AID 1020-25 (7-68)

PROJECT APPRAISAL REPORT (PAR)

(U-446) See M.O. 1026.1

SECURITY CLASSIFICATION: Unclassified

001 PROJECT NUMBER: 386-11-660-226

002 PAR AS OF:	MO.	DAY	YR.	003 U.S. OBLIGATION SPAN	
	1 2 3	1	6 8	FY 6 5	Thru FY 7 1

004 PROJECT TITLE: Science Education Improvement

005 COOPERATING COUNTRY - REGION - AID/W OFFICE: India NESA

386 0226 (6)

PD-AAD-090-E1

19 p.

006 FUNDING TABLE

AID DOLLAR FINANCING-OBLIGATIONS ($000)	TOTAL	CONTRACT (NON-ADD)	PERSONNEL SERVICES: AID	PERSONNEL SERVICES: PASA	PERSONNEL SERVICES: CONTRACT	PARTICIPANTS: DIR. PASA	PARTICIPANTS: CONTRACT	COMMODITIES: DIR. PASA	COMMODITIES: CONTRACT	OTHER COSTS: DIR. PASA	OTHER COSTS: CONTRACT
CUMULATIVE NET THRU ACTUAL YEAR (FY 19 68)	4717	2366	23	2106	2147	99	127	123	92	2	1
PROPOSED OPERATIONAL YEAR (FY 19 69)	1397	-	22	1298	-	77	-	-	-	-	-

AA, CDF, TD, ENGR, DIR, MGT, NE, REF, RA, TECH

CCC VALUE OF P.L. 480 COMMODITIES ($000) → Thru Actual Year: None; Operational Year Program: None

007 IMPLEMENTING AGENCY TABLE

If contractors or participating agencies are employed, enter the name and contract or PASA number of each in appropriate spaces below; in the case of voluntary agencies, enter name and registration number from M.O. 1551.1, Attachment A. Enter the appropriate descriptive code in columns b and c, using the coding guide provided below.

TYPE CODE b	TYPE CODE c	a. IMPLEMENTING AGENCY	TYPE CODE b.	TYPE CODE c.	d. CONTRACT/ PASA/ VOLAG NO.	e. LEAVE BLANK FOR AID/W USE
1. U.S. CONTRACTOR 2. LOCAL CONTRACTOR 3. THIRD COUNTRY CONTRACTOR 4. PARTICIPATING AGENCY 5. VOLUNTARY AGENCY 6. OTHER:	0. PARTICIPATING AGENCY 1. UNIVERSITY 2. NON-PROFIT INSTITUTION 3. ARCHITECTURAL & ENGINEERING 4. CONSTRUCTION 5. OTHER COMMERCIAL 6. INDIVIDUAL 7. OTHER:	1. National Science Foundation	4	0	NESA(NA) 34-66(A-6)	
		2.				
		3				

PART I - PROJECT IMPACT

I-A. GENERAL NARRATIVE STATEMENT ON PROJECT EFFECTIVENESS, SIGNIFICANCE & EFFICIENCY.

This summary narrative should begin with a brief (one or two paragraph) statement of the principal events in the history of the project since the last PAR. Following this should come a concise narrative statement which evaluates the overall efficiency, effectiveness and significance of the project from the standpoint of:

(1) overall performance and effectiveness of project implementation in achieving stated project targets;

(2) the contribution to achievement of sector and goal plans;

(3) anticipated results compared to costs, i.e., efficiency in resource utilization;

(4) the continued relevance, importance and significance of the project to country development and/or the furtherance of U.S. objectives.

Include in the above outline, as necessary and appropriate, significant remedial actions undertaken or planned. The narrative can best be done after the rest of PART I is completed. It should integrate the partial analyses in I-B and I-C into an overall balanced appraisal of the project's impact. The narrative can refer to other sections of the PAR which are pertinent. If the evaluation in the previous PAR has not significantly changed, or if the project is too new to have achieved significant results, this Part should so state.

008 NARRATIVE FOR PART I-A (Continue on form AID 1020-25 I as necessary):

In 1966 the Government of India at the advice of an assemblage of distinguished Indian and American scientists decided to establish an institution which would coordinate science education improvement activities at all educational levels in science, mathematics, engineering and polytechnics. USAID's expectation was that this institution would become a federally funded autonomous agency similar in function

MISSION DIRECTOR APPROVAL → SIGNATURE: MD - John Funari

DATE: February 24, 1969

Unclassified

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Keep PAR

This sheet is to be used for any Narrative Sections for which sufficient space has not been provided on the form. Identify each narrative by its Part and Section Designation.

008 Narrative for Part I-A (continued)

to the U.S. National Science Foundation. However, after a project agreement was signed in November 1966 it became apparent that the envisaged role of the Indian institution, The National Council for Science Education, could not be realized immediately due to jurisdictional conflicts with agencies with long established responsibilities to initiate and implement programs of science education improvement. These agencies, the University Grants Commission, The National Council for Educational Research and Training and the Association of Principals of Technical Institutions, were reluctant to yield any of their authority to any other body. Through December 1968 the NCSE functioned as an advisory body to the Ministry of Education and its affiliated agencies and only slightly influenced on-going programs. In December 1968 the NCSE requested the GOI that it be chartered, substantially funded and supported with a permanent secretariat of professional science educators, (this request has since been approved by the Minister of Education and is now being processed by the Ministry of Finance for funding). The hope for an effectively functioning NCSE lies in the implementation of these recommendations.

The National Science Foundation has assisted the NCSE in establishing an administrative structure including a council, national advisory panels and a skeletal secretariat. The NSF liaison staff has developed close professional relations with the council and panel members and with science educators throughout India. Individual NSF technicians have been assisting individuals and groups on how to initiate, process and evaluate research proposals in science education. In this activity they have established many new lines of communication among professionals across India. Their mere presence in India has catalyzed many curricular reform activities even though a nationally coordinated science education improvement program has not yet emerged.

The science education community is ready to avail itself of the provision of the NCSE mechanism. Proposals for research and development projects are in hand and in mind, and the NCSE is a machine awaiting a signal to begin to organize effectively. However, until the NCSE is granted the authority, the funds and the manpower to influence the course of science education development, USAID consultant inputs will not contribute to a self-sustaining program for science education improvement.

Summer Science Institutes constitute the GOI's major effort to provide in-service education to teachers of science, mathematics and technology. Science faculties are demonstrating their ability to conduct individual institutes with a minimum of foreign technical assistance. The planned phase out by 1971 of U.S. consultants assistance is a realistic goal. A comprehensive study of the impact of the SSI program in India since 1963 has been scheduled for 1969.

008 - Narrative for Part I-A (continued)

Programs of curricular reform, though in large measure influenced by summer science institutes, have originated in state and federal agencies and operate independently of NCSE/NSF control. These follow-up programs include syllabus revision, examination reform, textbook production and materials development. NSF liaison staff members have been assisting with many of the activities on an ad hoc basis. A nationally integrated improvement program does not yet exist because 1) the states are autonomous in education and 2) there is no coordinated leadership at the center.

The Science Education Improvement project is at a crossroads. If the NCSE becomes established as discussed above the chances are good that its role as a coordinating agency and outlet for U.S. technical assistance will be realized. However, if the NCSE continues as an adventitious appendage to the educational system, USAID should consider alternate GOI agencies, Center or State, with which to associate.

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PART I-B – PROJECT EFFECTIVENESS

009

I-B-1 – OUTPUT REPORT AND FORECAST – (See detailed instructions)

1. CODE NO. AID/W USE ONLY	2. This section is designed to record progress toward the achieve of each project output target which was scheduled in the PIP, Part II. Wh progress toward a target is significantly greater or less than scheduled, describe reason(s) beneath the target.	ACTUAL AND PLANNED OUTPUTS (ALL DATA CUMULATIVE) 3. ACTUAL CUM. TO DATE	4. AS OF PRIOR JUNE 30 a. PLANNED	b. ACTUAL	5. PLANNED BY NEXT JUNE 30	6. PROJECTED TOTAL FOR PROJECT LIFE
	A. Establish an institutional framework which has the capacity to coordinate science education improvement activities throughout India at all educational levels. (See 008)	0	1	0	1	1
	B. Maintain through the National Council for Science Education (NCSE) and the agencies concerned such as University Grants Commission (UGC), National Council for Educational Research and Training (NCERT), and Association of Principals for Technical Institutions (APTI), a program of science institutes for mathematics, the sciences, engineering and polytechnics.	276	276	276	162	375
	C. Mount through the NCSE and the agencies concerned such as UGC, NCERT and APTI, follow-up programs that may include, but not be limited to:					
	a. College development programs	0	4	0	4	–
	b. University/college-school cooperative development programs	0	0	0	1	–
	c. Curriculum materials development	2	4	2	4	–
	d. Engineering and/or Polytechnics development programs	0	[illegible]	0	2	–

AID 1020-25 B (7-68)

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PART I-B – Continued

010 B.2 – OVERALL ACHIEVEMENT OF PROJECT TARGETS

Place an "X" within the bracket on the following seven-point scale that represents your judgment of the overall progress towards project targets:

[| | | X | | |]

Unsatisfactory ← Satisfactory → Outstanding

PART I-C – PROJECT SIGNIFICANCE

011 C.1 – RELATION TO SECTOR AND PROGRAM GOALS (See detailed instructions M.O. 1026.1)

This section is designed to indicate the potential and actual impact of the project on relevant sector and program goals. List the goals in col. b and rate potential and actual project impact in cols. c and d.

SCALE FOR COLUMN c: 3= Very Important; 2= Important; 1= Secondary Importance

SCALE FOR COLUMN d: 3= Superior/Outstanding; 2= Adequate/Satisfactory/Good; 1= Unsatisfactory/Marginal

a. CODE NO. (AID/W USE ONLY)	b. SECTOR AND PROGRAM GOALS (LIST ONLY THOSE ON WHICH THE PROJECT HAS A SIGNIFICANT EFFECT)	c. POTENTIAL IMPACT ON EACH GOAL IF PROJECT ACHIEVES TARGETS	d. ACTUAL IMPACT ON GOAL TO DATE RELATIVE TO PROGRESS EXPECTED AT THIS STAGE
	(1) To help up-grade India's Educational System to the point where it can meet the needs of a modern industrial society. Emphasis is upon the field of science and technology at the higher education level.	3	1
	(2)		
	(3)		
	(4)		

For goals where column c. is rated 3 or 2 and column d. is rated 1, explain in the space for narrative. The narrative should also indicate the extent to which the potential impacts rated 3 or 2 in column c. are dependent on factors external to the achievement of the project targets, i.e., is there a substantial risk of the anticipated impact being forestalled by factors not involved in the achievement of project targets. If possible and relevant, it also would be useful to mention in the narrative your reading of any current indicators that longer-term purposes, beyond scheduled project targets, are likely or unlikely to be achieved. Each explanatory note must be identified by the number of the entry (col. b) to which it pertains.

012 NARRATIVE FOR PART I-C.1 (Continue on form AID 1020-2

(See 013 for explanation)

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PART I-C -- Continued

C.2 -- GENERAL QUESTIONS

These questions concern developments since the prior PAR. For each question place "Y" for Yes, "N" for No, or "NA" for Not Applicable in the right hand column. For each question where "Y" is entered, explain briefly in the space below the table.	MARK IN THIS COL.
013 Have there been any significant, unusual or unanticipated results not covered so far in this PAR?	N
014 Have means, conditions or activities other than project measures had a substantial effect on project output or accomplishments?	Y
015 Have any problems arisen as the result of advice or action or major contributions to the project by another donor?	N
016 If the answer to 014 or 015 is yes, or for any other reason, is the project now less necessary, unnecessary or subject to modification or earlier termination?	N
017 Have any important lessons, positive or negative, emerged which might have broad applicability?	Y
018 Has this project revealed any requirement for research or new technical aids on which AID/W should take the initiative?	N
019 Do any aspects of the project lend themselves to publicity in newspapers, magazines, television or films in the United States?	N
020 Has there been a lack of effective cooperating country media coverage? (Make sure AID/W has copies of existing coverage.)	N

021 NARRATIVE FOR PART I-C.2 Identify each explanatory note by the number of the entry to which it pertains. (Continue on form AID 1020-25 I as necessary):

014 The NCSE has not been able to achieve the jurisdictional authority to effectively influence the implementation of specific programs of science education improvement.

017 Do not position a full complement of technicians on site until assured that the institution to be served has the authority, funds and manpower to accomplish its ends.

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PART II – IMPLEMENTATION REPORT

II-A – STATUS OF SCHEDULE

022 A-1 – INDIVIDUAL ACTIONS (See detailed instructions M.O. 1026.1). This is a listing of major actions or steps which were scheduled for physical start or continuing implementation in the reporting period as reflected in the Project Implementation Plan, Part I.

(a) PIP ITEM NO.	MAJOR ACTIONS OR STEPS; CAUSES AND RESULTS OF DELAYS; REMEDIAL STEPS	(b) STATUS – PLACE AN "X" IN ONE COLUMN: (1) BEHIND SCHEDULE	(2) ON SCHEDULE	(3) AHEAD OF SCHEDULE
1.	Charter the NCSE as an institution for improvement of science education in India.	X		
	The NCSE is still in the process of acquiring jurisdictional authority. (see 008 for explanation of all behind schedule activities).			
2.	Appoint a council, national advisory panels, and a professional secretariat.	X		
	A professional secretariat has not yet been recruited.			
3.	Provide office premises and supporting services.		X	
4.	Receive from educational jurisdictions proposal for research and development in science education.		X	
5.	Review project proposals and recommend those of promise for implementation by appropriate agencies.	X		
	Aside from SSI some 30 proposals are in various stages of review.			
6.	Assist sponsoring agencies in the implementation of proposals.	X		
	Dependence on #5			
7.	Maintain annually approximately 150 in-service institutes for secondary and college teachers of mathematics, physics, chemistry, biology, engineering and polytechnics.		X	
8.	Initiate college faculty development programs in mathematics, physics, chemistry, biology, engineering and polytechnics.	X		
	Proposals are in the process of review.			

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PART II – IMPLEMENTATION REPORT

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(a) PIP ITEM NO.	MAJOR ACTIONS OR STEPS; CAUSES AND RESULTS OF DELAYS; REMEDIAL STEPS	(b) STATUS – PLACE AN "X" IN ONE COLUMN (1) BEHIND SCHEDULE	(2) ON SCHEDULE	(3) AHEAD OF SCHEDULE
9.	Support secondary school curriculum materials development projects in mathematics, physics, chemistry and biology.	X		
	Proposals are in the process of review.			
10.	Initiate university/college-school co-operative development programs.	X		
	Proposals are in the process of review.			
11.	Foster the indigenous development of science education equipment.	X		
	Proposals are in the process of review.			

PART II – Continued

II-A.2 – OVERALL TIMELINESS

023 In general, project implementation is (place an "X" in one block):

(a) On schedule	
(b) Ahead of schedule	
(c) Behind schedule	X

BLOCK (c): If marked, place an "X" in any of the blocks one thru eight that apply. This is limited to key aspects of implementation, e.g., timely delivery of commodities, return of participants to assume their project responsibilities, cooperating country funding, arrival of technicians.

(1) AID/W Program Approval	
(2) Implementing Agency (Contractor/Participating Agency/Voluntary Agency)	
(3) Technicians	
(4) Participants	
(5) Commodities (non-FFF)	
(6) Cooperating Country	X
(7) Commodities (FFF)	
(8) Other (specify):	

II-B – RESOURCE INPUTS

This section appraises the effectiveness of U.S. resource inputs. There follow illustrative lists of factors, grouped under Implementing Agency, Participant Training and Commodities, that might influence the effectiveness of each of these types of project resources. In the blocks after only those factors which significantly affect project accomplishments, write the letter P if effect is positive or satisfactory, or the letter N if effect is negative or less than satisfactory.

1. FACTORS-IMPLEMENTING AGENCY (Contract/Participating Agency/Voluntary Agency)

024 IF NO IMPLEMENTING AGENCY IN THIS PROJECT, PLACE AN "X" IN THIS BLOCK:		032 Quality, comprehensiveness and candor of required reports	N
		033 Promptness of required reports	N
025 Adequacy of technical knowledge	N	034 Adherence to work schedule	N
026 Understanding of project purposes	P	035 Working relations with Americans	P
027 Project planning and management	N	036 Working relations with cooperating country nationals	N
028 Ability to adapt technical knowledge to local situation	N	037 Adaptation to local working and living environment	P
029 Effective use of participant training element		038 Home office backstopping and substantive interest	P
030 Ability to train and utilize local staff	P	039 Timely recruiting of qualified technicians	P
031 Adherence to AID administrative and other requirements	P	040 Other (describe):	

2. FACTORS-PARTICIPANT TRAINING

041 IF NO PARTICIPANT ELEMENT IN PROJECT, PLACE AN "X" IN THIS BLOCK:		TRAINING UTILIZATION AND FOLLOW UP 052 Appropriateness of original selection	N
PREDEPARTURE 042 English language ability	P	053 Relevance of training for present project purposes	P
043 Availability of host country funding	P	054 Appropriateness of post-training placement	P
044 Host country organizational considerations (e.g., selection procedures)	N	055 Utility of training regardless of changes in project	P
045 Technical/professional qualifications	P	056 Ability to get meritorious ideas accepted by supervisors	P
046 Quality of technical orientation	P	057 Adequacy of performance	P
047 Quality of general orientation	P	058 Continuance on project	P
048 Participants' collaboration in planning content of program	P	059 Availability of necessary facilities and equipment	P
049 Collaboration by participants' supervisors in planning training	P	060 Mission or contractor follow-up activity	P
050 Participants' availability for training	P	061 Other (describe):	
051 Other (describe):			

025 Technicians have been highly competent in their subject matter fields; however, they generally are not experienced in the operations of the U.S. National Science Foundation, a counterpart of which they are expected to assist in setting up. There is little expertise among the technicians in the areas of elementary and secondary science education - approximately 30% of the operational coverage of the project.

027 Since the NCSE has not yet been able to function as a central coordinating institution, the NSF, in the name of NCSE, has attempted to support worthwhile, new and on-going science education programs. The NSF has had to relate directly with the agencies responsible for those specific activities, and in so doing, work around the NCSE. Sub-project activities have not emerged from the discipline processing units for which NCSE was established. Consequently, activities appear fragmented, opportunistic, unplanned and uncontrolled.

028 A significant amount of criticism has been leveled against technicians and consultants for their lack of understanding of Indian science education and, it follows, the sterility of their advice.

032 Reports often avoid and cloud the issue of project progress, lauding the realization of unstated objectives, clinging to the hope of the imminent establishment of an operational institution.

033 Reports are often late by weeks and sometimes months.

034 The cataleptic condition of the NCSE has prevented cadenced motion except with respect to the Summer Science Institutes.

036 Relations between Indians and Americans are generally good but a personality abrasion between the NSF Head and the Chief Executive Officer of NCSE has created a series of minor crises.

044 The GOI has tended to be exclusive of NSF in the process of participant selection.

042 People in too senior positions from universities were selected. They were not those likely to engage full-time in project work upon return. However, they were accepted because of their influence in gaining project approval from the GOI.

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PART II-B – Continued

3. FACTORS-COMMODITIES

PLACE AN "X" IN APPROPRIATE BLOCK:	062 FFF		063 NON-FFF		064 NO COMMODITY ELEMENT	X

065 Timeliness of AID/W program approval (i.e., PIO/C, Transfer Authorization).		072 Control measures against damage and deterioration in shipment.	
066 Quality of commodities, adherence to specifications, marking.		073 Control measures against deterioration in storage.	
067 Timeliness in procurement or reconditioning.		074 Readiness and availability of facilities.	
068 Timeliness of shipment to port of entry.		075 Appropriateness of use of commodities.	
069 Adequacy of port and inland storage facilities.		076 Maintenance and spares support.	
070 Timeliness of shipment from port to site.		077 Adequacy of property records, accounting and controls.	
071 Control measures against loss and theft.		078 Other (Describe):	

Indicate in a concise narrative statement (under the heading a. Overall Implementation Performance, below) your summary appraisal of the status of project implementation, covering both significant achievements and problem areas. This should include any comments about the adequacy of provision of direct hire technicians as well as an overall appraisal of the comments provided under the three headings (b, c & d) which follow. For projects which include a dollar input for generation of local currency to meet local cost requirements, indicate the status of that input (see Detailed Instructions).

Discuss separately (under separate headings b, c & d) the status of Implementing Agency Actions, Participants and Commodities. Where above listed factors are causing significant problems (marked N), describe briefly in the appropriate narrative section (1) the cause and source of the problem, (2) the consequences of not correcting it, and (3) what corrective action has been taken, called for, or planned by the Mission. Identify each factor discussed by its number.

079 NARRATIVE FOR PART II-B: (After narrative section a. Overall Implementation Performance, below, follow, on form AID 1020-25 I as needed, with the following narrative section headings: b. Implementing Agency, c. Participants, d. Commodities. List all narrative section headings in order. For any headings which are not applicable, mark them as such and follow immediately below with the next narrative section heading.)

a. Overall Implementation Performance.

a. Overall implementation performance has been marginally satisfactory, when one includes the Summer Science Institutes.

b. NSF has not had much opportunity to engage in activities that are directly related to the primary purposes of project viz. the establishment of a functional institution for the improvement of science education, and the guidance of the conduct of a planned program of research and development in science education. The NSF has provided technical assistance that has been strong in the content areas of sciences, mathematics, and technology at higher education levels and relatively weak at elementary and secondary school levels.

c. Participant training programs in the U.S. have been good, providing participants with experience in the operations of the USNSF. The effective utilization of these participants awaits the establishment of the NCSE.

d. N.A.

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PART III – ROLE OF THE COOPERATING COUNTRY

The following list of illustrative items are to be considered by the evaluator. In the block after only those items which significantly affect project effectiveness, write the letter P if the effect of the item is positive or satisfactory, or the letter N if the effect of the item is negative or less than satisfactory.

SPECIFIC OPERATIONAL FACTORS:	
080 Coordination and cooperation within and between ministries.	N
081 Coordination and cooperation of LDC gov't. with public and private institutions and private enterprise.	P
082 Availability of reliable data for project planning, control and evaluation.	P
083 Competence and/or continuity in executive leadership of project.	N
084 Host country project funding.	P
085 Legislative changes relevant to project purposes.	P
086 Existence and adequacy of a project-related LDC organization.	N
087 Resolution of procedural and bureaucratic problems.	N
088 Availability of LDC physical resource inputs and/or supporting services and facilities.	P
089 Maintenance of facilities and equipment.	N
090 Resolution of tribal, class or caste problems.	P
091 Receptivity to change and innovation.	P
092 Political conditions specific to project.	P
093 Capacity to transform ideas into actions, i.e., ability to implement project plans.	P
094 Intent and/or capacity to sustain and expand the impact of the project after U.S. inputs are terminated.	N
095 Extent of LDC efforts to widen the dissemination of project benefits and services.	N
096 Utilization of trained manpower (e.g., participants, counterpart technicians) in project operations.	N
097 Enforcement of relevant procedures (e.g., newly established tax collection and audit system).	N
098 Other:	
HOST COUNTRY COUNTERPART TECHNICIAN FACTORS:	
099 Level of technical education and/or technical experience.	P
100 Planning and management skills.	N
101 Amount of technician man years available.	N
102 Continuity of staff.	P
103 Willingness to work in rural areas.	P
104 Pay and allowances.	N
105 Other:	

In the space below for narrative provide a succinct discussion and overall appraisal of the quality of country performance related to this project, particularly over the past year. Consider important trends and prospects. See Detailed Instructions for an illustrative list of considerations to be covered.

For only those items marked N include brief statements covering the nature of the problem, its impact on the achievement of project targets (i.e. its importance) and the nature and cost of corrective action taken or planned. Identify each explanatory note.

106 NARRATIVE FOR PART III (Continue on form AID 1020-25 .):

A jurisdictional dispute rages among the constituent agencies of the NCSE. The consumers of the assistance which the NSF (and NCSE) can provide are receptive to its receipt. Until the NCSE receives the authority, the money and the manpower, efforts to effect a national program of science education improvement under the NCSE will be frustrated.

Factor ratings reflect the consensus of the NSF staff of technicians. The commentary was written primarily by the head of the NSF liaison staff, but incorporates the comments of staff scientists.

(see continuation pages)

080 Coordination and cooperation within and between ministries has usually been low in rate but ultimately satisfactory in result. It has improved in the past year.

081 Coordination and cooperation of LDC gov't with public and private institutions and private enterprise has been at a low rate but the atmosphere has been improving definitively. In some recent cases, recommendations to encourage private enterprise participation have been accepted and are being implemented.

082 Availability of reliable data for project planning, control and evaluation. Data are available in immense quantity. The problem is finding that which is useful, and reaching some agreement on the meaning of the data with our LDC colleagues.

083 Competence and/or continuity in executive leadership of project. This is the weakest point. Where there is competence, there is generally not adequate continuity or time available to the competent person to devote to the affairs of this project. Where there is some degree of continuity, the competence is not nearly as high as it ought to be. Recent recommended changes in the structuring of our counterpart organization, if implemented, may improve this situation considerably.

084 Host country project funding. The only complaint here on the part of the GOI officials is that those directly connected with the project on their side are not finding enough sensible projects to fund from the available monies.

085 Legislative changes relevant to project purposes. The only one which might make a big difference to this project has been in the talking (now, whispering) stage, viz., making education a concurrent subject between States and Center.

086 Existence and adequacy of a project-related LDC organization. This has been the major thorn in our side. The LDC organization exists but is sorely inadequate from the standpoint of staffing. See 083 and 084.

087 Resolution of procedural and bureaucratic problems. This must be answered from two points of view. From the Staff Scientist's position these are a major barrier since there is a tendency at the field project sites to interpret all central directives in the narrowest possible way to avoid trouble. From the Head's point of view these problems have been not so difficult because those relating to the LDC organization and the staff are generally taken care of easily by going to the top level personnel involved with us.

088 Availability of LDC physical resource inputs and/or supporting services and facilities. For a sensible program, there appears

to be .. adequate physical resources, supporting services and facilities. The problem is how to get them used in appropriate ways.

089 Maintenance of facilities and equipment. This can only be regarded as inadequate and generally incompetently done.

090 Resolution of tribal, class or caste problems. One could not answer this across the board. In some places, problems of age and caste color the effectiveness of efforts very strongly. In other areas, they have been largely overcome. Suffice to say that a great deal remains to be done in removing these problems as barriers to science education improvement.

091 Receptivity to change and innovation has been found to be high in almost every area visited and dealt with.

092 Political conditions specific to project. These have, in general, not affected activities noticeably.

093 Capacity to transform ideas into actions, i.e., ability to implement project plans. See once again 083, 084, 086 and 087. All of these are pertinent to the fact that this capacity is still largely to be developed. Those people who have such capability are glaring exceptions, and to some extent this makes them marked men in the science community.

094 Intent and/or capacity to sustain and expand the impact of the project after U.S. inputs are terminated. Staff scientists viewing this from the point of view of individual operations in the field, often have good reason to question whether such exists. This stems to some extent from the Central organizations having bought the participation of some personnel in the community via rewards available for doing things. From the point of view of the Head, at the upper central levels, the intent does exist and will, he believes, carry the day.

095 Extent of LDC efforts to widen the dissemination of project benefits and services. Steps have recently been taken to do just what is expected under this head by requesting submission of proposals from the field which will involve project personnel and services. The coming year should demonstrate the success of these efforts.

096 Utilization of trained manpower in project operations. By and large, this has been grossly unsatisfactory because of poor choice of participants, for example, and lack of

counterpart technicians who would be directly involved. Once again, recommendations made recently, if implemented in the coming year, could correct this situation.

097 Enforcement of relevant procedures. This is another weak point in the system. As improved procedures are developed by agreement there are often attempts to waive them in order to do things the old way. The arguments presented are those involving the necessity to save time by making the decision in an office, rather than on the basis of recommendation of a group of people involved in the project, and so on. However, as the science education community becomes aware of the fact that it can exert a considerable amount of pressure on the appropriate authorities to have things done in new, different and more rational ways, this situation is changing. Once again the coming year's activities will hold the key.

099 Level of technical education and/or technical experience. Here, there is general agreement that the intellectual competence needed exists in adequate numbers among the persons with whom the NSF deal.

100 Planning and Management skills. In the community dealt with, only a handful of people actually have had the opportunity to develop these. There is therefore a considerable breakdown when a project gets to either of these stages. When it is poorly planned, no amount of management will make it work extremely well and no matter how well planned, poor management can kill it. We have had adequate numbers of examples of both of these kinds of things. Nevertheless, the problem is recognized by many of the NSF colleagues, and some considerable efforts are being bent toward development of these skills.

101 Amount of technician man years available. The answer here depends upon interpretation. There is a great deal of technician time available. Completely inadequate amounts however, have been channeled into the activities of this program. Once again recent recommendations, if implemented, could change this situation very quickly.

102 Continuity of staff. This relates once again to 083. Too many people at the levels which must be concerned with a project such as this have far too many jobs each. As a consequence, very few of their jobs get done really well. An awareness of this is developing rather rapidly, and the situation is expected once again to change in the near future.

103 Willingness to work in rural areas. Here it must be said that those people dealt with, regardless of their level of training or jobs, have kept this factor clearly in mind. The great bulk

of the work being done is viewed for its applicability to the rural as well as the urban situation.

104 Pay and allowances. These are grossly inadequate and equitable for the level of personnel we must work with. For example, one cannot expect a first rate scientist to take enough time off from his teaching and research activities to go by train from Bombay to Calcutta to consult for one or two days with an institutional staff which wants to undertake some improvement activities that he is competent to talk with them about. If one or two more Americans who happen to have been born as citizens of India win Nobel Prizes, some very effective steps towards correcting this factor may well be taken.

SECURITY CLASSIFICATION	PROJECT NUMBER
Unclassified	386-11-660-226

PART IV – PROGRAMMING IMPLICATIONS

IV-A – EFFECT ON PURPOSE AND DESIGN

Indicate in a brief narrative whether the Mission experience to date with this project and/or changing country circumstances call for some adjustment in project purposes or design, and why, and the approximate cost implications. Cover any of the following considerations or others that may be relevant. (See Detailed Instructions for additional illustrative considerations.) Relevant experience or country situations that were described earlier can simply be referenced. The spelling out of specific changes should be left to the appropriate programming documents, but a brief indication of the type of change contemplated should be given here to clarify the need for change.
For example, changes might be indicated if they would:

1. better achieve program/project purposes;
2. address more critical or higher priority purposes within a goal plan;
3. produce desired results at less cost;
4. give more assurance of lasting institutional development upon U.S. withdrawal.

107 NARRATIVE FOR PART IV-A (Continue on form AID 1020-25 I):

The need for science education improvement in India and the scope for U.S. technical assistance, increase as the states and the center, the universities and the schools begin rolling with a massive curriculum reformation. There are however serious concerns about the strategy of coordination. This project assumes that the central government can function effectively with one coordinating body. Thus far, the NCSE has not been up to the task.

IV-B – PROPOSED ACTION

108 This project should be (Place an "X" in appropriate block(s)):

1. Continued as presently scheduled in PIP.	
2. Continued with minor changes in the PIP, made at Mission level (not requiring submission of an amended PIP to AID/W).	
3. Continued with significant changes in the PIP (but not sufficient to require a revised PROP). A formally revised PIP will follow.	
4. Extended beyond its present schedule to (Date): Mo. ___ Day ___ Yr. ___. Explain in narrative, PROP will follow.	
5. Substantively revised, PROP will follow.	
6. Evaluated in depth to determine its effectiveness, future scope, and duration.	
7. Discontinued earlier than presently scheduled. Date recommended for termination: Mo. ___ Day ___ Yr. ___	
8. Other. Explain in narrative.	

109 NARRATIVE FOR PART IV-B:

Hold up until May 1 on recruitment of NSF technicians and consultants, other than those associated with SSI 1969 and those for short term sub-project activities for which assistance has been committed. If by this date the GOI has not 1) recruited a professional secretariat in counterpart to technicians on board 2) provided the NCSE with the funds necessary to carry out its functions effectively and 3) authorized the NCSE to coordinate science education improvement projects on a national basis, an immediate and thorough review of the conceptional base of the project be made with a view to determine whether the project should be carried on in an alternate form.

109 Narrative for Part IV-B:

Should it be determined that the SEIP with the NCSE as its focus be abandoned, then the following alternatives occur:

1. Establish in one, several or all states, union territories a similar type institution to coordinate science education improvement at all education levels.

2. Directly assist existing central agencies charged with science education improvement in their own areas of authority. Those include 1) the UGC for colleges and universities, 2) the NCERT for elementary, secondary and teacher education, 3) the APTI for engineering and polytechnical education, 4) ICAR for agriculture education, 5) ICMR for the medical colleges, 6) CHEB for school health education.

3. Directly assist the counterpart agencies of 2 above as they exist in the states.

The existing project, in theory, offers the most econom and efficient mechanism. Costs increase and efficiencies diminish as we proceed down the list of these alternate schemes.

4. Abandon project.

Mr. Robert Muscat, NESA/SA
Dr. Burton C. Newbry, NESA/ID
Mr. Richard G. Birnberg, NESA/PR

April 2, 1969

John H. Kean, AA/NESA

India - Science Education Improvement PAR - Project No. 386-11-660-226

I find this PAR to be complete, candid, generally consistent. It raises the key issues of which we were aware in this project and indicates the alternatives that are open and which are to be resolved in the next month or so.

I feel no need to meet on the PAR as such but believe we will need to be sure that the Mission will be reporting developments in the near future. These will determine whether and how to continue the project. There will then be a need to come to a decision in accordance with the earlier action memo which AA/NESA approved.

JHKean/rsw AA/NESA 4/2/69