be statistically significant, suggesting that teaching experience (like many other things) is subject to diminishing returns.

Table 2  
GAIN SCORES PER TYPE OF COURSE

Type of Course	Gain Score	Number of Subjects
General Business	3.05	55
Economics	2.62	463
World Studies	1.07	44
Sociology/Ethnic Studies	.88	164
U.S. History	.83	100
Consumer Education	.79	97
American Studies	.53	71
Average	1.74	994

Table 3  
GAIN SCORES ACCORDING TO TEACHER EXPERIENCE

Experience in Teaching Economics (No. of years)	Gain Score	Number of Subjects
None	.51	306
1/2 or less	.69	378
1 or less	.81	462
1 1/2 or less	1.23	622
2 or less	1.44	714
3 or less	1.60	758
More than 3	1.97	300

As mentioned, the CEE promotes an instructional aid package, entitled the *Hawaii Economics Project*, which combines detailed outlines of economic lessons, grouped into units, with the use of the two

comic books, *The Adventures of Primero Dinero* and *Superheroes of Macroeconomics*. The students who were exposed to this material had an average gain score of 2.04. Students whose teachers used other or no instructional aids had an average gain score of .79 or 1.25 points less. The difference is statistically significant at the .01 level. After controlling for the effects of grade level, teacher's experience, and CEE workshops attended by the teacher (see below), this difference reduced to .69.

The quality of education in economics might also depend on how much the teacher was exposed to economics instruction. We grouped students according to the number of economics courses their teachers took at the college level. While this variable helped explain the level of the post-test score, there were no significant differences in gain scores between the groups.

We also grouped students according to whether their teachers had taken one or more summer workshops in economics sponsored by the CEE. The students of teachers who had taken these workshops obtained an average gain score of 2.06; students of teachers who had not taken these workshops obtained an average gain score of .58, a difference of 1.48 points, significant at the .01. After controlling for the effects of grade level, teacher's experience, and instructional aids, this difference reduced to .95.

It may seem surprising that college-level economics courses produce no significant difference in teaching effectiveness (as measured by the TEU gain score), while the CEE workshops do. It must be remembered, however, that CEE workshops are specifically geared to helping high-school teachers improve their ability to *explain* economic concepts at the high-school level. College courses have a broader goal as the emphasis is on explaining economic theory and its applications in general. In addition, when the teachers go back to work, the workshop material is still fresh in their memory, while college courses are several years in the past.\*

At the time of the post-test, students also responded to a survey about their attitude towards

\*This finding is in line with the results of the "Des Moines" study undertaken by Davidson and Kilgore<sup>8</sup> which concluded that familiarizing teachers with instructional materials and methods may be more important than economic content. See also, the survey paper by Dawson.<sup>9</sup>



different aspects of economic life, viz., government intervention, profits, business in general, capitalism and labor unions. Students recorded their responses to each item of the survey on a scale of one to five, with five reflecting the most positive attitude towards the concept in question.

The results of this attitude survey are presented in

Table 4  
ATTITUDE SURVEY RESULTS

Attitudes towards:	Average	Number of Subjects	T-test for Difference from 3
Government Intervention	3.15	1007	t = 10.0
Business	3.01	1005	t = 0.67
Profits	3.37	1002	t = 21.76
Capitalism	3.31	1000	t = 20.67
Unions	3.01	1005	t = 0.58
Economic Reality	3.17	985	t = 21.37

Table 4. Attitudes toward profits, capitalism and government are significantly positive (i.e., greater than 3). Attitudes towards business and unions can be labeled neutral. All 30 statements of the attitude survey together can be thought of as reflecting a person's attitude towards economic reality and some of its pillar institutions. In our sample, this attitude was slightly positive.

We correlated students' scores on the survey with their gain score and found a low, but significant (at the .01 level), correlation (correlation coefficient  $r = .09$ ). Of the subscores, only capitalism correlated significantly with gain scores ( $r = .09$ ). Attitude towards capitalism correlated much higher though with pre-test scores ( $r = .36$ ) and post-test scores ( $r = .39$ ). A positive attitude towards profits also correlated significantly with pre- and post-test scores ( $r = .15$ ,  $r = .17$ , respectively). This may suggest that a positive attitude towards certain aspects of economic reality is instrumental in the understanding of economics. Alternatively, of course, it may simply show that the TEU questions are biased towards the concepts of profits and capitalism. Further research will have to reveal the determinants of these attitudes and the exact nature of the causality involved — do

attitudes determine, in part, the score on TEU, or does the instructional methodology affect attitudes? On the other hand, it is equally possible that a common set of variables (a student's socio-economic background, for example) influences attitudes towards economic phenomena as well as the level of economic understanding.

### Summary and Implications

Although a significant amount of time and effort has been put into economic education programs in Hawaii over the past twenty-five years, Hawaii still lags behind the rest of the United States in terms of economic literacy.

In all fairness to those involved in the attempt to increase the level of economic understanding, it must be pointed out that the amount of money spent in this endeavor has been relatively small; an average of about \$15,000 per year, net of rental expenses provided by the Department of Education and the University.

While it is impossible to say where Hawaii would stand in the absence of the kinds of economic education programs which have been carried out in the past, it seems clear that past in-service programs have not had a dramatic impact on improving the economic literacy of Hawaii's school-age population.

Up until the early 1970's, however, in-service programs were carried out without much follow-up. There was no separate economics course within the public school curriculum, and little was available in the way of teaching materials.

The empirical research reported on in this paper points at the importance of these and other variables in affecting student performance in learning economics, as measured by the TEU gain scores. It was found that the number of years of teaching experience and teacher attendance at in-service workshops, with emphases on the use of materials and instructional methodology in economics at the high-school level, positively affected their students' gain scores.

The number of college-level courses in economics teachers had taken, on the other hand, did not seem to have a significant effect. In addition, the type of course in which students were exposed to economics, and the kind of instructional aids used were important determinants of gain scores.

The positive aspect of these findings is that several

variables were identified which can be affected by appropriately-designed programs, such as an increase in the number of twelve-week courses in economics or general business offered by high schools in Hawaii, and of improving the availability of instructional aids such as the *Hawaii Economics Project*. Increased teacher participation in workshops of the kind the CEE organized during the past few summers is also a promising vehicle for improving student learning of economic principles.

With those findings in mind, we feel somewhat entitled to look upon Hawaii's low level of economic literacy, not as an insurmountable problem of lagging behind, but rather as a challenge which can be met with success.

### Footnotes

<sup>1</sup>"Economic Education in Hawaii's Schools," in *Paradise of the Pacific*, Vol. 64, No. 6, June 1952, p. 30.

<sup>2</sup>*Economic Education in Hawaii*, New York; Joint Council on Economic Education, 1952, p. 2.

<sup>3</sup>*Economic Education: An Important Educational Goal in Hawaii*, Honolulu: Hawaii Economic Education Advisory Council, 1955, p. 5.

<sup>4</sup>Department of Public Instruction, Territory of Hawaii, *Memo from Stanley Miyamoto to Walton Gordon, Superintendent*, August 22, 1961.

<sup>5</sup>*Secondary Social Studies Program Guide*, Hawaii State Department of Education, 1971, pg. 32.

<sup>6</sup>Stephen L. Jackstadt and Yukio Hamada. *The Adventures of Primero Dinero: Teacher's Guide*, Honolulu: Hawaii Joint Council on Economic Education, 1971, p. 1.

<sup>7</sup>Committee for Measurement of Economic Understanding. *Test of Economic Understanding Interpretative Manual and Discussion Guide*, Chicago: Science Research Associates, 1964.

<sup>8</sup>Donald Davidson and John Kilgore. "An Evaluation of Second-Grade Economics Material," in *Research Papers in Economic Education*, New York: Joint Council on Economic Education, 1972.

<sup>9</sup>George Dawson. "Research in Economic Education at the Pre-College Level," in *Perspectives on Economic Education*, Proceedings from the National Conference on Needed Research and Development in Pre-college Economic Education, February 12-14 1976, New Orleans.

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