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ABSTRACT

The purpose of this report is to recommend certain administrative management policies and procedures for the National Institute of Education (NIE). Administrative management activities for NIE are personnel, budget, finance, general services, contracts and grants, and overall administrative management. Management information is included in this list of activities, especially where the information or data are derived from administrative sources, such as the finance or personnel systems. In this report, administrative management activities are described in terms of (1) the policies governing NIE as a federal agency, (2) the management policies recommended for NIE, (3) the operational procedures recommended for NIE, and (4) the management and program decision process of NIE as an agency. The report identifies documents and issuances that are to be developed for actual use by NIE as an agency, but which are not appropriate for inclusion in this report. Examples of such data are the document flow of personnel actions, travel orders, and contracts; a staffing pattern; the Common Accounting Number structure (CAN book) to be used for NIE accounting; and the allotment of funds (both program and administrative) for NIE operation during FY 1973. The objective of these administrative management measures is to provide an appropriate management structure for the NIE director and his managers to use as an instrument, effective July 1, 1972, to develop NIE into a fully operative agency; to fashion the FY 1973 program of R&D funding; and to execute that program. (Author)

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ADMINISTRATIVE MANAGEMENT IN NIE

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A Report of the Planning Unit for the National Institute of Education

June 20, 1972

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ADMINISTRATIVE MANAGEMENT IN NIE

Introduction

The purpose of this report is to recommend certain administrative management policies and procedures for NIE. The policies and procedures to conduct the administrative and business management of the new agency are established to undergird the programs to be conducted by NIE. To appropriately describe the administrative operations of NIE it will be necessary to consider also the techniques to be used for management of NIE R&D programs. Thus, reference should be made to other NIE Planning Unit reports pertaining to a proposed agenda for R&D, to organization and management, and to program management procedures.

Administrative management activities for NIE are: personnel, budget, finance, general services, contracts and grants, and overall administrative management. Management information is included in this list of activities, especially where the information or data is derived from administrative sources, such as the finance or personnel systems. In this report, administrative management activities are described in terms of (1) the policies governing NIE as a Federal agency, (2) the management policies recommended for NIE, (3) the operational procedures recommended for NIE, and (4) the management and program decision process of NIE as an agency. This report will identify documents and issuances which are to be developed for actual use by NIE as an agency, but which are not appropriate for inclusion in this report. Examples of these are: the document flow of personnel actions, of travel orders, and of contracts; a staffing pattern; the Common Accounting Number structure (CAN book) to be used for NIE accounting; and the allotment of funds (both program and administrative) for NIE operation during FY 1973. Many of the materials are being prepared by the Planning Unit. Others may require decision on selection of alternatives by the actual NIE decision-makers. In the latter event, the Planning Unit is identifying the situation or problem and suggesting possible options. Recommendations are made in most areas.

The objective of these administrative management measures is to provide an appropriate management structure for the NIE Director and his managers to use as an instrument, effective July 1, 1972, to develop NIE into a fully operative agency; to fashion the FY 1973 program of R&D funding; and to execute that program.

Relations with the Department of HEW

Federal research and development is not new to the Department of Health, Education, and Welfare with its National Institutes of Health and Health Services and Mental Health Administration. Many of the administrative policies and procedures which have been issued by DHEW will be applicable to NIE. In determining the administrative management of NIE, consideration must be given as to the costs and benefits to NIE to utilize these services. Criteria applicable to this determination would be as follows: the extent to which NIE needs to establish a self-contained or independent capacity for a particular administrative service; the relative cost to NIE of allocating budgeted positions to a particular activity as contrasted with procuring these services and allocating those positions to other activities within NIE; the time and effort which would be required in order to develop for NIE a system as contrasted with the ability of NIE to participate in an existing system; and the short term needs of NIE to have an immediate capacity.

Centralization vs. Decentralization of NIE Administrative Staff

In a centralized arrangement all administrative personnel are in a single administrative organization, generally reporting to the Office of the Director. In the proposed interim organization for NIE, the Bureau of Administration would constitute a centralized organization. This has the advantage of making it easier to apply the generally large number of policies and procedures consistently and therefore to avoid the situation in which grantees, contractors, and prospective employees receive different guidance from different parts of the organization. Another advantage is that recruitment of good quality staff is aided. Centralization enhances the prestige of administrative personnel, permits higher salaries to be paid because of broader responsibility, and opens career advancement paths within administration. A potential disadvantage of this arrangement is the tendency for separate administrative staffs to become rigid in the application of administrative regulations and relatively unresponsive to the needs of the R&D program staff.

In a decentralized arrangement, administrative personnel are distributed among the organizations' subdivisions, reporting to each subdivision director. The advantage of this arrangement is the greater responsiveness to the needs of the program staff that should result from closer association.

Its principal disadvantage is the administrative inconsistencies among subdivisions that may occur to the confusion of those who deal with more than one organization.

A centralized approach is utilized for the interim NIE organization particularly because of the need for establishing and applying internally consistent policies and procedures in a new agency. In addition, the relatively small number of staff positions for NIE would be more effectively used on a centralized basis. It is to be noted, however, that the staffing pattern to be proposed would include an administrative officer within each of the major bureaus to act as a focal point for all administrative services within the bureau.

Financial Management

Financial mangement within NIE includes both finance and budget presentations and execution functions. Both these functions require close coordination with the policies and procedures of the Office of Management and Budget, the Comptroller General, and DHEW.

Budget Presentation and Execution

The Office of Policy, Planning, and Evaluation will prepare the multi-year and the initial development of the current year annual budget presentation. Preparation of the budgetary presentation to the Office of Management and Budget and the Congressional justification will be a combined activity of this office and the Bureau of Administration. With the enactment of the annual appropriation, the budgetary execution function will be implemented by the Bureau of Administration. Proper and effective budgetary execution of the appropriation will require close coordination with the finance and accounting system for NIE. Expenditure control within departmental ceilings is also a component of this activity.

DHEW has established an "umbrella" accounting system concept whereby the various accounting systems of the constituent agencies of HEW must provide for certain established accounting principles and standards, basic coding structures, relationships of the accounting system to organization, and program and budget structures. The intention is to make all financial accounting systems of the Department compatible. At the present time, DHEW is involved in securing approval of the various accounting systems of HEW by the Comptroller General and OMB. It is expected that this process will continue through calendar 1973.

NIE must have a capacity on its effective date for an operational financial management system, encompassing accounting, fund control, and reporting. Generally speaking, this system must have a capacity to record commitments of funds, to record the obligation of funds, to make payments for all contracts and grants and direct activities of NIE, to record these payments, to produce reports for the Office of Management and Budget, Treasury, and DHEW, and to provide appropriate linkages with the other DHEW financial systems. These other DHEW financial systems are the NIH Grant Management Fund for purposes of making grant payments primarily to institutions of higher education, the HEW letter of credit system for making payments to State agencies, the Office of Education direct payments to contractors and other grantees. These payment systems are in the process of making changes, such as a single letter of credit for all HEW grantees in a particular state and in a particular university.

The Office of Education Financial Management Information System (OEFMIS) is designed to satisfy the DHEW and other Federal requirements. OEFMIS is a total system and is designed to be both integrated and comprehensive. It employs the use of electronic data processing equipment to convert large quantities of data into useful, timely information to meet statutory requirements and management needs. The automated accounting and financial control system provides compliance with the DHEW accounting requirements.

A. DHEW Master File

B. Document and Transaction Files

C. Accounting and financial controls by appropriation, apportionment, allotment, limitation, commitment, obligation, accrued expenditure, disbursement, pre-closing adjustment entries, closing adjustment entries, and fiscal control of annual, multi-year, and expired appropriations.

The system can also provide on a current basis:

A. The general ledger

B. The subsidiary ledgers

C. Daily accounting information requirements

D. Data to satisfy Congressional and management inquiries for varying types of reports and for specified internal and external forms and reports.

It is recommended that NIE utilize the OEFMIS to discharge its responsibilities for financial management in the areas of accounting, fund control, reporting, and linkages to the DHEW system. This recommendation is made because the system would provide for NIE requirements; it is an operational system that can satisfy NIE needs as of July 1, 1972; and it has been used for educational R&D work.

Fund Allotment

A stated amount of funds is allotted to the principal officer (allottee) responsible for the administration of a program. Financial operating plans are articulated by the issuance of limitations within the allotment structure. These limitations provide authority to the staff personnel who are under the supervision of the allottee to administer an administrative or a program function. Typically, the allottee is at the bureau level and the limitations are issued to the division level. One task within NIE will be to establish the level to which allotments and limitations will be made. In large part, this decision should be made on the basis of the management style to be used within the agency. The incurring of obligations in excess of a limitation amount is not considered to be a violation of the Anti-Deficiency Statute. The administrator of the limitation is subject, however, to censure if his obligation actions exceed the limitation since this over-obligation may cause the allottee to exceed his authority as set forth in the original allotment. The allottee is held responsible under the Anti-Deficiency Statute.

The limitation structure encompasses administrative and program limitations.

1. Administrative limitations reflect the operating plans for salaries and expenses, the administrative funds of the agency. These limitations are further delineated to recognize the fact that certain administrative costs such as overtime and travel are controllable by the administrator. There are other administrative costs such as utilities and directed costs over which the program administrator has no control. This differentiation recognizes that administrators should not be held responsible for costs over which they have no control. Therefore, administrative limitations are designated as those which are centrally controlled.

2. Program limitations are issued to each program office. The obligations and expenditures related to program limitations are further identified by budget activities or program activities. The development of a program limitations structure is therefore contingent upon the development of the FY 1973 program budget for NIE.

A code structure identified as the Common Accounting Number (CAN), is used by all subsystems throughout the Department of Health, Education, and Welfare. This CAN is a 7-digit code which substitutes for several specific, constant data elements required for an input transaction. Three major elements are included in the CAN structure; the organization accounting control points and the appropriation. The accounting control point field will be used to identify NIE. The accounting control point for NIE will be "50". A task necessary for the establishment of NIE's financial management system, therefore, is a CAN structure based upon the organization and programs to be assigned within this organization structure for NIE. This system, however, is adaptable and additional CAN numbers may be assigned as necessary during the fiscal year.

Upon the establishment of NIE it will be necessary to take the following steps in order to provide a suitable financial base for operation of NIE:

1. Establish a program budget including activities and subactivities within that program budget.

2. Make allotments of funds (program and administrative) from the FY 1973 appropriation within the Institute. It is, of course, possible that as a result of Congressional action on the FY 1973 appropriation, the Director may be required to make certain adaptations from the proposed budget request. The authorization in the enabling legislation for NIE of "no-year funding" will assist NIE in the development of a coherent R&D program without the usual stress to obligate funds at year end. This authorization would apply absent a contrary expression in the annual appropriation acts to the effect that funds be obligated in the year in which appropriated.

Program and Administrative Fund Control

The desired objective is for each bureau director to have total responsibility for all of his resources, both personnel and funds. Thus, the bureau director would be authorized to make choices as to the allocation of funds for promotion of employees, for hiring of employees, for travel, for contracted studies, and for program projects to be funded. This allocation decision would, of course, be subject to the overall plans and objectives of the bureau director in order to achieve the program goals ned by the director of NIE.

In the area of directed program activities, for example, the bureau director could decide to allocate more dollars of his allocation for salaries of staff to manage contracted extramural research and fewer dollars for staff travel. One significant restraint upon a bureau director in these circumstances is, of course, the matter of position control. NIE, like all other HEW agencies, will be subject to position control; that is, the number of permanent positions assigned to the agency. (It is to be noted that while this concept of position control is currently being questioned as an effective management device in favor of reliance only upon dollar control, the assumption must be that at least for FY 1973 NIE will be subject to position control.)

In other organizational units of NIE, a different situation is presented. The manager responsible for granting financial support of research resource building would be required to decide between the number of grants to fund and the cost to NIE to award and to monitor these grants. This decision may be constrained by a budget or program commitment to award a stated number of grants.

It is recommended that, in order for NIE to achieve an objective-oriented program plan supported by integrated budgeting of program and administrative funds and personnel resources, the following steps be achieved:

1. Effective current fiscal year program operational planning.

2. Resource allocation of program and administrative funds and personnel resources grounded upon the current year program operational plan.

3. Fund control of allocations at appropriate organizational levels.

Fund Control--Organizational Level

The organizational level at which funds are controlled is important to the vesting of responsibility. Basically, there are two major options. The first option is to assign a stated number of personnel positions to each organization, such as a bureau. In addition, all administrative costs, including personnel compensation required for these positions,would be assigned at the bureau level. The second option is to assign a stated number of positions to the bureau level but retain control over funds for personnel compensation on a centralized basis for NIE. Bureaus would be assigned control over funds for such items as travel, contracts, and consultants.

It is recommended that, NIE establish the first option as its objective. That is, through the program planning process, personnel and fund allocations are established, controlled, and become the responsibility at the bureau level. It is further recommended, however, that during FY 1973 the fund control of personnel compensation be established on a centralized basis. The reason for this difference in FY 1973 is because of the nature of the "start-up" activities of NIE during that year. NIE employment will be building up during the entire fiscal year. Many decisions will be made during that year without benefit of prior year financial experience or cost accumulation data. Thus, it does not seem feasible or desirable to attempt, during the first start-up year of NIE, to have effective control and responsibility vested at the bureau level. However, the centralized control and accounting activities should accumulate cost data for personnel compensation and other costs attributable to bureau level activities. This data would serve as the basis for the FY 1974 fund allocation process.

It is recommended that NIE use the management accounts subsystem available within the OEFMIS. Management accounts provide a third dimension in addition to the typical object classification and organizational level accounts. Through the use of management accounts, costs may be accumulated which will show, for example, what amount of the total costs of staff travel of a division are used to monitor contracts awarded by the division. This management account capability will be important in the use of management by objectives. Through management accounts financial data may be obtained which may then be used as an indication of operational plan accomplishments.

NIH Grant Management and Letter of Credit Payment System

Grants awarded to universities and to particular state educational agency control system must be paid through the NIE Grants Management Fund. Since OE will provide accounting services for NIE, all documents involved in the NIH Grants Management Fund must be transmitted via OE Finance Division on an NIH Approval List and all documents must bear a preassigned NIH transaction number as an NIE document number. OE Finance Division will assign blocks of transaction numbers to NIE.

The Letter of Credit Financing System authorizes a recipient organization, e.g., a State Education Agency (SEA) to submit payment vouchers through its local commercial bank to a Federal Reserve Bank or branch for deposit of cash on the SEA's local bank account. Several NIE programs will be financed under the letter of credits with all SEA's except Nebraska and Arizona which are under the single letter of credit concept administered by the NIH Grants Management Fund. For all SEA's that are administered by OE, NIE will receive financial information through their systems rather than initiate a new letter of credit agreement with each SEA. This will be the procedure for Arizona and Nebraska SEA's, i.e., via the NIH Grants Management Fund.

<u>FY 1973 Financial Operations</u>

It is assumed that NIE is authorized by statute prior to July 1, 1972, with an effective date of July 1, 1972. If it is further assumed that the FY 1973 appropriation for NIE has also been enacted by July 1, 1972, then obligation of funds may be made following receipt of apportionments through DHEW and OMB. Principal financial needs arising on July 1, 1972, will be for personnel compensation and supporting administrative funds and a limited amount of program funds. Current information indicates, however, a few projects requiring continuation funding in the first quarter of FY 1973. The first major funding activity would be the educational laboratories and centers which have contract funding expiring in November.

If the FY 1973 appropriation act is not enacted by July 1972, authorization would be sought under the Continuing Resolution and the authorizing legislation of NIE, to continue activities at the FY 1972 level. Thus, continuation funds would be available for the 174 positions to be established in NIE effective July 1, 1972. The usual rules governing continuing resolution activity would apply; no new project starts could be funded but funds would be available for obligation of non-competing continuation projects under the new NIE legislative authorization. During the month of July, allotments would be made at the level of 1/12 of the FY 1972 appropriation level for program and administrative funds.

Personnel Management

NIE will maintain a full agency capability for personnel services, including the appointment and classification authority. During the "start-up" FY 1973, the assistance of DHEW and OE will be used to recruit and employ NIE staff. NIE will also need to maintain employee relations, employee development, and employee records capabilities. The personnel activity for NIE will be particularly important because of the plans for associates, interns, fellows, and task force members to rotate into NIE from universities and school districts and other organizations.

An important and distinctive element of NIE personnel activity is the authority of NIE to make certain employments without regard to the Civil Service laws. This statutory provision, in effect, authorizes the Director to employ and compensate such technical and professional employees of the Institute as deemed necessary to accomplish its functions. The employment appointments may be made for periods of up to three years without regard to the competitive appointment, classification, and pay rates of the Civil Service laws. In addition, up to twenty per cent of the full time regular professional and technical employees of NIE may be appointed and compensated without regard to the Civil Service laws. These latter appointments are not subject to the three year time limitation.

Assuming that NIE will have permanent position staffing of 344 positions, it is expected that approximately two hundred of those positions would be professional and technical. The result is that approximately forty of these positions would be available for employment and compensation without regard to Civil Service laws. NIE plans to use the authority to make short-term appointments (for periods of up to three years) for approximately 140 appointments. These short-term or other-than-permanent appointments would be made for persons on task force activities where the period of research and their expertise needed is for time periods of less than three years. Interns, research fellows and associates joining NIE for periods of one, two, or three years would also be appointed under this authority. In this way, NIE would be assured of the continuous input of people with fresh ideas and recent experience in the educational community.

Personnel Capabilities and Expertise Desired for NIE

Federal agencies currently involved in R&D have utilized a broad spectrum of personnel capabilities. These capabilities differ according to the nature of the program management role.

1. In NIH, an executive secretary manages the process of review of unsolicited grant proposals by a study section comprising non-NIH scientists in a spedified discipline. His principal role is to engineer the applications through the review process.

2. At NSF, a program officer is typically more aggressive in the encouragement and discouragement of proposals, in the selection of proposal reviewers, and in making the final decision.

3. A NASA project director must determine what R&D is necessary, solicit the performance, award contracts, monitor their performance, and combine them to achieve his project objectives.

At NIE it is expected that this entire array of capabilities and expertise will be required.

These Federal agencies also indicate that first priority in choosing a project director, is his technical competence. The second is his management experience. A staff development program has been found necessary in these agencies in order to develop and train program managers. It is to be expected that NIE will have difficulty in recruiting sufficient researchers also possessing management experience. Thus, a development program for advanced management techniques will be desirable. In the conduct of NIE's intramural research program it may be expected that conflicts will arise between the responsibilities of conducting intramural research and managing the extramural research activities assigned to a bureau or division. Relief of this situation is expected through the use of the short-term appointment authority (one to three-year appointments). This statutory authority will also enable NIE to fix the salary classification for senior intramural researchers at an appropriate level, notwithstanding the absence of administrative responsibilities which would be required under typical Civil Service appointment requirements.

Staffing of NIE

The interim NIE organization recommended in the April 15 statement of organization and management is the initial starting point for establishing staffing patterns, and is relied upon as the basis for the subsequent staffing phases. The staffing pattern proposed is a recommended distribution of all 484 positions (344 permanent positions and 140 short-term positions). The Planning Unit has developed a staffing pattern which, it is believed, represents a reasonable resource allocation based on current assumptions. In preparing the staffing pattern, the permanent positions and the short-term positions were treated as an entity. Thus, in some organizations using task forces to accomplish finite term projects, fewer permanent positions but a greater number of short-term positions were allocated. The staffing pattern will also serve as a basis for identifying the 170 jobs to be requested of the Congress, and as the basis for the recruiting schedule of NIE.

Recruitment of Staff

Ideally, of course, it would be desirable to recruit staff for NIE on a "top-down" basis. That is, with the Director recruiting the top management staff at bureau level, and subsequent recruiting of division and task force leaders by the bureau leadership. It is expected that some of this may be accomplished. However, recognition should be made that timing of the Senate confirmation of the Director may cause delays in achieving final appointment of top management. Security clearances may also retard timely appointments.

It is recommended that a recruitment schedule be established based upon the staffing pattern, nature of staff qualifications desired in each bureau, the number of people desired possessing particular types of expertise, the expected term of appointment, and the desired time of reporting to NIE during FY 1973.

NIE Personnel Function Activity

It is recommended that the personnel activity for NIE be capable of providing a wide range of personnel services in order to provide for effective and prompt employment and personnel services for both permanent staff as well as those persons appointed to short-term employment. The number of short-term appointments (other-than-permanent positions) will be larger than in most federal agencies, and the relatively frequent turnover of these appointments will require a personnel office capable of administering this operation.

It is recommended that an effective and continuous orientation program for NIE staff be maintained by the personnel activity in view of the large number of new staff to be employed, and the continuous influx of people coming into the agency under the short-term appointments.

It is recommended that an effective advanced management training program be established since most researchers will not have management experience in administering extramural funding. Advanced management training has been identified in other federal R&D agencies as an extremely important aspect of their operations. As people are employed by NIE, they should be fully informed as to the advanced management training requirements appropriate to their positions. This advance commitment is necessary because once people become established in their jobs, they then become extremely reluctant to be away from the desk for the periods of time necessary for effective advanced management training.

Manpower Planning in NIE

Multi-year planning for manpower requirements is principally a function of the Management Planning and Analysis Unit in the Office of Policy, Planning, and Evaluation. All bureaus would, of course, produce their requirements for this unit. The personnel activity of NIE should then translate these longer term requirements and plans into operations such as recruitment, the classification process, and employee training and development programs. A special element of the manpower planning process would be to incorporate the need for short-term appointments as related to the program plans developed by the Program Planning Unit. Thus, it will be necessary for effective manpower planning to consider the turnover of various short-term interns, associates, and fellows as their tasks are completed relative to the need for new short-term appointees to accomplish new tasks and programs.

Integrated Payroll and Personnel System

It would be desirable for NIE to have an automated system to integrate the personnel and payroll systems. Such a system would make possible the accumulation and interface of payroll and personnel information. For example, the system would provide, on an automated basis, projected costs of employment for the entire fiscal year including within-grade increases. This information is currently available now but involves a substantial amount of manpower to assemble the information and make the computations.

It is recommended that in its initial year of operation, NIE utilize the existing automated personnel system currently in use in the Office of Education. Through this automated system, printouts are available indicating the staffing pattern, the position-title, name of incumbent, GS grade, and salary and other relevant information. System inputs would be the SF 50's prepared by the NIE staff and transmitted to the automated data processing system. It is also recommended that during FY 1973, NIE examine the possibility and feasibility of an automated system integrating payroll and personnel data.

Contracts and Grants Management

The function of managing contracts and grants in NIE will be important to the achievement of an effective R&D program. This function must be seen as integral to the management of R&D programs, rather than as a separate and distinct operation. The linkages between business and program management in R&D agencies can present problems. It is important for the success for NIE and of its R&D program that these problems be resolved in an effective manner.

NIE will have authority to enter into contracts, to award grants, and to make jointly financed cooperative arrangements with public and private organizations. Achievement of the NIE R&D program objectives will require use of all of these authorities.

An analysis of the nature of the problems likely to be encountered by NIE in the use of contracts and grants to manage extramural research is indicated by a review of the problems encountered by the Federal agencies. An analysis of these problems as identified in a number of audit reports prepared by the General Accounting Office and the DHEW Audit Agency is contained in Appendix A.

Distinction Between Contract and Grant

A failure to properly distinguish between these two concepts frequently is the source of problems. This distinction is not free from difficulty. A number of articles have been written--and will be written--to attempt to point up the similarities and dissimilarities of these two concepts.

(See, for example, "Grants for Scientific Research," Federal Bar Journal, Summer 1971, citing numerous references.) What is important for NIE is the resulting impact upon NIE program management arising from the use of a grant or of a contract. For example, contract activities are governed by the Federal Procurement Regulations and the Federal Property and Administrative Services Act. Introduction of a grant philosophy to the contract process results in a disparity between actual contract operations and applicable statutory and regulatory requirements. These circumstances tend to arise where contract and grant instruments are used in the same program area. Conversely, problems arise in the use of the grant when the conditions imposed upon the grantee amount to the degree of control and direction typically found in a contract. This is not to imply a lesser degree of stewardship or accountability in the use of a grant than a contract; what it does mean is a difference in program management and operations.

Accordingly, for purposes of a working definition for NIE, a contract may be described as the instrument used by the Government to procure or obtain goods and services which the Government determines are needed in order to discharge its agency operations. A grant is described as the instrument by which a Government agency provides financial assistance to support activities deemed worthy of Federal support by national policy. The only benefit flowing to the agency awarding a grant is the fact of satisfaction of an agency mission to promote an activity through provisions of financial support. Thus, in programmatic and practice-oriented research, the contract instrument would be used in order to obtain a product, system, or procedure that satisfies a need of NIE to achieve a program goal. As contrasted with supporting basic research through grants, NIE contracted research will exert managerial influence through performance milestones and documentation reviews as conditions for partial payments. Additional differences between a contract and a grant are stated in Appendix B.

It is recommended that NIE prepare policies and procedures providing for guidance to NIE staff as to the use of the contract and the grant instruments, and as to the resulting internal management process resulting from this choice. Determination of the R&D objectives to be sought in a particular NIE program will guide the choice.

It is further recommended that separate identification be made of persons appointed as contract officers and those appointed as grant officers. This distinction is recognized in other federal R&D agencies, is consistent with the proposed management techniques of the different bureaus of NIE, and is necessary to reflect the different expertise and procedures used for grants and contracts. The proposed staffing incorporates the recommendations and provides also for appropriate contract administration staff to support the contract officer in post-award administration of the contracts.

It is also recommended that NIE explore the potential use of the "jointly funded cooperative arrangements" authorized by the enabling legislation. Arrangements of this nature may have the potential for providing the relationship between NIE and the researcher not altogether available through the grant or contract instrument. The Atomic Energy

Commission and the Argicultural Research Service use research agreements which could be used as models for NIE adoption.

Role of Contract Officer and Project Officer

A frequent source of difficulty is a lack of understanding or ambiguity as to the proper role and responsibilities of the contract officer and the project officer. While it is clear that only the project officer is responsible for the programmatic substance of the contract, it is equally clear that only the contract officer has the authority and responsibility to obligate the Federal government.

It is anticipated that many people joining the NIE staff will not be familiar with the Federal statutory and regulatory requirements of contracting. For this reason, it is recommended that an explanation of these requirements be included in the NIE orientation program recommended in the "Personnel Management" portion of this report. For program staff expected to be substantively engaged in contracting, it is recommended that a seminar on contracting be presented. Among the examples of seminars available is the recent seminar on contracts and grants conducted for the USOE by Harbridge House, Inc.

NIE Contract Operations

NIE is expected to accomplish a substantial amount of contract work to procure directed research and development. Effective and quality program and business management will be essential. To achieve results it is essential that procurement management plans be well developed and then implemented according to sound business management practices.

A review and analysis of the methods and procedures used by other Federal R and D agencies is instructive for NIE planning. A description of the conduct of a directed contract program used by a Federal R and D agency is contained in the RAND Working Note 7677 (page 91) describing the OEO, Office of Planning, Research and Evaluation. The following discussion draws upon information in the RAND Working Note for purposes of formulating guidance to planning NIE operations.

The first phase of program planning is that of preliminary development designed to answer these questions:

- What is to be found out?
- How can it be found out?
- Who will use the results?
- About how much will it cost?

To be sure, the NIE program planning process under direction of the Program Planning Unit will have already completed program development to a certain level upon which to base these determinations. Still, staff responsible for each component of a program plan must address these issues. A result of this first phase is expected to be a procurement management plan designed to embrace both the internal NIE activities of pre-award, as well as the beginnings of the post-award contract administration work.

The second phase of program planning is the preparation of the statement of work to be accomplished by the resulting contractor. The final product of this phase is a Request for Proposal (RFP). A team of agency staff, including the project officer and the contract officer, would produce the RFP. Once the RFP is drafted, a project review board reviews the draft RFP for adequacy of the work statement, that necessary funds are budgeted (including future year requirements), that the estimated cost is appropriate for the project, and that the contract terms (including provision for post-award contract administration) are adequate. The project review board is chaired by a management official from at least the next highest level above the project team level. If the estimated project cost is in excess of a stated amount ($300,000 in the OEO instance) then an *ad hoc* Procurement Board is established to review the RFP, to review the criteria to be used in selecting the winning contractor, to prepare an instrument for evaluating proposals with respect to the criteria, and to determine the type of contract to be used (fixed price, cost plus fixed fee, or other contract forms). Members of the Board are appointed by top management of the agency and are selected to include an agency-wide cross section of senior-level program staff, the project team leader, and the director of procurement. Where the estimated project cost is less than the stated amount, the process for reviewing the criteria to be used in evaluating bidders is less structured and instead of a formal Procurement Board, office managers accomplish this review at the same time they are reviewing the final version of the RFP for substance.

Notwithstanding the amount of the estimated project cost, the final version of the RFP and the criteria to be used in evaluating bids is reviewed for its technical substance and legal conformity by agency managers: the director of the Office, the general counsel, and the director of the procurement office. If acceptable, the RFP is released for publication in the *Commerce Business Daily*, and is also sent directly to organizations that the staff thinks would be exceptionally able performers.

In the third phase of program planning, proposals received in response to the RFP and evaluated through several techniques: internal agency committee review in which sometimes a few people from outside the agency may be added, either governmental or non-government; a panel of outside consultants may be convened; or field readers may prepare their evaluations. The Procurement Evaluation Board members then proceed to rank the proposals on technical merit according to criteria set in the RFP. After the Board has completed the assignment of technical scores to the proposals, the Board sees the cost portion of the proposals for the first time. The Board then determines which set of proposals are in the "competitive range." The competitive range generally consists of those proposals which are high in technical merit but not too high in cost. The bidders in the competitive range (usually from three to five bidders) are then invited to discuss the strengths and weaknesses of their proposals with the project team, including the contract officer. Bidders are then given until a set date to revise either or both their cost or technical proposals. Revised cost and technical proposals received from the "competitive range" bidders are then rescored and re-evaluated by the Board as its final determination of rank order according to technical merit.

Final decision on the contractor to be selected is made by a Source Selection Board when the procurements are in excess of the stated amount. Members of this Board in OEO are the Deputy Director of OEO, the Bureau Director, and the General Counsel. After a presentation from the project team leader summarizing the results of the Procurement Evaluation Board consideration, the Source Selection Board reaches a decision. Where the procurement is less than the stated amount, the Bureau director makes the final decision on contractor selection, relying to a considerable extent on the opinions and judgments of the project team leader and the project contracting officer.

In the final phase of post-award contract administration, the contractor's work is closely monitored through key milestones, approval of position statements at significant accomplishment stages, and periodic status reviews pending scheduled payments to the contractor.

Recommendations for NIE

The above analysis describes the general outline of the internal agency use of contract procurement for directed R&D. It is expected that the two proposed NIE Bureaus to be engaged in directed R&D (Directed Programs and Educational Practices) will desire to adapt the general concepts to their operations. There are, however, certain principles which are recommended:

1. That the preparation of statements of work receive the benefit of substantial staff development, so that when the contract is awarded, there is a good understanding between the contractor and NIE as to exactly what is to be produced.

2. That in the formulation of the statement of work, the NIE contract officer and project officer work on a team basis, rather than merely involving the contract officer at the final stages for signoff of documents.

3. That written procedure be established for all contract procurement in each Bureau of NIE; that this written procedure establish a formal approval mechanism for procurement contracts at a stated dollar level; and that the formal approval procedure include legal clearance of procurement contract actions at a stated dollar level. In the initial year of NIE operation, $100,000 is suggested as the stated dollar level in order that overall agency policy might be better developed--after experience is developed and policies more advanced, this level might be raised.

4. That all procurement contract actions be approved for final decision by an official at an organizational level at least one level higher than the project officer or task force leader.

5. That a sole source board be convened to review the justifications for contract procurement on a sole source basis.

6. That post-award contract administration be accomplished on a team basis composed of a project officer and a contract administrator. The contract administrator function is designed to accomplish the numerous and detailed transactions necessary to effective contract administration and to enable the project officer to concentrate upon the substance of the contractor's work. Under direction of the contract officer, the contract administrator would accomplish all business management functions with the contractor, assist the project officer in monitoring contract performance milestones, and prepare any timely written amendments to the contracts made necessary by significant changes in the scope of work desired by the project officer and contractor.

7. That a procedure be established and aggressively implemented for timely closeout of contracts when the R&D work is completed.

Grant Management in NIE

NIE is expected to use grants to support basic research, researcher training, and unsolicited research. Other areas may also be funded through grants. Announcements as to the availability of these grants will be made through program brochures and similar issuances. These announcements generally may be expected to describe the particular NIE program and its objectives; to state the areas of NIE interest, though not with the specificity of a procurement RFP; and to state the application process. The articulation of the policies and other standards of general applicability upon which will be based the decision as to which applicant is awarded a grant is subject to the "rule-making" procedures established by the Department of Health, Education, and Welfare.

The grant-making process is not subject to statutory or regulatory provisions and requirements to the same extent as contracts are so subjected under the Federal Property and Administrative Services Act and the Federal Procurement Regulations. DHEW has, however, established certain policies and procedures applicable to grant programs in the DHEW Grants Administration Manual. A good number of these HEW policies are required to be set forth by each constituent agency in their policy issuances.

No standard form grant instrument is presently required in the Federal Government. Various recommendations have been made for a government-wide standard research grant instrument; but no such instrument has been prepared. Other studies have recommended a form of "research agreement" in lieu of a grant as a better device to encompass the Federal and grantee (mostly universities) relationships in the support of scientific research.

It is recommended that NIE prepare a grant instrument reflecting the nature of a grant as a means of financial support. The language used in the terms and conditions should not merely be modified contract language. In addition, it might be appropriate for the NIE grant terms to be different in the case of basic, unsolicited research and in the case of researcher training.

It is recommended that the DHEW Grants Management Manual be reviewed for the insertion of all required policies as NIE grant policies are being prepared.

It is recommended that NIE prepare agency instructions to be followed by each NIE bureau for the issuance of program grant policies; that the policies and procedures governing approval of project proposals be combined with delegations of authority at appropriate organization and fund control level; and that a closeout procedure for grants be followed when the R&D activity has been completed.

It is recommended that a grants manager concept be established, as distinguished from a contracts officer, to reflect the different concept of a grant and of the expertise required. The grant manager would work alongside the project officer on both pre- and post-award activities.

NIE Program and Business Policy Issuances

The conduct and execution of NIE programs will require the issuance of policy statements setting forth the program goals, priorities, and the manner in which funds may be secured for extramural research. In establishing the policies, NIE will be subject to DHEW regulations and may be subject to the General Education Provisions Act (GEPA).

DHEW policy regarding the issuance of these regulations is that notices of the proposed regulation must first be published in accordance with rule-making procedures. (These HEW policies are in Chapters 3-20 and 19-11, HEW General Administration Manual.) All NIE regulations--that is, standards imposed by NIE having general applicability as program requirements--are subject to these DHEW policies. Following the rule-making procedures, the final regulations must be published in the Federal Register. Two DHEW basic procedures are established: those regulations issuing guidance or procedures to state and local governments: and those regulations which involve significant policy issues but which do not require review by heads of state and local governments. The procedure for the first category normally requires a minimum period of 60 days prior to publication and involves consultation with the Advisory Commission on Intergovernmental Relations. The second category procedure specifies a minimum of 30 days prior to publication date. Actually, the time necessary to draft policy statements of this nature and complete the agency internal clearance process usually is at least four to six months.

Should analysis of the rather complex provisions of the Conference Report on S.659 indicate that the General Education Provisions Act apply to NIE, then NIE will be required to publish in the Federal Register any "standard, rule, regulation, or requirement of general applicability prescribed for the administration" of the NIE programs. Before any such standard, rule, regulation or requirement of general applicability may take effect, a thirty-day period must elapse following publication in the Federal Register of the appropriate document. It will be necessary for NIE to secure legal advice as to the application of the GEPA requirement to the particular policy issuances intended to be used. For example, it must be determined whether the GEPA requirement applies to guidelines established describing the annual NIE priority areas to be funded in soliciting basic research grants. Another area is the management policy for institutional support of educational laboratories. Even if GEPA is not applicable to NIE, DHEW policies would require NIE policies be issued as regulations through rule-making.

Existing regulations prepared by the Office of Education for its administration of research and development programs will not be operative since they were not issued under the NIE statutory authorization and the Conference report on S.659 did not include any authorization to "carryover" these existing regulations. Thus, NIE will need to issue new policy statements as regulations, or, as an interim measure, adopt the existing regulations while proceeding to develop new regulations.

It is recommended that NIE collect for all programs which it will administer all rules, regulations, guidelines, and other issuances to which the above requirements are applicable. Much of this work can be accomplished by appropriate linkage with the OE task force established for purposes of the study and report on regulations required under Section 505 of the Conference Report of S.659.

It is recommended that NIE start a review of the policies which it may wish to change--giving priority to the more significant matters--as the basis for deciding the extent to which existing regulations need to be adopted or revised.

It is recommended that in order to achieve NIE agency-wide consistency and to avoid proliferation of conflicting issuances, NIE establish a policy that all policy issuances are a matter of agency-wide concern, not limited to a particular unit; that priority be given to the development and issuance of the NIE policies to be applicable to all particular NIE programs; and that all NIE program policy issuances by bureaus for particular programs be in accord with these over-all NIE policies.

Management Information in Contracts and Grants

There are several areas where management information will be very necessary during the first year of NIE operations. In other areas, this information and the system to obtain it may require more time to develop.

As a minimum for FY 1973, NIE needs to have the capability to inventory all contracts and grants awarded by NIE and to record relevant information pertaining to these awards. The information required by DHEW will, of course, be included in the data base requirements plus additional information needed by NIE management. Currently, the capacity of the OE Project Grant Information System (PGIS) includes the DHEW data requirement along with many data elements appropriate to an R and D operation. (See the Hayman report on MIS prepared for the Planning Unit.)

NIE will also need a system for recording the receipt and assignment within NIE of solicited and unsolicited proposals. NIE management will want to be able to respond to inquiries from applicants, other agencies, and the Congress as to the receipt as well as the status of proposals. Clearly NIE management will want to be able to respond with promptness and accuracy to an inquiry that a proposal has been received by NIE and where in NIE the proposal has been assigned. It will also be desirable to provide a capability to track the status of each proposal within NIE. This capacity should, however, be provided for in NIE. The PGIS system does provide this capability.

It is recommended that NIE determine the ability of the PGIS system to provide for: a continuing inventory of contracts and grants awarded by NIE commencing July 1, 1972; and the receipt and assignment within NIE, at least to the bureau level, of all solicited and unsolicited proposals. In making this recommendation it is recognized that the PGIS system currently has operational problems and that a full level of reliance has not been achieved; but also that FY 1972 is the first year of operation. (Hayman report) PGIS, however, is an existing system; it is available for FY 1973 use; and it was developed from an R and D program needs base. In determining the desirability to use PGIS, NIE should also take into consideration the workload required for those needed components of PGIS and the reporting capability at stated levels of NIE management.

It is recommended that in the NIE management techniques, linkages be established among the bureau operational plans, management of objective plans, procurement plans, the financial management information system, and the contract and grant management information system components.

Administrative Services

NIE administrative services pertain to the provision and procurement of office space and its management, office furnishings and equipment, internal agency logistics, mail and messenger services, printing and reproduction services, and other related general services. Where some of these activities must be accomplished through HEW administrative offices, NIE will need a capability to administer the internal NIE preparation of required documents and justifications and to follow through with the HEW offices. These activities consist, in the main, of the acquisition of office space, printing by the Government Printing Office, and procurement of office equipment and furnishings.

NIE will need its own capability for the handling and internal distribution of mail; internal office space management; telecommunications management; internal logistics of office furnishings and equipment; and printing reproduction. NIE will also need to manage a number of internal housekeeping services, such as a safety and fire prevention program, records retention, employee health services, congressional and other controlled mail, and employee directories. In providing for mail services, provision must be made for such large volume periods as receipt of project proposals responding to RFP's. A directory of NIE personnel will be important, especially during the FY 1973 increase of new staff appointments. Also, with the turnover of a relatively large number of staff on short term (one to three year) appointments from universities, school systems, and other organizations, a continuously updated personnel directory will be a necessity.

Space management and internal logistics of people, office furnishings, and office equipment will be a significant function for NIE during the initial establishment of the agency. These activities can be expected to continue due to the changes and realignments in staff and task force assignments resulting from completion of R and D programs and initiation of new programs.

Printing of NIE publications that are required to be performed by the Government Printing Office will be transmitted through DHEW. NIE will have a task requirement to prepare the manuscripts in proper format, make the necessary layouts and art work, and read proofs. Other forms of printing reproduction activities are expected to constitute the substantial portion of this work, such as policy issuances, program brochures and manuals, and reports of program accomplishments. This work can be accomplished through preparation of camera-ready copy for offset printing. Photocopy machines would be used where the volume is at appropriate levels. The extent to which these services are obtained from HEW agencies depends, in large part, upon the location of NIE offices.

APPENDIX A

Problem areas in contracts and grants as described by GAO and DHEW Audit Agency reports and analyses:

1. Objectives of contracts are not clearly understood by contractors and statements supporting the scope of work need to be better described in sufficient detail to achieve the desired product.

2. Criteria are needed for use by personnel in evaluating the final report prior to acceptance to determine if the contract objectives have been satisfied and whether the report contained useful information.

3. Agency guidelines are needed to describe the methods to be used in monitoring the contractor's progress during the period of performance. Included in these methods should be the requirement for site visits at specified points in the contract period. As part of the monitoring process on relatively large contracts, the agency should consider requiring the use of a panel of experts to review periodically the contractor's progress and to recommend any necessary changes in scope, emphasis, or level of effort. Such reviews might be made on or before expenditure of 25 per cent of the effort planned for the project and at the halfway point, as well as at the end before accepting the final product.

4. Criteria is needed for use by agency personnel in evaluating a final report prior to acceptance to determine whether the contract objectives have been satisfied.

5. Guidance is needed as to the steps required to be taken when considering action against a contractor for poorly performed work, including consultation with legal counsel and contracting officials.

6. Orientation courses should be established to acquaint agency program personnel involved in the administration of study and evaluation contracts with the requirements of the Federal Procurement Regulations.

7. Agency requirements should be established to formally amend contractual agreements in writing whenever significant changes to the scope of work are made in order that a more meaningful product is available for program needs.

8. Necessary controls should be established to assure that continuation projects contingent upon previously conducted research are not awarded until the results of such research are reviewed and evaluated.

9. Where legislation authorizes the use of a grant or a contract, no distinction is made in the initial planning. The application of a grant philosophy to the contract process results in a disparity between the contract operation and the Federal Property and Administrative Services Act.

10. A lack of evidence of procurement planning.

11. Advance discussion with favored recipients and a tendency to make the award to that party.

12. Large supplemental awards are made without competition or analysis of budget need and relevance, due to unclear project design or work statement in the original proposal.

13. Administrative and program management personnel are frequently under a misconception that negotiated procurement and noncompetitive procurements are synonymous while only formal advertising requires competition.

14. Evidence lacking in the contract files that procurements which required publicity through synopsis in the Commerce Business Daily had been done. Practically no attempts were made to foster competition through publicizing proposed procurements.

15. Solicitations were accomplished by use of the brochure method; guidelines for submission of applications, resulting in a grant approach applied to contracts.

16. Duplicative research efforts were funded.

17. Inadequate progress reports and final reports that do not demonstrate accomplishments.

18. Final reports that speak to questions irrelevant to the project.

19. Failure to close out completed contracts and grants.

20. Grant and contract documents are basically similar. One of the major considerations as to whether to use a grant or a contract was based on the type of organization, e.g., profit-making organizations awarded contracts since they are not eligible for grants. The decision to use a grant or a contract should be made based on the program plans, and not to circumvent the Federal Procurement Regulations by using a grant in place of a contract.

21. Lack of a registry of active or completed projects.

22. Overlapping involvement of agency officials without clear responsibility.

23. Lack of a policy for utilizing findings of final reports.

24. Good procurement practices depended more on the efforts and attitudes of individuals in program and contracting offices rather than stemming from management policy and direction.

25. Lack of agency policy and procedures providing for systematic follow-up with contractors or grantees that do not submit final technical reports when due.

26. Lack of agency guidance and controls to assure that all contract amendments are subject to contract officer's written approval.

APPENDIX B

Distinguishing Features of Contracts and Grants

Grants Financial Assistance	Contracts Procurement
1. Support, stimulate, or aid activities of a non-Federal agency	1. Purchase goods and services primarily for government benefit
2. Recipient defines what it will do to achieve objectives of the program	2. Government specifies what it wants done and how it wants it
3. Recipient is usually responsible for what and how it will do something	3. Government is responsible for specifying project scope
4. Price and estimated cost plays a small role in selecting recipient--competition is for funds available	4. Price is an important factor in selection contractor--award made to lowest responsive responsible bidder. Formal and negotiated bids and formal procedures for selection required by law or regulations
5. Assistance is often made with knowledge that recipient needs some form of aid or help in order to perform	5. Organization awarded contract must be capable of performing
6. No buyer-seller relationship. Relationship is more a role of partner or patron Cooperative relationship Rights and responsibility rest with recipient or shared by the government	6. Basic arm length buyer-seller relationship Rights and duties defined in detail Inspection and acceptance procedure