

MEMORANDUM

RM-4333-RC

JANUARY 1965

EDUCATION IN THE PROGRAM BUDGET

W. Z. Hirsch

MEMORANDUM
RM-4333-RC
JANUARY 1965

EDUCATION IN THE PROGRAM BUDGET

W. Z. Hirsch

The **RAND** *Corporation*
1700 MAIN ST • SANTA MONICA • CALIFORNIA • 90406

PREFACE

This Memorandum represents one chapter in a forthcoming book, Program Budgeting: Program Analysis and the Federal Budget, which is presently in preparation by a group of RAND staff members and consultants. The study is being sponsored by The RAND Corporation as a contribution to public welfare and national defense. Because of its potential interest and usefulness and in order to make it available before publication of the book, it was felt desirable to issue this chapter as a RAND Memorandum.

The book will focus primarily on the issues involved in determination of specific national program goals and the analytical approach necessary to facilitate decision-making on these major issues. Its purpose is to help improve the understanding, and accelerate the application, of the principles of program budgeting.

The objectives in view are: (1) to make the budget a more useful and precise instrument for planning, appropriation, administration, and control within the Federal establishment; (2) to contribute to broader public understanding of the allocation and use of Federal funds; and (3) to facilitate economic analysis, forecasting, and planning in the private sector.

The chapter represented by this Memorandum presents an application of program budgeting to education, especially as seen by the Federal Government. It surveys the nature and scope of education and key education objectives and decisions in the United States; it reviews the Federal education budget in use today; it applies the program budget concept to education and presents fiscal 1963 figures; it considers examples of how program budgeting can elucidate education decisions; and it examines arrangements for effective use of program budgeting.

Werner Z. Hirsch

SUMMARY

One government activity which can benefit from improved resource allocation through program budgeting is education. Education decisions, unlike defense decisions which are in the hands of a monolithic Federal agency, are made by literally tens of thousands of administrative units. Although Federal education funds are relatively small, they can affect education decisions in a major way, since their mode of distribution can be such that local officials are inclined to treat them as costless.

The first two parts of this Memorandum survey the nature and scope of education in the United States, and examine key education objectives and decisions. Part III reviews the existing Federal education budget format and points to some select shortcomings. The fourth part attempts to develop some guidelines for the identification of education programs, and applies them in relation to fiscal year 1963. Part Five presents some examples of how program budgeting can elucidate certain education decisions. The final part considers arrangements for effective use of program budgeting in education, including some pros and cons of establishing a Federal Department of Education.

ACKNOWLEDGMENT

The author wishes to acknowledge his indebtedness to Hirst Sutton, Chief, Labor and Welfare Division of the Bureau of the Budget, who read an earlier version of the manuscript and offered helpful criticism and suggestions.

CONTENTS

PREFACE	iii
SUMMARY	v
ACKNOWLEDGMENT	vii
LIST OF TABLES	xi
Section	
I. NATURE AND SCOPE OF EDUCATION IN THE UNITED STATES ...	1
II. KEY EDUCATION OBJECTIVES AND DECISIONS	4
III. EDUCATION IN THE EXISTING BUDGET	6
The Existing Federal Education Budget	6
Some Shortcomings of the Existing Budget	12
IV. APPLICABILITY OF PROGRAM CONCEPT TO EDUCATION	16
Considerations in Defining Education Programs	16
Major Education Programs	18
The Education Program Budget for FY 1963	19
V. APPLYING PROGRAM BUDGETING TO ELUCIDATE EDUCATION DECISIONS	28
VI. ARRANGEMENTS FOR EFFECTIVE USE OF PROGRAM BUDGETING	35

LIST OF TABLES

1	Administrative Federal Education Budget Fiscal Years 1963, 1964, and 1965	7
2	1963 Expenditure Budget of the U.S. Office of Education	8
3	Payments to School Districts by Program and Financing	10
4	Payments to School Districts by Object Classification	11
5	Education Programs in an Idealized Federal Budget	20
6	Federal Education Program Budget Arranged by Sources of Support FY 1963	22
7	Federal Education Program Budget Arranged by Nature of Support FY 1963	25

I. NATURE AND SCOPE OF EDUCATION IN THE UNITED STATES

Education is provided in the United States by a very large number of administrative units. For example, in late 1962 there were about 36,000 school districts (and many private and parochial schools). In addition, there were more than 2000 institutions of higher learning, about 700 public and 1300 private.

In late 1962 in the United States, 3.3 million men and women were gainfully employed in the provision of formal education, and education expenditures in FY 1963 amounted to about \$31 billion; public education accounted for about \$25 billion and private and parochial education \$6 billion. The trend during the past decade of about four-fifths of all expenditures for education coming from public funds continued in FY 1963. Of total education expenditures, almost 15 per cent went for construction, with the percentage figure somewhat higher in the public than in the private sector. Public school expenditures of \$25 billion in FY 1963 were financed jointly by Federal, State, and local governments. The Federal Government's contributions were relatively small. They amounted to about \$3.6 billion, or about 10 per cent.

Of the \$31 billion education total expenditures, about \$22 billion were for primary and secondary education, and \$9 billion for higher education. Of the first amount, 88 per cent was spent by public institutions, while the corresponding percentage figure for higher education was 60.

The Federal Government's participation in the financing of education has been aimed primarily at higher education, and much of the Federal financial contribution has been indirect; i.e., through the support of university research. Most of the direct support in recent years has been in the form of training grants and fellowships. Federal financial support of primary and secondary education is given mainly under Public Laws 815* and 874.** In FY 1963 it amounted to about

*1950, Act Relating to Construction of School Facilities in Areas Affected by Federal Activities.

**1950, Act to Provide Financial Assistance for Local Educational Agencies in Areas Affected by Federal Activities.

\$332 million or 1.5 per cent of all primary and secondary school expenditure. A further important Federal contribution has been the school lunch program which in 1963 amounted to \$379 million. These are mainly indirect supports, and financially they are much more important than the direct Federal support to primary and secondary schools. The Federal Government also has been financing some adult education and international education programs, as well as such related activities as library services, and research and development.

Hardly anybody in or outside government appears to have a clear view of the nature, scope, and mix of the Federal education budget. In 1963 the House Committee on Education and Labor pointed out that "while the Federal Government is involved in many parts of the educational system, and a major partner in the higher education system, there is little evidence of a well-coordinated program."^{*} A great many committees and agencies take part in funding and administering education in the United States. The report of the House Committee concluded that we suffer from "the inadequacy and misleading nature of available educational statistics" and that "inconsistencies and even contradictions have arisen in our education activities."^{**}

Forty-two Federal departments, agencies and bureaus have funds for education in their budget. Major participants in the financing of education are the Department of Health, Education, and Welfare; the National Science Foundation; the Veterans Administration; the Department of Agriculture; the Department of Defense; the Atomic Energy Commission; and the National Aeronautics and Space Administration. In the Department of Health, Education, and Welfare, education activities are concentrated in the Office of Education, the Office of Vocational Rehabilitation, and the Public Health Service, especially in the National Institutes of Health. Agencies with lesser interest in education are the Departments of Commerce, Interior, Justice, Treasury, and the Housing and Home Finance Agency.

^{*}U.S. House Committee on Education and Labor, The Federal Government and Education, Washington, D.C.: U.S. Government Printing Office, 1963, p. iii.

^{**}Ibid., p. iv.

Many of these agencies participate also in international education, although in this area the major responsibility rests with the Department of State, the Agency for International Development, the Peace Corps, and the U.S. Information Agency.

Two agencies only -- the Office of Education and the National Science Foundation -- have education as their primary concern. NSF is very young, and was established in 1950 as an independent agency with the mandate to develop and encourage basic research and education in the sciences.*

Over the years Federal funds for education have been on the increase. In the same period the sources of support have been subject to marked change. Thus in FY 1951, as in the years immediately following World War II, the Veterans Administration's Budget for the provision of assistance for the education of servicemen under the Servicemen's Readjustment Act of 1944 constituted almost 90 per cent of the Federal education budget, while today it is less than 5 per cent.

Just as education budget requests originate in dozens of Federal agencies, their authorization and appropriation is dispersed among numerous committees of both Houses of Congress. Nearly every committee of the Congress has jurisdiction over some type of education legislation.** For example, in the House of Representatives the Committee on Education and Labor has jurisdiction over the Office of Education, the Science and Astronautics Committee over the National Science Foundation, the Interstate and Foreign Commerce Committee over the Public Health Service and the National Institutes of Health, the Committee on Veterans' Affairs over veterans' education, etc.

* Ibid., p. 2.

** Ibid., p. 4.

II. KEY EDUCATION OBJECTIVES AND DECISIONS

The basic education issues calling for decisions by government officials (and citizens) are: what knowledge and skills should be developed; and when, where, how, by whom, and for whom? Or, to put it differently, in a given year what kind of education should be offered for how many students, by how many teachers (and support personnel), with what background and training, and in what facilities? In addition, there is also the issue of who should pay for the education. A proper answer to this last question requires tax incidence considerations.

In clarifying these issues, it is important to be cognizant of a great tradition. First of all, we in the United States make free primary and secondary education available to every American, and free higher education to most of those who have the ability to benefit from it. And secondly, the United States operates under a federated political and fiscal system. Both issues reflect our basic philosophy of life and at the same time provide a setting within which education decisions must be made.

We must now take a look at the nation's main educational objectives. Clearly the creation of human capital is of great national concern. In this respect, education is an investment designed to produce an enterprising and skilled labor force that can be counted on to contribute to economic growth, prosperity, technological advances, and national security. In so doing it enables people to hold rewarding jobs, and in turn provides the nation with economic and military strength. Another important objective is to provide students (and perhaps indirectly their parents) with the joy and satisfaction of learning. These latter are current benefits associated with the consumption portion of education. A further objective is to preserve and enlarge the cultural heritage of the country and to strengthen its democratic institutions.

To approach the matter from a theoretical point of view, let us look for a moment at a hypothetical country with a monolithic government: Here the education ministry can take far-reaching steps affecting education. While the head of state together with the legislature must decide on the over-all investment level of the country, the education ministry makes recommendations about the level of investment in education. In order to do so, priorities must be established and decisions made about how much money and skilled manpower of different types are to be allocated to primary, secondary, higher, and adult education, respectively. The education industry disseminates accumulated knowledge to individuals for their use; this knowledge pool must constantly be enlarged and further knowledge added. This is done through fundamental and applied research which competes for personnel and funds with education. While the allocation of scarce resources among education and research calls for difficult decisions, further priorities might have to be established among knowledge areas.

Under a centralized fiscal system the major funding issue relates alone to the allocation of financial burdens to the various income levels of the population.

Turning now to our federated fiscal system it should be clear that we, too, face all these decisions plus some additional ones. Thus, for example, the launching of the first Sputnik persuaded the United States Government to offer financial support to education in science and engineering, and to this day a hot debate is in progress about the wisdom of this step. The Federal Government today plays only a minor direct role in the financing of education. Nevertheless, it is in its power to be a catalyst and bring about adjustments. Federal funds not only must support education, but also must induce State and local governments to exert greater efforts and possibly bring about improvements in their teaching methods and curricula as well as in financing methods. Major decisions must be made about the local, State, and Federal role in financing different education programs, and criteria are necessary to facilitate these decisions. Before purposeful changes can be discussed, an understanding of educational activities and the existing budget is needed.

III. EDUCATION IN THE EXISTING BUDGET

An effort will next be made to review the existing Federal education budget. To do so, we must examine not only the budget of the United States Office of Education, but also those of more than 40 additional agencies who have some education funds. This summary will be followed by a few examples designed to show how the existing budget format and budgeting process fail to elucidate key education decisions.

THE EXISTING FEDERAL EDUCATION BUDGET

In The Budget of the United States for the Fiscal Year Ending June 30, 1965, funds for education are dispersed through more than 40 agencies. The administrative education budget in this document is reproduced in Table 1. It suffers from serious shortcomings which will be discussed below in detail.

Although Section VI of the Budget document contains special analyses of certain programs (e.g., health programs and research and development programs), no such effort has been made in connection with education. Therefore, we are forced to undertake a separate examination of each agency.

The logical first step is a look at the U.S. Office of Education. Its 1963 expenditure budget is summarized in Table 2. However, it should be realized that this Office's expenditures of \$624 million are only about one-fifth of the Federal education budget.

The Vocational Rehabilitation Administration of the Department of Health, Education, and Welfare spent in FY 1963 \$98 million, of which \$71 million took the form of grants to States, \$24 million was for research and training in the United States, \$2 million for research and training abroad under a special foreign currency program, and \$2.5 million was spent on salaries and expenses.

Table 1

ADMINISTRATIVE FEDERAL EDUCATION BUDGET
FISCAL YEARS 1963, 1964, and 1965
(In millions)

Program or agency	Payments to the public			Recommended new obligational authority for 1965
	1963 actual	1964 estimate	1965 estimate	
Administrative Budget Funds:				
Assistance for elementary and secondary education:				
Assistance to schools in federally impacted areas.....	\$343	\$350	\$395	\$418
Defense education: Science, mathematics, and foreign language instruction, and guidance and testing.....	49	61	76	84
Assistance for higher education:				
Construction of academic facilities.....		3	38	464
College housing loans.....	284	223	208	300
Defense education: Student loans, fellowships, and language and area centers.....	116	149	162	165
Assistance for land-grant colleges, Howard University and Gallaudet College.....	28	30	33	28
Assistance to science education and basic research:				
National Science Foundation:				
Basic research and specialized research facilities.....	106	132	148	224
Grants for institutional science programs.....	31	37	58	98
Science education.....	51	70	74	137
Other science activities.....	18	21	22	29
Other aids to education:				
Vocational education.....	55	73	127	205
Other defense education assistance.....	20	24	23	23
Indian education services.....	78	84	92	97
Library of Congress and Smithsonian Institution.....	38	48	51	45
Other.....	27	41	65	79
Proposed education legislation.....		3	118	718
Subtotal, administrative budget.....	1,244	1,348	1,691	13,115
Trust Funds.....	2	2	2	12
Intragovernmental transactions and other adjustments (deduct).....	33	48	52	
Total.....	1,214	1,302	1,641	

¹ Compares with new obligational authority for 1963 and 1964, as follows:
Administrative budget funds: 1963, \$1,420 million; 1964, \$1,888 million.
Trust funds: 1963, \$2 million; 1964, \$2 million.

Source: The Budget of the United States for the Fiscal Year Ending June 30, 1965 (Washington, D.C.: U.S. Government Printing Office, 1964), p. 120.

Table 2

1963 EXPENDITURE BUDGET OF THE U. S. OFFICE OF EDUCATION
(In Thousands of Dollars)

GENERAL AND SPECIAL FUNDS

Expansion and improvement of vocational education - -	\$ 34,330
Further endowments of colleges of agriculture and the mechanic arts - - - - -	11,950
Grants for library services - - - - -	7,257
Payments to school districts - - - - -	276,869
Assistance for school construction - - - - -	66,242
Defense educational activities (assistance for elementary and secondary education)- - - - -	48,690
Assistance for higher education - - - - -	116,476
Other bids to education - - - - -	33,169
Expansion of teaching in education of mentally retarded children - - - - -	960
Expansion of teaching in education of the deaf - - - -	1,383
Cooperative research - - - - -	5,015
Educational research (special for foreign currency program) - - - - -	20
Salaries and expenses - - - - -	12,041
Colleges of agriculture and the mechanic arts (permanent)- - - - -	2,550
Promotion of vocational education, Education Act of February 23, 1917 - - - - -	7,144
<u>INTERGOVERNMENTAL FUNDS</u>	<u>-392</u>
Total - - - - -	\$ 623,705

Source: The Budget of the United States for Fiscal Year 1965,
Washington, D.C., 1964, pp. 218-220.

The 1165-page Appendix to the Budget provides nine pages of detail on the Office of Education and the Vocational Rehabilitation Administration. For example, Tables 3 and 4 are given in support of the item in line 4 of Table 2, i.e., payments to school districts. Payments to school districts for the maintenance and operation of schools are made under the Act of September 30, 1950. They are to assist in the maintenance and operation of schools in areas where enrollments are affected by Federal activities. Such payments are made principally to school districts; however, where such districts cannot assume responsibility for educating federally connected children, payments are made to other Federal agencies for the provision of such education under Federal auspices. Also, under certain circumstances, the Commissioner of Education can make arrangements for the provision of free public education for children of members of the Armed Forces on active duty not residing on Federal property.

Payments are made to more than 4000 eligible school districts and Federal agencies on account of the attendance of approximately 2 million federally connected children in all states, Puerto Rico, Virgin Islands, Guam, and Wake Island.

Table 3 summarizes payments to school districts in terms of programs (as the term is used in the Budget document) and their financing, while Table 4 presents the data by object classification.

A careful analysis of the rest of the budget of the Department of Health, Education, and Welfare reveals further major education funds in the National Institutes of Health and the Public Health Service. The former support faculty directly through research career awards and indirectly through research grants and facility and equipment grants. They support students through pre- and post-doctoral fellowships and training grants. The education support of the National Institutes of Health was in excess of a quarter of a billion dollars in FY 1963, while that of the rest of the Public Health Service was about \$20 million.

The Department of Defense spent more than \$100 million to provide education for military personnel in Defense Department schools. More than \$160 million was spent on education in civilian institutions,

Table 3

PAYMENTS TO SCHOOL DISTRICTS BY PROGRAMS AND FINANCING

(In Thousands of Dollars)

	<u>1963</u> <u>Actual</u>	<u>1964</u> <u>Estimate</u>	<u>1965</u> <u>Estimate</u>
<u>PROGRAM BY ACTIVITIES</u>			
Payments to local educational agencies	\$260,477	\$ 86,966	\$399,950
Payments to other Federal agencies	<u>13,793</u>	<u>17,500</u>	<u>19,500</u>
Total program costs funded - obligations - - - - -	274,270	104,466	359,450
 <u>FINANCING</u>			
Unobligated balance brought forward	-367	-217	--
Recovery of prior year obligations	-7,749	--	--
Unobligated balance carried forward	217	--	--
Unobligated balance lapsing	<u>15,951</u>	<u>217</u>	<u>--</u>
New obligational authority (appropriation) - - - - -	282,322	194,466	359,450

Source: Appendix to the Budget of the United States for Fiscal Year 1965, Washington, D. C., 1964, p. 385.

Table 4

PAYMENTS TO SCHOOL DISTRICTS BY OBJECT CLASSIFICATION

(In Thousands of Dollars)

PERSONNEL SUMMARY

<u>Allocation Accounts</u>	<u>1963 Actual</u>	<u>1964 Estimate</u>	<u>1965 Estimate</u>
Total number of permanent positions	10	11	11
Full-time equivalent of other positions	4	5	5
Average number of all employees	12	15	15
Employees in permanent positions, end of year	9	10	10
Employees in other positions, end of year	5	5	5
Average GS grade	9.0	9.0	9.0
Average GS salary	\$7,007	\$7,184	\$7,307

PROGRAM AND FINANCING

Program by Activities

Payments to local educational agencies (costs - obligations)	--	216,204	--
--	----	---------	----

Financing

New obligational authority (proposed supplemental appropriation)	--	216,204	---
--	----	---------	-----

Source: Appendix to the Budget of the United States for Fiscal Year 1965, Washington, D. C., 1964, p. 386.

e.g., Army, Navy, and Air Force R.O.T.C. A further \$200 million was granted to universities for the support of research.

The National Science Foundation had a \$200 million budget, most of it devoted to the support of education. The Veterans Administration had an education budget of about \$150 million for readjustment training, vocational rehabilitation and war orphan scholarships. Many other Federal departments supported education in various forms from a few million dollars to around \$60 million a year. The latter figure pertained to the Department of Agriculture and the Department of Interior.

SOME SHORTCOMINGS OF THE EXISTING BUDGET

The existing budget, which incorporates financial support for education in 42 departments and agencies, makes it difficult to appraise the place of education in the Federal Government and the role of the Federal Government in providing and financing education. In more general terms, it neither facilitates the development and implementation of a policy for education nor the examination of the role of education in pursuance of a national education policy. The shortcomings of the of the existing education budget format are perhaps best discussed under the following headings:

1. Intermingling of grant and loan funds.
2. Lack of identification of relevant information prevents:
 - a. coordination of interrelated decisions;
 - b. consideration of full-cost implications of decisions; and
 - c. consideration of alternatives and their trade-offs.

Intermingling of Grant and Loan Funds

Until quite recently, Federal funds for education were made available solely on a grant or contract basis. However, a new development has taken place; loans are made both to students to tide them over the costly years of their training, and to colleges to help finance their building programs. The loans in FY 1963 reached the half billion dollar level -- almost the size of the 1963 expenditures of the U.S. Office

of Education. The administrative education budget, reproduced in Table 1, intermingles grant and loan funds. In the absence of a careful separation between these two funds, we face problems which are somewhat similar to those encountered by adding tax receipts of school districts to funds raised by them through the sale of bonds.

Lack of Information Prevents Coordination of
Interrelated Decisions

Quite a few education activities require budgetary decisions by more than one level of government. In other cases, education activities of different types supplement one another. Therefore, gains can often accrue from presenting information in an orderly, internally consistent manner to facilitate the joint consideration of these activities and their possible coordination.

For example, all three levels of government actively participate in the financing of higher education. Local school districts have assumed major responsibility for the financing of junior colleges, with State governments providing some subsidies. The main financial responsibility for colleges and universities rests with the State, while the Federal Government is providing increasing amounts of direct and indirect financial aid. This aid is made available by numerous Federal agencies. For example, student fellowships are offered, among others, by the Office of Education, National Science Foundation, National Institute of Health, National Aeronautics and Space Administration, Atomic Energy Commission, Public Health Service, and Department of Interior. Many more Federal agencies make indirect support available.

The Budget document includes a special analysis of Federal aid to State and local governments.* This information is not well articulated. The data follow department lines and much information is concealed, which makes it virtually impossible to take a comprehensive look at the Federal support for college students and to integrate it effectively with the financial efforts of the States.

*The Budget, op. cit., pp. 427-435.

An example might be offered in relation to the fact that well organized information can improve decisions about education activities which supplement one another. In recent years, the Federal Government has provided loan funds for the construction of student housing facilities. Some Federal agencies, including the National Science Foundation, the National Aeronautics and Space Administration, and the National Institutes of Health under differing conditions, have offered grants for research facilities. State and private funds also have been used to finance the construction of college plant and equipment. These construction projects could be better evaluated and integrated if the budgetary information were more readily available in an explicit and internally consistent end-product oriented form.

Lack of Information Prevents Consideration
of Full-Cost Implications

A discussion on the full-cost aspects of a decision should include two, although somewhat different, issues. First, there is the time horizon issue. This full-cost issue is important mainly with regard to financing research and building activities in support of education. Were the Federal Government to contemplate financing, for instance, national educational television, it should not only consider the first-year costs, but the long-term cost implications, perhaps over the next five years.

The second issue related to a full-cost discussion involves the need to consider as many of the costs as possible, and not only the obvious elements. For example, the cost of instituting a universal junior college system should include not only the junior college expenditures associated with such a proposal, but also the implication of further unbalancing a very precarious demand and supply situation for instructional staff in high schools and colleges. One result could be an across-the-board increase in teachers' salaries.

Lack of Information Prevents Consideration
of Alternatives and Their Trade-Offs

Our increasing investment in education and in such complementary activities as basic and applied research, both so essential for our future economic and military health, necessitates a systematic consideration of trade-offs in order to enable us to make judicious choices. The present budget does not provide organized information which can help estimate the implications, for example, of trading off an additional billion dollars to be spent on higher education for the same amount to obtain more basic research, or applied research. Or should the money be spent to retrain obsolete manpower and help win the war against poverty?

The Federal dollar invested in education should do extra duty. It can induce local and State governments to invest more heavily in education, and it can induce them to invest in especially advantageous educational activities. It can have desirable and disadvantageous side effects in terms of economic growth, economic stability, income distribution, etc. These points should be in the minds of those who make education decisions, and yet the present budget is of little help to them.

IV. APPLICABILITY OF PROGRAM CONCEPT TO EDUCATION

Let us examine a schematic presentation of the lifetime flow of students through the formal education system (see Chart I).^{*} Virtually all individuals attend primary grades and some years of high school. Most high school education is college preparatory, while some is explicitly vocational. From the latter programs students mainly progress either into the labor force (and the non-working population) or into a junior college system. From the college preparatory courses, students enter either regular colleges -- including the service academies -- or undergraduate divisions of universities, or junior colleges. Part of the junior college students enter four-year colleges to work toward their bachelor's degree; part of the college population continues in graduate and professional schools of universities.

Regardless of whether they have a college education, Americans can participate in a variety of adult education activities. There are various extension programs as well as retraining courses open to them. Some federally financed activities are mainly designed to help veterans; others are for government employees, and still others for farmers.

In short, education approximates a vertical structure with lower levels of education facilitating and leading into higher levels, and special adult training and retraining programs offering some short cuts and flexibility.

CONSIDERATIONS IN DEFINING EDUCATION PROGRAMS

What are some of the key characteristics of a useful program category in the field of education? Tentatively, an education program should:

1. Directly and effectively relate to the nation's major education objectives, and in this sense it should be end-product oriented.

^{*}I owe this chart to Mr. Morton Marcus of The Institute of Government and Public Affairs, University of California of Los Angeles.

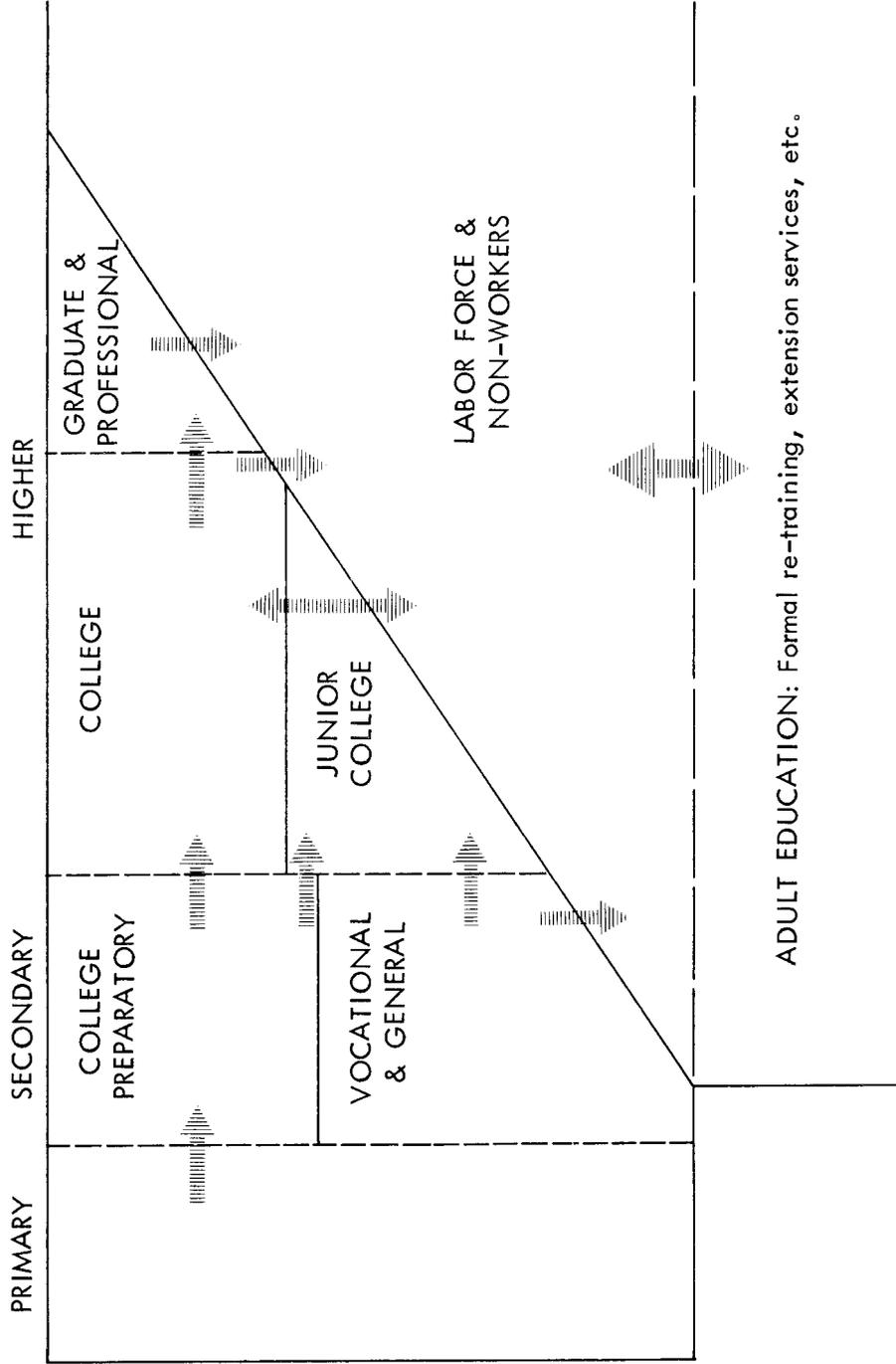


Chart I — Lifetime flow of students through the education system

2. Lend itself to a meaningful breakdown into program elements which can readily be related to each other.
3. Have administrative relevance and provide for administrative effectiveness.
4. Directly relate to sources of funds and facilitate viable intergovernmental fiscal relations.

With these characteristics in mind, an effort will next be made to identify major education programs, keeping in mind that program budgets should have a reasonably long time horizon, e.g., five years, and permit full-cost pricing.

MAJOR EDUCATION PROGRAMS

As was pointed out, the education system has a number of components, many of which are vertically related to one another. Thus primary education produces an intermediary output, much of which is preparatory to secondary education, which in turn is preparatory to college attendance.

The identification of key education programs is difficult, partly because of our inability to separate on the one hand investment and consumption aspects of education, and on the other hand its research aspects. Nonetheless, one might recommend the subdivision of the Federal education budget into the following main programs:

- . Primary Education
- . Secondary Education
- . Higher Education
- . Adult Education

Each of these four main programs can have significant program elements. For example, in terms of its mission and educational activities, secondary education can be separated into college preparatory and vocational. Except in small rural high schools and private preparatory schools, the two types of education can take place in the same district, which makes expenditure separation into the two groups very difficult, if not impossible.

Likewise, in line with the California experience it appears desirable to divide higher education into junior college, college, graduate, and post-graduate education.

Again, adult education can have a number of program elements. In the abstract we might want to distinguish between continuous education and retraining, the first group being further subdivided into general and vocational (or professional) education. Federal participation in these programs stems from a variety of concerns. The most obvious is its desire to educate government employees so that they can better and more efficiently fulfill their responsibilities. Furthermore, we have long-standing training commitments to farmers and veterans, and more recently to residents of depressed areas in this country.

In addition to these four main programs, it appears useful to single out three further programs: library services, research (and development) in educational institutions and research centers, and international education. They are summarized in Table 5. Library services provide important support for our categories of higher and adult education as well as research and development. Not unlike library services, research supplements and supports our major educational efforts in that it creates new knowledge which is disseminated by our schools, colleges and universities. International education falls into a slightly different category in that it can involve itself in education on all levels, with the direct beneficiaries, however, being foreigners.

THE EDUCATION PROGRAM BUDGET FOR FY 1963

An effort will now be made to provide data for the main programs of Table 5 in FY 1963. Since no separate data exist, it appears necessary to combine primary with secondary education. We will distinguish between Federal grants and Federal loans. The FY 1963 data that will be presented are estimates of Federal education funds, and are not

Table 5

EDUCATION PROGRAMS IN AN IDEALIZED FEDERAL BUDGET

	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>
Primary education					
Secondary education					
College preparatory					
Vocational					
Higher education					
Junior college					
College					
Graduate					
Post-graduate					
Adult education					
Continuous general (liberal) education					
Continuous vocational (professional) education					
Government employees					
Non-government employees					
Retraining					
Library services					
Research (and development)					
International education					

strictly comparable with U.S. education expenditure data.*

*The "funds" data are prepared on an obligation rather than on an expenditure basis. Federal funds data include the following types of items (for FY 1963) which are not included in the U.S. education expenditure figures:

- . Student stipends under Federal fellowship and training program (about \$200 million).
- . Education of military dependents overseas (about \$45 million).
- . Value of commodities distributed under the school lunch program (about \$180 million).
- . Surplus property donations (about \$110 million).

In Table 6, Federal funds for major education programs are presented in terms of their administrative purposes and sources of support, while in Table 7 they are arranged by the nature of their support.*

For example, Federal support for primary and secondary education is given both directly and indirectly. The indirect support mainly takes the form of financing such auxiliary school services such as lunch and job placement programs. The direct support is mainly across the board with all schools eligible to apply for it. In 1963, most of the support was for veterans and war orphans. However, there are some earmarked funds for the support of such special groups as American Indians and residents of the District of Columbia and U.S. Territories. In addition, there are earmarked funds for special types of education, e.g., science education and vocational education.

Federal support under Public Laws 815** and 874*** is somewhat different in character than most other support. In many respects it is made available in lieu of taxes to local and State government, and for certain purposes it may not be combined with other Federal aid to education. However, we also can take a different view of payments to federally impacted areas. Since a sizable portion of the Federal grants are made on behalf of children whose parents work on Federal property located outside the school district, parts of the funds can become available without strings and controls. The relevant portion of these funds could then be included in the across-the-board direct support.

Regardless of which view we take of funds made available under Public Laws 815 and 874, it is revealing that relatively little money is given to schools in terms of across-the-board direct support, i.e., somewhere between \$150 and \$350 million in FY 1963.

* In Table 7, funds which appeared in Table 6 as "Other" under primary and secondary education and higher education are grouped together with across-the-board direct support.

** 1950, Act, op. cit.

*** 1950, Act, op. cit.

Table 6

FEDERAL EDUCATION PROGRAM BUDGET ARRANGED BY
SOURCES OF SUPPORT FY 1963
(Obligations in Thousands of Dollars)

I. Grants, etc. - Total	<u>\$3,620,220</u>
A. Primary and Secondary Education - Total	<u>991,858</u>
1. Federally impacted area support (Public Laws 815 and 874)	332,200
2. Military dependents, schools	45,289
3. Military dependents, bus transportation	550
4. National Defense Education Act	62,622
5. Public lands revenue for schools	44,549
6. Teaching grants (Educational Exchange Program)	6,800
7. Course content improvement group (National Science Foundation)	3,637
8. Science education (National Science Foundation)	3,901
9. Vocational education	26,323
10. Indian education	60,876
11. School aid to District of Columbia and Territories	18,021
12. School lunch program	379,258
13. Job placement services for high school seniors	6,900
14. Other	932
B. Higher Education - Total	<u>242,397</u>
1. Training grants	255,988
2. Fellowships	108,389
3. Institutional grants	38,695
4. Traineeships	23,423
5. Special training programs	9,784
6. Veterans' education	68,446
7. Military Academies	51,493
8. Training state and local personnel	5,765
9. Basic research and research facilities in U.S. educational institutions proper	551,376
10. Other, including surplus property transfers	129,038

Table 6 (Continued)

FEDERAL EDUCATION PROGRAM BUDGET ARRANGED
BY SOURCES OF SUPPORT FY 1963

(Obligations in Thousands of Dollars)

C. Adult Education - Total	<u>\$209,945</u>
1. Vocational and technical training	67,551
2. Veterans' education	29,007
3. Training Federal personnel in non-Federal facilities	31,869
4. Training state and local personnel	3,589
5. Apprenticeship and training programs	4,458
6. Education in Federal correctional institutions	2,518
7. Indian education	6,165
8. Cooperative agricultural extension service	63,008
9. Mine safety training	1,400
10. Other	380
D. Library Services - Total	<u>\$23,896</u>
1. Library of Congress	12,073
2. Library Services Act grants	7,406
3. National Library of Medicine	3,321
4. National Agricultural Library	1,096
E. Research (and Development) - Total	<u>1,089,124</u>
1. Applied R&D in educational institutions and research centers	1,089,124
F. International Education - Total	<u>63,000</u>
1. AID cooperative projects	54,000
2. Grants for observation and advisory service under the Educational Exchange Program	9,000

Table 6 (Continued)

FEDERAL EDUCATION PROGRAM BUDGET ARRANGED
BY SOURCES OF SUPPORT FY 1963
(Obligations in Thousands of Dollars)

II. Loans - Total	<u>\$481,851</u>
A. Primary and Secondary Education - Total	<u>616</u>
1. Loans to private schools	616
B. Higher Education - Total	<u>481,235</u>
1. Student loan program	90,692
2. College housing loans	390,543

Source: Department of Health, Education and Welfare, Office of Education, Annual Survey, Federal Funds for Education and Related Activities, and records.

Table 7

FEDERAL EDUCATION PROGRAM BUDGET ARRANGED BY
NATURE OF SUPPORT FY 1963*
(Obligations in Thousands of Dollars)

I. Grants, etc. - Total	<u>\$3,620,220</u>
A. Primary and Secondary Education - Total	<u>991,858</u>
1. Across-the-board direct support (4,5,6,7,14)	118,540
2. Support in lieu of taxes** (1,2,3)	378,039
3. Support for special groups (10,11)	78,897
4. Support for special education (8,9)	30,224
5. Indirect support (12,13)	386,158
B. Higher Education - Total	<u>1,242,397</u>
1. Across-the-board direct support (1,2,3,4,5,10)	565,317
2. Support for special groups (6,7,8)	125,704
3. Indirect support through R&D (9)	551,376
C. Adult Education - Total	<u>209,945</u>
1. Support for special groups(1,10)	209,945
D. Library Services - Total	<u>23,896</u>
1. Across the board (1,2)	19,479
2. Support for special groups (3,4)	4,417
E. Research (and Development) - Total	<u>1,089,124</u>
F. International Education - Total	<u>63,000</u>
II. Loans - Total	<u>481,851</u>
A. Primary and Secondary Education - Total	<u>616</u>
B. Higher Education - Total	<u>481,235</u>

*Numbers in brackets refer to items in Table 5.

**For some purposes support in lieu of tax payments may be deducted from Federal support of education.

Source: Table 5.

Federal funds to higher education entail, on the one hand, support on an across-the-board basis and, on the other hand, support for special groups; e.g., veterans, military academies, and State and local personnel. During FY 1962, Federal grants provided direct support to 182,000 students, full and part time, at all academic levels at a cost of more than a quarter of a billion dollars. Nearly 60 per cent of these funds went to veterans under the readjustment training and rehabilitation programs, both of which are being reduced at a rate of nearly 50 per cent each year, and to war orphans. Eighty-seven per cent of the funds for graduate student support went to students in the sciences and engineering. These figures exclude the military academies.* Most of the direct support is directed toward pre-doctoral work and takes the form of fellowships given directly to the student or the institution or research assistantships as parts of research grants and contracts.

While some of the Federal funds are for direct support of higher education, other funds provide, indirectly, support through research and development. Support for basic research and research facilities has been increasing rapidly in recent years, from \$210 million in FY 1959 to \$550 million in FY 1963. About one-third of this total amount comes from the National Institutes of Health and the Department of Defense, respectively. Next in importance are the National Science Foundation, the Atomic Energy Commission, the Department of Agriculture, the National Aeronautics and Space Administration, et cetera.

The very fact that major research and training funds are included in the administrative budgets of these agencies, mentioned in the preceding paragraph, points to the intriguing issue of whether education produces an intermediate or a final output. In terms of legislative intent, many research and training funds are awarded to help specific agencies accomplish their missions. However, the viewpoint underlying Tables 6 and 7 is one which looks at research in educational institutions, and research centers and training efforts as purely educational

* U.S. House Committee on Education and Labor, op. cit., p. 14.

activities. It would be very proper indeed to have a different viewpoint and exclude from the education program budget those research and training funds that directly relate to specific government missions other than education. The excluded items could then be grouped into the program budgets of other departments. Clearly this viewpoint would result in a substantially smaller total education budget figure than the \$3.6 billion given in Tables 6 and 7, possibly somewhere between \$2.6 and \$3.0 billion.

V. APPLYING PROGRAM BUDGETING TO
ELUCIDATE EDUCATION DECISIONS

The philosophy underlying this chapter has been that the education budget of the Federal Government should give expression to the nation's position toward education, and should facilitate long-range projections even though the education demand and supply picture involves major uncertainties. While different types of education and their output cannot be measured in simple quantitative terms, nevertheless the program budget, if properly designed, can provide partial quantitative information which elucidates some of the consequences of spending funds on different programs. Fewer difficulties need to be overcome on the input side, where it is often possible to stipulate the manpower (by types), material, and supplies requirements to support specified activities. These requirements can readily be expressed in money terms. However, it must be kept in mind that much of the nation's investment in education is designed to create human capital. It follows that education decisions relate heavily to the future, and if they turn out to be wrong they cannot be readily reversed. Thus, it is of paramount importance to be aware that today's action or inaction with regard to education can constitute sins of omission or sins of commission whose burdens will mainly fall on future generations.

As was pointed out in Chapter II, program budgeting can facilitate the making of decisions on three different levels. For education this means that on the highest level, program budgeting can be employed to help select the proper budget size on the basis of information about the optimal mix between education, defense, space, natural resources, etc., and the private sector. On the second level, program budgeting can help in the determination of the best possible mix of different education programs, often involving judgments about vaguely defined objectives. Finally, there is the relatively low-level decision, which relies on factors for cost and output to determine the most effective way of attaining a given program objective.

It must be remembered that education decisions, unlike defense decisions which are in the hands of a monolithic Federal agency, are made by literally tens of thousands of administrative units. Furthermore, three levels of government share in the responsibility to raise education funds, all in competition with private educational institutions. As was pointed out earlier in this chapter, in terms of funds the Federal Government is the smallest of the four partners and in recent years provided only slightly more than 10 per cent of the money. While Federal funds are relatively small, they have been increasing in recent years, and more importantly, they can be made available in a way that local and State school officials consider them costless. (In a similar way, local school officials tend to look at State subsidies.)

Thus the executive branch and Congress ponder not only the question of how much Federal aid to education should be made available, but also the form it should take. Crucial questions are: Who should benefit; who should pay; what strings, if any, should be attached; and what are the objectives to be obtained? Elucidation of these questions calls for a benefit-burden analysis which explicitly allows for spatial benefits and cost spillovers. A conceptual framework has been developed and implemented in relation to a case study published by the author elsewhere, and need not be repeated here.*

The dispersion of education decision making and complicated inter-governmental fiscal relations must be kept in mind in the preparation of program budgets and in devising applications for them. This admonition holds no less for the Federal education than for the local school district decision maker.

* Werner Z. Hirsch, Elbert W. Segelhorst, Morton J. Marcus, Spillover of Public Education Costs and Benefits, (Los Angeles: University of California Institute of Government and Public Affairs, 1964), p. 465; also Werner Z. Hirsch, Regional Accounts for Public School Decisions, a paper presented to the Third Regional Accounts Conference, Miami Beach, Florida, Nov. 20, 1964.

A few samples will next be explored to illustrate possible applications of education program budgets. Since our main concern is with program budgeting by the Federal Government and only two of the three types of decisions mentioned earlier in this section involve it, we shall concentrate on them. The relatively low level decision concerned with finding the most effective way of attaining a given sub-program objective basically involves the local school district, and therefore will not be considered.

We shall concentrate first on a decision facing the President and his budget advisors. To the extent that the education budget as well as those of other major Federal activities is end- (or intermediate-) product oriented, and at least some outputs are in quantitative terms, the trade-off discussions about an additional billion dollars for education, defense, resources development, or space exploration become sharper and more meaningful. More specifically, on the basis of the 1963 program budget figures, the following questions suggest themselves: In the light of a 1963 GNP of about \$585 billion, a \$93 billion Federal budget, and \$25 billion public education budget, is a \$3.6 billion Federal education budget of optimum size?^{*} Or would, for example, an additional billion dollars for education prove more beneficial to the nation than adding \$1 billion to NASA's 1963 budget of \$3.7 billion for space exploration, or to DOD's 1963 budget of \$57.8 billion for defense, or are we putting too much into our defense program and not enough into education? Or vice versa?

Partial answers to these questions would not only require our estimate of contributions that can be expected from a marginal dollar invested in defense space exploration or education, but also their multiplier effects. Thus, for example, unlike an additional Federal defense or space exploration dollar, an increment of Federal contributions to education, depending upon the form it takes, could lead to further State and local education funding. In this sense, the additional Federal education dollar will carry extra duty and this increment needs to be estimated and considered in a discussion of whether we would not be better off if the Federal Government were to increase its education budget.

^{*}Economic Report of the President (Washington, D.C., U.S. Government Printing Office, January 1964), pp. 207 and 274.

Another consideration of the desirability of further Federal contributions to the financing of education centers around the issue of distributional equity. This issue has a bearing on the allocation of financing responsibility to the three levels of government. If we agree that the Federal Government is mainly responsible for income redistribution and that large scale spatial cost and benefit spillovers exist, and that they should be either neutralized or made consistent with some norm of distributional equity, greater Federal financial participation might be appropriate. Increased Federal funds provided, for example, through grants -- i.e., aid -- change the distribution of education costs and benefits to different geographic areas and income groups. Because the Federal income tax is progressive, larger Federal subsidies are likely to improve distributional equity.

Let us next turn to another type of decision. It involves the following question: If the Federal education budget is \$3.6 billion (or, if we exclude the \$.3 billion aid to federally impacted areas, \$3.3 billion), is a mix of \$1 billion (or \$.7 billion if the \$.3 billion are excluded) for primary and secondary education, \$1.1 for higher education, \$.2 billion for adult education, \$.02 billion for library services, \$1.1 billion for research (and development), and \$.06 billion for international education the optimal mix? What is the relative merit of spending an additional given amount of money for each of these programs?

Answers are not easy to come by. But a few simple yardsticks suggest themselves. For example, although the Federal budget for primary and secondary education is smaller than that for higher education, many times more youngsters attend schools than colleges and universities. The ratio is about 9 to 1.* At the same time, adequate higher education per student is not that much more expensive than primary and secondary education. Another consideration is that since education has a vertical structure, good college education is likely to be much more effective when it is accorded to youngsters with a solid

* Statistical Abstract 1963, (Washington, D.C., U.S. Government Printing Office, 1963), pp. 127 and 136.

primary and secondary education. Furthermore, if, for example, there is no immediate crisis which requires a mammoth increase in the supply of scientists and engineers, an orderly long-run program, well-balanced on all levels of education, appears to be in order.

On the surface it would appear that since across-the-board direct Federal support for primary and secondary education is so extremely small (for example, in FY 1963 it was only slightly more than 100 million dollars), there the marginal dollar would yield the highest return. Before we could be confident, however, that primary and secondary education can use additional Federal funds better than any other education program, a number of important issues must be investigated. They should elucidate such questions as: By how much will an additional Federal dollar for primary and secondary education increase funds provided for education in general compared to an additional Federal dollar for another education program? And also, by how much will an additional dollar for primary and secondary education increase education benefits compared to other education programs?

While at best the economist can have only partial answers to these resource allocation questions, policy makers would want to consider them in conjunction with some political "facts of life." For example, the issue of separation of school and church appears to have stymied all Congressional efforts to increase the support for public schools. This particular impediment to legislation exists only to a lesser extent in connection with higher education, and it plays hardly any role in relation to the other programs. Therefore, major increases in Federal support for education may have to be selected from among such programs as adult education, library services, research (and development), and international education.

The question can also be raised whether a 1963 expenditure of \$26 million for vocational high school education constitutes an optimum level. In the light of projected demand increases for skilled workers, it may be highly desirable to offer more youngsters schooling in technical high schools, and Federal grants for vocational training may be able to induce local governments to take appropriate steps. As a result, marginal returns from such an investment may be high.

Similarly, the question can be raised concerning the heavy emphasis on science. Direct and indirect Federal support of institutions of higher learning has no doubt further unbalanced the relative position of the natural sciences, social sciences, and humanities. While we do not have readily available national statistics, data can be found for specific universities. This leads to the question of whether, for example, \$50 million could not be more effectively used if channeled into the humanities than into the social or natural sciences.

Also, there is the issue of adult education and only one aspect will be considered here. On June 20, 1964, President Johnson in dedicating a new University of California campus at Irvine called for an Urban Extension Service. No doubt, in part, this interest stems from the exceptional success of our Agricultural Extension Service. With the rural population rapidly declining and urban America growing by leaps and bounds, on the first blush the President's call appears logical and perhaps overdue.

And yet, much careful work is needed before one can be sure that Federal funds for urban extension could be well spent in comparison with other opportunities. For example, the objectives of agricultural extension were clear and almost universally agreed upon -- make two blades grow where one was growing, and do so efficiently. Also these objectives were to be achieved with the aid of mechanical and chemical means whose effectiveness had been established in advance, e.g., better ways to cultivate, fertilize, fight diseases, and irrigate crops. However, on the urban scene we have neither agreement upon objectives nor tested knowledge to improve urban life and form. Therefore, perhaps we should invest more heavily in urban research before we use Federal funds for an urban extension effort.

A few words will next be said about the application of benefit-cost analysis to elucidate a higher education decision, although it may involve the Federal Government only indirectly. Early in 1964, the Education Policies Commission proposed universal junior college education, and some suggestions will be made as to how the relative merits of this proposal can be analyzed with the aid of a benefit-cost analysis.*

*The Education Policies Commission, Universal Opportunity for Education Beyond the High School, (Washington, D.C.: National Education Association, 1964).

There are 908,000 "potential" college students who, according to the proposal at hand, would enter colleges to be educated for a two-year period. For simplicity's sake, it will be assumed that:

1. These 908,000 youngsters will be in college on a full-time basis.
2. Costs will be the same as those of college students presently enrolled in various institutions. (Since junior colleges are less expensive to operate than regular liberal arts colleges or universities during the freshman and sophomore years, this assumption produces an upward cost bias.)
2. Benefits will be the same as those of college students presently enrolled in various institutions. (Since junior colleges are likely to offer education inferior to that of other institutions of higher learning, and more importantly, the caliber of those presently not in college is on the average inferior to that of those attending college, this assumption produces an upward benefit bias.)
4. Marginal cost equals average cost.

Under these assumptions, additional operating costs of \$2.8 billion, capital costs of \$.7 billion, foregone earnings of \$.4 billion and miscellaneous private costs of \$.2 billion, or a total of \$4.0 billion a year can be expected. Incremental annual student income benefits (in present value terms) of \$2.5 billion can be expected. The resulting benefit cost ratio would be about .63.

While this ratio does not reflect all the items that are germane to the proposal at hand -- a good example is the employment impact of the proposal -- it appears to indicate that investment in universal junior college education is likely to produce negative returns. At the same time, under similar assumptions adding, for example, 8-week sessions for five summers following the 7th through the 11th grade, would produce a benefit-cost ratio of 2.2. Furthermore, its social cost would tend to be much smaller than those associated with the junior college proposal -- perhaps only one-third in amount. On the other hand, if we are concerned about the fact that today about 3.5 million teenagers are in the work force and of them 2 million are out of work, placing teenagers into junior colleges is a very attractive way of reducing unemployment in the immediate future.

VI. ARRANGEMENTS FOR EFFECTIVE
USE OF PROGRAM BUDGETING

Even if promising program budgets can be designed and an agreement reached to apply benefit-cost analysis whenever possible, there remains the task of providing an institutional arrangement which will assure effective use of the two tools in negotiating and implementing major allocative decisions in the education field. The importance of such a step becomes especially clear if we remember that while the Federal education budget in FY 1963 amounted to \$3.6 billion, the United States Office of Education budget was a mere \$0.6 billion. Furthermore, in that year State and local government raised more than \$22 billion for education.

Opposition to major changes in the budgeting procedure and evaluation capability with regard to education could be forthcoming not only from Federal departments, but also from the 50 State Departments of Education and the tens of thousands of local school districts and their organized spokesmen. Also, the official position of the National Education Association, Council for Higher Education, etc., will have to be considered.

Part of the opposition is likely to stem from a general uneasiness regarding change. The existing budget and budgeting procedures are so patently uninformative that they effectively conceal most of the needed insight. Many old-timers are quite comfortable in such a situation, which makes it difficult for any operation seriously to be judged and evaluated.

There are other more basic objections to be expected. Effective program budgeting by the United States Office of Education could strengthen the hand of this agency not only in relation to other parts of the Federal Government concerned with education, but also in relation to State and local governments. It might force the latter to move in a similar direction, especially if Federal aid would include such a direct or indirect requirement.

Another serious objection is based on the view held by many educators, i.e., that education is unique, and its achievements defy measurement. They are likely to be appalled by the mere thought that outputs of education would be discussed and compared, and a benefit-cost framework be applied. In addition, there are the other potential general difficulties which have been discussed in Chapter IV.

These potential difficulties need to be remembered in our attempt to design a set of arrangements which will assure the effective use of program budgeting for major allocative decisions by the White House and Congress.* To facilitate the successful institution of program budgeting, it would be most important to create an environment in which the various Federal departments with education funds, as well as State education departments, would be induced to adopt comparable program budget and benefit-cost analysis procedures and effectively use them, when resource allocation decisions are made. Beyond this, the system should be such as to stimulate States to have local school districts adopt reasonably uniform program budgets and benefit-cost analyses, all closely integrated with the State and Federal procedures.

Achieving this objective does not necessarily require the creation of a new Department of Education with cabinet level status. This might even prove undesirable, since many budget items included in Table 7 are of great concern to education officials, as well as officials in one or more other policy areas. A good example is Federal support for medical research in universities. These funds, for example, concern decision-makers in the education, health and research fields.

What, then, is needed is a recasting of the present budget document to replace the uninformative administrative education budget reproduced as Table 1. Hand in hand with such an education program budget exhibit, the budget exhibit of the U.S. Office of Education and other agencies with major education funds should also be modified. In addition, the Bureau of the Budget might develop more detailed program budget information to facilitate its review, in cooperation with the Office of Science and Technology, of Federal science (and education) programs.

*See Chapter V.

Furthermore, the United States Commissioner of Education could be given broader powers and responsibilities and a more attractive "carrot" which would help to bring about more effective horizontal and vertical communication between education decision-makers. Such communication and dialogue could take place utilizing an integrated, internally consistent program budget and benefit cost framework, leading hopefully in future years to more closely integrated resource allocation decisions. It would be naive to assume that such a step will be easy. As a matter of fact, in many instances Federal and local school officials will have opposing interests, which program budgeting and benefit-cost analysis will not reconcile. However, these methods of analysis can guide Federal officials with the responsibility of bringing local education decisions into closer harmony with national objectives. They can also aid State and local officials to adjust themselves better to Federal education policies by helping them understand their trade-off positions.

If we are optimistic and assume that program budgeting will be instituted in the near future, in the short run the old administrative budget will have to be continued side by side with the new program budget. Budget categories should be such that cross-classification is facilitated. As was discussed earlier, there are many forces which will work in a direction favoring retaining the existing administrative budget. In order to bring about wider acceptance of program budgeting, it would be important for the Bureau of the Budget, as well as the Council of Economic Advisors, to generally move to this approach. The budget conferences of the various Federal departments in general and units within the departments with the Bureau of the Budget can now be carried out within a program budget framework. But in the major narrow education areas, the institution of a program budget by the United States Office of Education, including all Federal education financing, could induce other departments to follow suit. Furthermore, if the discussion of Federal grant proposals would take place within a program budget framework, State and local governments might be induced to make their proposals and evaluate the impact of Federal proposals on their operations and finances in a similar framework.

