DOCUMENT RESUME

ED 215 185 CE 032 010

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TITLE A Cost-Effectiveness Comparision of Two Types of Occupational Home Economics Programs in the State of Kentucky. Final Report.
INSTITUTION Kentucky State Dept. of Education, Frankfort. Bureau of Vocational Education.
SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, D.C.
PUB DATE Dec 81
NOTE 42p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Child Care Occupations; Comparative Analysis; *Cost Effectiveness; Employer Attitudes; Followup Studies; *Food Service; *Occupational Home Economics; Outcomes of Education; Participant Satisfaction; *Program Costs; Program Design; *Program Effectiveness; Secondary Education; State Programs; Student Attitudes
IDENTIFIERS *Kentucky

ABSTRACT

A study compared the cost effectiveness of secondary child care and commercial foods occupational home economics programs in Kentucky. Identified as dependent variables in the study were program effectiveness, cost efficiency, and cost effectiveness ratio. Program expenditures, community size, and program age were considered as independent variables. Using the Kim and Harris Cost Effectiveness Analysis Model for Secondary Vocational Programs, researchers administered questionnaires to persons employing completers of, and persons completing, 9 child care and 11 commercial foods programs, computed individual program costs, and determined cost effectiveness ratios for each program based on program effectiveness and program cost data. After identifying the most and least effective programs in each category, researchers concluded that (1) the commercial foods programs were more effective than the child care programs; (2) program effectiveness and cost effectiveness increased with program age; (3) a correlation existed between community size and expenditures; (4) rural child care programs were generally less cost effective; and (5) the percentage of student completers employed in their field of training was higher for commercial foods programs. Recommendations included calls for increased efforts to match student vocational objectives and program goals and for replication of the study in other areas. (MN)

FINAL REPORT

A COST-EFFECTIVENESS COMPARISON OF TWO TYPES OF OCCUPATIONAL HOME ECONOMICS PROGRAMS IN THE STATE OF KENTUCKY

by

Lydia Carol Moore Gabbard

December 1981

Project Number
V21810013F

The research reported herein was performed pursuant to a contract with the Commonwealth of Kentucky, State Department of Education, Bureau of Vocational Education. Points of view or opinions do not therefore, necessarily represent official State Department of Education position or policy.

Printed With Federal Funds

ACKNOWLEDGEMENTS

Extreme gratitude is extended to the 20 secondary occupational home economics teachers in Kentucky who provided numerous data for this study. Without their assistance the study would not have been feasible.

A special thanks is also extended to the many persons in the Department of Education and in the Bureau of Vocational Education for their assistance and support; especially Ms. Jewell Deene Ellis for her encouragement and understanding.

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CHAPTER I

INTRODUCTION

Secondary programs of child care and commercial foods occupational home economics have continued to expand in Kentucky since 1965, when the five pilot programs were initiated. Statewide, 1,626 secondary eleventh and twelfth grade students were enrolled in the areas of child care and commercial foods in 1978. Occupational home economics continues to be an established part of the overall secondary program of studies for home economics in the state of Kentucky. The number of programs in Kentucky increased to 105 in 1978, and were offered in both secondary and post-secondary settings. In the 1978-79 fiscal year there were 26 child care programs and 31 commercial foods secondary reimbursed programs within Kentucky's 181 public school districts. New program requests continue to be high for child care and commercial foods as manpower needs in these areas have not been met.

Prior to passage of the Education Amendments of 1976, evaluation of Kentucky's occupational home economics programs had been generally confined to sporadic supervisory visits by State staff. Title II of the Education Amendments of 1976 was unusually prescriptive in defining

federal and state roles in vocational education, establishing a need, assuring funds were spent as intended, and stimulating action toward program improvement and redirection. This Amendment mandated that all programs funded with federal, state, and local funds be evaluated at least every five years (PL 94-482, p. 90 STAT 2187).

Therefore, during the 1978 fiscal year, Kentucky developed a program review system for the purpose of evaluating vocational home economics programs. Still lacking in their review system was information allowing comparison of the quality and effectiveness of instructional programs relative to program cost.

Statement of the Problem

As a result of the critical need for accountability and efficient budgeting, local administrators in the public schools of Kentucky are beginning to question the cost effectiveness of existing or proposed vocational home economics programs. To date, program effectiveness and cost efficiency data are not available to aid in planning and i making sound programmatic decisions.

Purpose

The purpose of this study was to determine the cost-effectiveness analysis measures: (1) program effectiveness, (2) cost efficiency, and (3) cost effectiveness ratio in selected reimbursed secondary commercial foods and child care programs in Kentucky. Determined also was the relationship between these measures and the variables: (1) program expenditures, (2) program age, and (3) community size. The study provided program effectiveness data which measured goal attainments for a program, that is, the extent to which specific target goals were achieved. Provided also were cost efficiency data to determine total cost which were prorated to the vocational program. Therefore, the study provided cost-effectiveness data which should be beneficial to vocational education planning efforts in Kentucky.

Specific Research Questions of the Study

This study has identified as dependent variables the three cost-effectiveness analysis measures: (1) program effectiveness, (2) cost efficiency, and (3) cost effectiveness ratio; as independent variables: (1) program expenditures, (2) community size (urban and rural) and

(3) program age. Concerning the variables the study addresses the following specific research questions:

1. How program effective is each child care and commercial foods program?

2. How cost efficient is each child care and commercial foods program?

3. What is the relationship between each child care and commercial foods program effectiveness and cost efficiency (cost effectiveness ratio)?

4. Does the program effectiveness of child care programs differ significantly from the program effectiveness of commercial foods programs?

5. Does the cost efficiency of child care programs differ significantly from the cost efficiency of commercial foods programs?

6. Does the cost effectiveness ratio of child care programs differ significantly from the cost effectiveness ratio of commercial foods programs?

7. What is the relationship between program expenditures, community size, and program age to program effectiveness, cost efficiency and the cost effectiveness ratio of the two program types?

8. What is the relationship of program expenditures, community size, and program age to program effectiveness,

cost efficiency and the cost effectiveness ratio in child care programs as compared to commercial foods programs?

Assumptions of the Study

1. Child care and commercial foods occupational home economics are phases of the total secondary program of vocational home economics which are needed to meet manpower demands for entry-level employment.

2. Follow-up information obtained from program completers of occupational child care and commercial foods will be of assistance in evaluating existing programs in addition to the development and improvement of future programs.

3. Programs selected to participate are representative of the total secondary reimbursed child care and commercial foods programs in Kentucky.

4. Teachers in the selected programs of child care and commercial foods would cooperate in the study by providing needed program effectiveness and cost efficiency data.

5. The program completers of the 1978-79 school year will have been out of high school an adequate length of time to have begun work.

6. The completers of the programs selected would provide accurate information regarding their occupational instruction and their work experience.

7. Employers of students employed in a field related to training would provide accurate information regarding the adequacy of the students' vocational training and job performance.

8. Cost and program data of school corporations obtained from the Department of Education would be consistent and accurate.

Scope and Limitations of the Study

1. The study was limited to a randomly selected sample of secondary child care and commercial foods occupational home economics programs in Kentucky.

2. Follow-up data were collected only from students, both male and female, completing the program in the 1978-79 school year.

3. Only employers of students employed in a field related to training were surveyed.

4. The number of responses obtained from completers and employers was limited by the number and accuracy of names and addresses provided by the teachers.

5. Cost data were limited to the accessability of public information through the Department of Education in Kentucky and the assistance of the teachers of the various programs.

6. The data collected for the three cost-effectiveness analysis measures would be processed according to the Kim and Harris Cost-Effectiveness Analysis Model for Secondary Vocational Programs (1976). This model appears in Appendix A.

7. Some cost data which may be relevant to this study were not available to the researcher (i.e.,land and building cost).

Definition of Terms

Community Characteristics: community factors external to the school system to be used for interpretation of analytical results, (i.e., size of community).

Completers of Programs of Occupational Home Economics: students who have completed at least one year of training in an occupational home economics program.

Cost Effective Analysis: the measure of specified goal attainments of the program against the associated cost.

Cost Effectiveness Ratio: a criterion in judging program effectiveness in relation to associated costs.

Cost Efficiency: Measured by the unit cost.

$$\text{Unit Cost} = \frac{\text{Total Cost of Program}}{\text{Unit of Output}}$$

Direct Program Cost: those costs directly related to the instruction (i.e., salaries of teaching staff, travel, fringe benefits, supplies and materials, and purchase of equipment).

Indirect Program Cost: costs for supportive services necessary in the operation of vocational programs which can be prorated to the vocational program.

Occupational Home Economics, Wage Earning Home Economics, Gainful Home Economics: terms which are used synonymously to refer to the vocational home economics program which provides training for entry-level employment in home economics related occupations.

Program Costs: total cost of programs.

Program Effectiveness: effectiveness is a measure of goal attainments for a program, that is, the extent to which specified target goals are achieved.

Program Objectives: the seven broad objectives which were a part of the Kim and Harris Model.

Program Review: term used in Kentucky for the instrument and the procedure developed for vocational program evaluation mandated by the Education Amendment of 1976.

Reimbursed Programs: those vocational programs receiving federal and state funds via the local boards of education in the public schools of Kentucky.

Rural Area: a county in which 59 percent or less of the population was classified as rural, according the the 1970 United States Census.

School Corporation: the level at which budget and expenditures are expressed.

Target Goals: thirty-three specified goals within the program objectives which were selected from the Kim and Harris Model.

Total Cost of Program: annual expenses for operating vocational programs at the local school level. Program cost include direct and indirect costs.

Unit of Output: number of student completers annually.

Urban Area: a county in which 60 percent or more of the population was classified as urban, according to the 1970 United States Census.

Vocational Program Rosters: accountability report for each secondary, post secondary, and adult program that is covered by the Kentucky State Plan and funded by vocational education funds.

Organization of the Study

Chapter I introduces the problem, defines the terms used and states the specific research questions of the study. Chapter II describes the procedure used in

determining the study sample, the instruments and data sources utilized for data collection and presents the statistical methods used in analysis of the data. Chapter III summarizes the purpose of the study, the research procedures, the analysis of the data and the findings. Chapter IV contains the conclusions and recommendations made as a result of the study.

CHAPTER II

METHODS AND PROCEDURES

Data Types

The study was designed to develop program effectiveness and cost efficiency data from selected programs in occupational home economics. Two occupational home economics areas were chosen for the study--child care and commercial foods. Nine child care programs and 11 commercial foods programs were randomly selected based upon the percentage of Kentucky's population located in rural and urban areas.

For the implementation of the cost-effectiveness analysis study, the Kim and Harris Cost-Effectiveness Analysis Model for Secondary Vocational Programs (1976) was utilized as the format for data types and data collection instruments (see Appendix A). For executing a cost-effectiveness analysis study, Kim and Harris (1976) suggest the following steps (pp. 8-11):

1. Identify instructional program(s)
2. Identify population
3. Determine program (i.e., Child Care) objectives/ target goals
4. Collect program outputs/follow-up data

5. Analyze costs of vocational programs

6. Compute cost-effectiveness measures of program effectiveness, cost efficiency, and cost effectiveness ratio

Data types identified for this study were program objectives, program outputs, and program costs. Evaluation of program objectives and outputs required data on enrollees and completers from each program, and follow-up information on employment and advanced studies after graduation. Total cost of the programs included both direct and indirect program costs. Cost data were classified according to the accounting system recommended by the United States Office of Education, which was adapted to Kentucky.

Instrumentation and Data Sources

Program objectives and specific target goals were identified from the Kim and Harris Model (1976, pp. 94-99) after consultation with leaders in home economics and other vocational educators at the state level and through review of evaluative studies of secondary programs of occupational home economics and vocational education. Those broad program objectives utilized in this study were as follows: (1) aid students enrolled in vocational education to successfully complete a secondary occupational program; (2) assist special student

groups to successfully achieve in a secondary vocational program; (3) provide vocational education for secondary school youth in accordance with their occupational preparation; (4) provide leadership development activities for vocational students through a youth organization functioning as an integral part of the vocational institution; (5) provide guidance and counseling service information appropriate to continued education or employment for students enrolled in vocational programs; (6) provide vocational programs to fulfill the requirement of the labor markets and the employment community's manpower needs; and (7) encourage vocational graduates to continue their education after completion of their secondary program. For each of these broad program objectives, specific, measurable target goals were specified. In all, there were 33 target goals contained within the seven objectives for each program type (refer to Appendix B).

The implementation of cost-effectiveness analysis required various data pertaining to each of the three measures: (1) program effectiveness, (2) cost efficiency, and (3) cost effectiveness ratio. Each of the following input sources was essential in order to obtain the data relating to the study's seven program objectives and the 33 specified target goals. Examples of these data sources were:

1. Vocational Home Economics Teachers. Teachers provided selected information relating to direct program costs. They also provided an updated roster of student completers; their employment status and other information relating to students.

2. Public Records. Public records, available through the Kentucky State Department of Education, were used to obtain selected data relating to indirect program costs.

3. Student Completers. A questionnaire developed by Kim and Harris (1976) was used to obtain information from program completers regarding their satisfaction with the instructional programs (refer to Appendix C). Attention was directed toward the following areas: (1) satisfaction with vocational training, (2) adequacy of job preparation, (3) nature of present job (if employed), (4) youth organization participation, and (5) preparation for advanced studies. All program completers (N=279) were mailed this questionnaire.

4. Employers of Student Completers. A questionnaire, developed by Kim and Harris (1976), was used to explore employers' opinions about the skill, knowledge, and abilities of employees who completed the vocational training program (refer to Appendix C). Practices such

as cooperativeness, job interest, attendance and productivity were included. The questionnaire was mailed to employers of students coded on Kentucky's vocational program roster as employed in a field related to training.

Upon identification of the above data sources, implementation of the cost-effectiveness analysis study was possible.

Collection of Data

Follow-up questionnaires were mailed to both student and employer, samples which included: (1) all program completers of the 11 commercial foods (N=154) and the nine child care programs (N=125), and (2) all employers of students employed in a field related to training (N=48).

Program cost data for determining cost efficiency measures were collected for each of the 20 occupational home economics programs included in the study. Cost data were classified into direct and indirect categories and prorated to the vocational program in order to identify total annual program costs. The majority of the cost data was obtained from public information of local school districts' financial reports, while additional data were provided by the program area teachers. Finally, a cost

effectiveness ratio was determined for each program based on program effectiveness and cost efficiency measures.

Data Analysis

The dependent variables used in the data analysis were the three cost-effectiveness analysis measures: (1) program effectiveness, (2) cost efficiency, and (3) cost effectiveness ratio. The independent variables used in analyzing the data were; (1) program expenditures, (2) community size (urban and rural), and (3) program age. The Statistical Analysis System (SAS) (Helwig and Council, 1979) was utilized to analyze these data. Descriptive statistics, correlation statistics, and nonparametric statistics were specifically utilized for analysis of the data. The descriptive statistical measures of mean and standard deviation were used to summarize the data and give an indication of how the programs varied among and between the two program types. The Pearson Product Moment Correlation was utilized to test the type and the strength of the relationship between the dependent and independent variables among and between the two program types studied. Furthermore, the Wilcoxon Rank Sum Test was the nonparametric test utilized to contrast the performance

between the two program types. This statistical test not only measured the direction of the difference between the two program types but also the relative magnitude of the difference. This nonparametric statistical test was chosen rather than the use of the parametric "t" test. Assumptions regarding population parameters which were required for the "t" test could not be met for the data in this study. Therefore, the Wilcoxon Rank Sum Test assumptions were more relevant for the data used in this study.

CHAPTER III

SUMMARY AND FINDINGS

This chapter summarizes the purpose of the study, the research procedures, the analysis of data, and the findings. Conclusions drawn from the study and recommendations based on these conclusions are also presented. Finally, suggestions for further research are made.

General Summary

The purpose of this study was to determine program effectiveness, cost efficiency, and the cost effectiveness ratio of selected reimbursed secondary child care and commercial foods programs in Kentucky and to determine the relationship between these measures and the variables: program expenditures, program age, and community size. This study will provide cost effectiveness data based on the extent to which goal attainment is achieved for each program type. Such data should be beneficial to vocational education planning efforts in Kentucky in the following ways: (1) as a decision model in allocating scarce resources to the most worthy programs; (2) as a means of evaluating existing programs in terms of effectiveness associated with costs; (3) as a method for developing new programs with maximum effectiveness at the optimum cost.

Analysis Rationale

Research questions were analyzed as follows:

1. Research Questions 1-3 were analyzed to determine the cost-effectiveness analysis measures for each of the 20 programs included in the study.

2. Research Questions 4-6 were analyzed to determine if significant differences of the three cost-effectiveness analysis measures existed between the two program types. Utilizing the Wilcoxon Ranked Sum Test the mean ranks of the child care and the commercial foods program were compared for the three cost-effectiveness analysis measures.

3. Research Question 7 was analyzed to determine the relationship between the independent variables: (a) program expenditures, (b) community size, and (c) program age; to the three cost-effectiveness analysis measures of all programs studied. Pearson Product Moment Correlation coefficients for the entire data set were computed for the independent and dependent variables.

4. Research Question 8 was analyzed by program type to determine if a relationship between the independent variables and each of the three cost-effectiveness analysis measures were significant. Intercorrelations of the independent variables with the three cost-effectiveness analysis measures were computed for both child care and the commercial foods program types.

Findings

The major findings summarized from the research questions of the study are presented below. Findings 1-3 appear in Tables 1 and 2, pages 24 & 25 of this report.

1. Based on the average program effectiveness indices, child care program C and commercial foods program F were the most program effective among their respective program types. The child care program was located in an urban community while the commercial foods program was located in a rural community. Child care program G and commercial foods program G, both located in rural areas, were the least program effective. Refer to Appendix B for target goal summary data.

2. Child care program F and commercial foods program F were considered to be the most efficient on the basis of the cost efficiency index. Both of these programs were located in rural communities. Child care program I and commercial foods program H were the least cost efficient. Both of these programs were located in rural areas and indicated the two lowest program completion rates.

3. When comparing the relationship between the program effectiveness and cost efficiency of each program (cost effectiveness ratio) program C of child care and program F of commercial foods were judged the most effective and

efficient among their respective program types. The child care program was located in an urban community while the commercial foods program was located in a rural community.

4. When the dependent measure was program effectiveness, there was a significant negative difference ($z = -2.01$; $p < .05$) between the mean ranks of the child care and commercial foods programs, indicating that commercial foods programs were significantly more program effective. Refer to Table 3, page 26.

5. When the dependent measure was cost efficiency, there was no significant difference between the mean ranks of child care and commercial foods program types. Refer to Table 3.

6. When the dependent measure was the cost effectiveness ratio, there was a significant negative difference ($z = -2.05$; $p < .05$) between the mean ranks of the child care and the commercial foods programs. This difference indicated that commercial foods programs were the most effective and efficient of the two program types. Refer to Table 3.

Findings 7-10 appear in Table 4, page 27, and are summarized below:

7. Because the cost effectiveness ratio is determined by the relationship of program effectiveness to cost

efficiency, the following significant correlations were found: (a) as the program effectiveness measure increased, the cost effectiveness ratio increased ($r = .75$; $p < .01$) and (b) as the cost effectiveness ratio decreased, cost efficiency of the program increased ($r = -.51$; $p < .05$).

8. As the age of the programs increased, the program effectiveness ($r = .72$; $p < .01$) and the cost effectiveness ratio ($r = .70$; $p < .01$) also increased significantly.

9. There was a significant correlation ($r = .66$; $p < .05$) between community size and program expenditures. This indicates that as community size decreased program expenditures decreases.

10. As the age of the child care and commercial foods program increased, the cost effectiveness ratio increased significantly. Statistical significance for child care programs was indicated by a positive correlation of $r = .75$; $p < .05$. For commercial foods programs the correlation was $r = .71$; $p < .05$.

Findings 11-13 appear in Table 5, page 27, and findings 14 and 15 appear in Table 6, page 28.

11. Rural child care programs were found to be significantly less program effective than urban child care programs ($r = -.88$; $p < .01$). No major differences existed between these variables in the commercial foods programs.

12. Program expenditures for rural child care programs were significantly less than those located in urban settings. No major differences existed between these variables with regard to the commercial foods programs.

13. Rural child care programs were found to be significantly newer than urban child care programs ($r = -.68$; $p < .05$). No major differences existed between these variables in the commercial foods programs.

14. As the program effectiveness of commercial foods programs increased significantly, so did the cost effectiveness ratio ($r = .80$; $p < .01$). No significant differences were found between these variables in the child care programs.

15. The results of this study revealed that the percent of student completers employed in their field of training was higher for commercial foods programs (17 percent) than it was for child care programs (10 percent). The related employment rate of completers of either program type was not very impressive.

TABLE 1

CHILD CARE PROGRAMS RANKED ACCORDING TO THEIR COST EFFECTIVENESS RATIO

Program Identification (N=9)	Average Program Effectiveness	Cost Efficiency	Cost Effectiveness Ratio
C *	108[a]	$ 2793	.04[c]
D	58	2547	.02
H	42	2723	.02
F	35	2145[b]	.02
A *	103	8007	.01
B *	67	6796	.01
E	36	5482	.01
G	32	2753	.01
I	58	12119	.004
Mean Scores	59.2	$ 5040	.016
Standard Deviation	28.66	3399.23	.010

*Urban Programs; remainder rural.

[a]Most program effective.

[b]Most cost efficient.

[c]Most effective and efficient.

TABLE 2

COMMERCIAL FOODS PROGRAMS RANKED ACCORDING TO THEIR COST EFFECTIVENESS RATIO

Program Identification (N=11)	Average Program Effectiveness	Cost Efficiency	Cost Effectiveness Ratio
F	143[a]	$1746[b]	.08[c]
K	124	2362	.05
D	117	2235	.05
A *	115	3412	.03
H	120	5226	.02
B *	72	3028	.02
E	59	3269	.02
C	52	2471	.02
J	63	2785	.02
I	51	2230	.02
G	44	3170	.01
Mean Scores	87.2	$2903	.03
Standard Deviation	36.37	927.75	.02

*Urban programs; remainder rural.

[a]Most program effective.

[b]Most cost efficient.

[c]Most effective and efficient.

TABLE 3

MEAN RANKS USED IN WILCOXON RANK SUM TEST

Cost-Effectiveness Analysis Measures	Program Types (Mean Ranks) Child Care (N=9)	Commercial Foods (N=11)	z
Averaged Program Effectiveness	7.6	12.9	-2.01*
Cost Efficiency	12.3	9.0	1.29
Cost Effectiveness Ratio	7.4	13.0	-2.05*

*p<.05.

TABLE 4

INTERCORRELATIONS OF VARIABLES BETWEEN CHILD CARE AND COMMERCIAL FOODS PROGRAMS
(N=20)

Variable	Program Effectiveness	Cost Effectiveness Ratio	Cost Efficiency	Program Expenditures	Program Age	Community Size
Program Effectiveness	1.0	.75**	-.08	.004	.72**	-.30
Cost Effectiveness Ratio		1.0	-.51*	-.25	.70**	.07
Cost Efficiency			1.0	.32	-.34	-.22
Program Expenditures				.10	.006	.66*
Program Age					1.0	-.33
Community Size						1.0

*P<.05.

**P<.01.

TABLE 5

INTERCORRELATIONS OF VARABLES AMONG CHILD CARE PROGRAMS
(N=9)

Variable	Program Effectiveness	Cost Effectiveness Ratio	Cost Efficiency	Program Expenditures	Program Age	Community Size
Program Effectiveness	1.0	.44	.19	.48	.86**	-.88**
Cost Effectiveness Ratio		1.0	-.64	-.15	.75*	-.28
Cost Efficiency			1.0	.21	-.20	-.18
Program Expenditures				1.0	.22	-.77*
Program Age					1.0	-.68*
Community Size						1.0

*P<.05.

**P<.01.

TABLE 6

INTERCORRELATIONS OF VARIABLES AMONG COMMERCIAL FOODS PROGRAMS
(N=11)

Variable	Program Effectiveness	Cost Effectiveness Ratio	Cost Efficiency	Program Expenditures	Program Age	Community Size
Program Effectiveness	1.0	.80**	.01	-.12	.58	-.08
Cost Effectiveness Ratio		1.0	-.54	-.06	.71*	.14
Cost Efficiency			1.0	-.12	-.50	-.17
Program Expenditures				1.0	.02	-.50
Program Age					1.0	-.05
Community Size						1.0

*P<.05.

**P<.01.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations were warranted when comparing the findings of other follow-up and cost analysis studies with the findings of this study.

1. Cost efficiency data and program effectiveness indices can be computed for each child care and commercial foods program. Moreover, such data should be useful to program planners and curriculum decision makers who increasingly must allocate scarce resources among programs. The data herein reported have made it possible to identify both the least and the more effective and efficient programs of child care and commercial foods.

2. Cost-effectiveness data can be a useful tool for identifying the program type which is most efficient and effective between the two program types compared. However, it should be noted that such data become only one of many input sources which should be used in making programmatic decisions.

3. Variations in direct program costs and total program costs would be useful in analyzing programs which are most efficient versus those which are least

efficient. Such an analysis can be used to improve programs which are found to be least cost efficient.

4. The cost-effectiveness analysis measures of this study will be of primary value in making improvements among and between programs.

Recommendations

The findings of this study suggest several recommendations to teachers, school administrators, and the Department of Education, Bureau of Vocational Education planners of occupational home economics programs throughout Kentucky. Based on the findings and conclusions of this study, the following recommendations seem warranted:

1. A special effort for continued review of occupational home economics programs should be made based upon expected program outputs. Utilization of the cost-effectiveness measure of program effectiveness, cost efficiency, and a cost effectiveness ratio are indices which could be computed to evaluate this effort. Moreover, program deletions should be considered for programs which consistently demonstrate both ineffectiveness and cost inefficiency.

2. Those persons responsible for planning the Home Economics curriculum should study carefully the objectives and specific targe goals for the occupational

child care and commercial foods programs. Expected program outputs should be prioritized and cost-effectiveness data should be periodically obtained.

3. New occupational home economics programs should continue to be funded based upon the current and anticipated occupational outlook of that community.

4. Efforts should be made to determine the students' vocational objective, interests, and abilities prior to enrollment in an occupational home economics program. A better match betwee tudents' vocational objectives and program goals might significantly increase training-related placement rates.

Recommendations For Further Research

The results of this cost effectiveness research was not intended to be used as exclusive criteria in the (1) planning, (2) development, and (3) evaluation of secondary occupational child care and commercial foods programs in Kentucky. Additional research is needed utilizing this and other program evaluation methods. Occupational home economics could, however, benefit by utilizing cost-effectiveness research for program planning, development, and evaluation. Additional research is needed in the following areas:

1. Research to determine the cost effectiveness of occupational child care and commercial foods programs operated directly by the Kentucky State Department of Education.

2. Research to compare cost effectiveness of occupational child care and commercial foods programs operated by local boards of education in Kentucky and those operated directly by the State Department of Education.

3. A comprehensive study to determine which occupational programs will be needed in Kentucky to meet future needs.

4. A study of employers of graduates of occupational home economics programs to determine the relationship between vocational training and job success.

5. Research to specifically identify major occupational home economics competencies taught in local high schools and how employers view the need for these competencies.

6. A replication of this study within the state of Kentucky to compare findings.

7. Replication of this study in other states from which results could be compared to determine differences in programs among the states.