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THE EVALUATION OF A PERFORMANCE BASED CURRICULUM IN THE LANGUAGE ARTS

A Dissertation Presented

By

Mary-Alice B. Wilson

Submitted to the Graduate School of the
University of Massachusetts in
partial fulfillment of the requirements for the degree of

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October 1970

Major Subject Reading and Evaluation

THE EVALUATION OF A PERFORMANCE BASED CURRICULUM IN THE LANGUAGE ARTS

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Mary-Alice B. Wilson

Approved as to style and content by:

(Chairman of Committee)

(Head of Department)

(Member)

William Phillip Gorth
(Member)

Daniel C. Jordan
(Member)

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CHAPTER I

INTRODUCTION

In May of 1969, the Model Elementary Teacher Education Program (METEP) at the School of Education, University of Massachusetts began a Feasibility Study (Cooper, 1970). Members of the faculty had been developing a performance based curriculum for elementary teacher education for the past two years (Allen and Cooper, 1968). During the summer of 1969, final preparations were to be made for the fall semester when the new curriculum would be tested. In the fall students would spend three weeks in an introductory program, five weeks in a curriculum block (language arts, math, social studies, and science) and eight weeks practice teaching. Although the Feasibility Study officially ended in January, the language arts staff planned to test their program for at least two semesters.

Members of the language arts staff had already devised a hierarchy of teaching abilities (Rudman, 1970), some performance criteria based on this hierarchy and the instructional alternatives to accompany the performance criteria (Yarington, 1969). The performance criteria (PCs) covered the four areas of the language arts: reading, writing, listening, and speaking. During the summer 28 PCs were developed specifically for use with language arts generalists, those students seeking to achieve a minimal level of competence in the language arts. Each PC had at least two instructional alternatives (IAs) which the student might use in preparing for the PC.

The language arts staff felt that the selection of learning experiences was an important part of the program and, therefore, the students were encouraged to prepare the PCs in any order they chose and to select as many, or as few, instructional alternatives as they felt were needed. Students could attempt each PC as many times as was necessary for a successful performance. All 28 PCs were to be completed during the five-week curriculum block.

During the summer while the language arts staff was developing the PCs and IAs to be used in the fall, they were constantly being asked to provide information on the curriculum and on the anticipated operation of the program. Everyone asked questions: the METEP administration, other curriculum components, the simulation component, prospective students, staff assistants, and non-METEP personnel both within and outside the School of Education. One of the major activities during the fall and spring semesters was clearly going to be the processing and reporting of information. The staff would be asked to provide information (1) to students about the operation of the program and their own progress in it; (2) to the staff and staff assistants about the activities of each student, the constraints on the operation of the program, the effectiveness of each PC and IA, the degree of attainment of program goals, and the nature of any unspecified effects of the program; (3) to the METEP administration about the academic, administrative, economic, and technical feasibility of the language arts program (Cooper, 1970); (4) to the simulation team about facility use, student and staff time, and the probability of successful student performance; (5) to the rest of the School of Education about a program which was competing with other programs and other centers for space, money and students; and (6) to METEP clients outside the University of Massachusetts about the operation of the program and the degree and conditions of its success.

How could all this information be provided? Could an evaluation be designed which would at least help provide such different kinds of information to so many different audiences?

The performance criteria which were to be used in the program had developed from a tradition of behavioral objectives (Mager, 1962) and a hierarchy of educational objectives (Bloom, 1956; Krathwohl, Bloom, & Masia, 1964) which incorporated evaluation directly into the curriculum (Metfessel, Michael, & Kirsner, 1969; Rudman, 1970). Including evaluation within each language arts performance criterion was not the same, however, as designing an evaluation of the language arts program. Evaluation methodology, rather than curriculum theory, was needed as a basis of the evaluation design.

CHAPTER II

REVIEW OF THE LITERATURE

Methodology

Most of the writing in educational evaluation methodology has been presented as evaluation models. These models can be divided into two general categories: the temporal models which classify evaluations by the time the information is gathered and reported, and the unit size model which classifies evaluations by the size of the unit being evaluated (the information source).

Temporal classifications. One of the best known of the temporal classifications is Stufflebeam's CIPP model (1968). Since, according to Stufflebeam, the purpose of evaluation is to provide information for decision making, the information and the decisions are divided into four categories: Context, Input, Process and Product. These categories provide very practical assistance to the evaluator by helping him define his role within an operating program. They force him to recognize the scope of the evaluation questions he might otherwise ignore. Unfortunately the Stufflebeam model is not deterministic. If it were, the evaluator would be able to take his evaluation problem from its original CIPP categorization into a unique series of design stages. In fact, all four CIPP categories use the same design stages and, as useful as these are as a checklist for evaluation planning, they do not help the evaluator focus his questioning. They do not help him choose the variables appropriate to his evaluation.

A second temporal model is the formative/summative classification system of Scriven (1967) which distinguishes between information needed during the development of a product, formative evaluation, and that needed during the adoption of a product into a system, summative evaluation. Stake (1967) has argued that formative evaluation, which studies relationships, is the more powerful. Scriven, replying to an earlier article by Cronbach (1963), agreed with Cronbach that the purpose of evaluation is explanation, but argued that summative evaluation which can include comparative studies can provide explanations better than formative evaluation. Summative evaluation was so important to Scriven that formative evaluation became simply summative evaluation of the immediate phase of development--thus destroying the distinction altogether.

While the formative/summative dichotomy now appears to have been a superficial distinction, the debate served to highlight at least three issues which must be considered in a review of evaluation methodology. These are (1) the distinction between research and evaluation; (2) the constrictive effect of the program monitoring approach to evaluation; and

(3) the disproportionate educational and social consequences of summative evaluation. Each of these issues will be discussed briefly.

1. Research evaluation. The distinction between research and evaluation can best be described in terms of the control each can exercise over threats to internal and external validity (Campbell and Stanley, 1963; Campbell, 1969). In general, evaluators have claimed that what they lose in the control of internal threats, they gain in the control of external threats (Guba and Stufflebeam, 1968; Stake and Denny, 1969) or, to put it in slightly different terms, the researcher so carefully controls the external world that generalization is forfeited, the "sterile lab in the ivory tower" argument. It is interesting that in the formative-summative controversy described earlier, each side claimed that research (and explanation) logically belonged on his side. Welty (1969) has argued that it is theoretically possible to implement a rigorous experimental design while providing feedback for managerial decision making, thus questioning the folktale of the helpful evaluator who, because he provides information for program change, must abandon his cherished hope of conducting a "true experiment," of providing explanations.

2. Program monitoring. An educational program may be described as an open system which, among other characteristics,

exchanges matter, energy and information with its environment and tends to maintain itself in a steady state (Griffiths, 1964). This steady state is maintained by a feedback or cybernetic mechanism. In terms of Guba and Stufflebeam's decision matrix (1968), this would be described as a homeostatic decision making setting. The better the feedback mechanism, the more effective the system is in maintaining its steady state, and hence the more effective it is in resisting change. The formative/summative distinction reflects the conflict between the temporary system (formative evaluation) and the permanent system (summative evaluation) but provides little insight into the problem of designing evaluations for innovations.

3. Consequences of summative evaluation. Summative evaluation is designed to provide a moment of truth when an innovation is finally adopted or rejected by the system. The finality of this approach has tended to widen the gulf between the innovator and the evaluator. Campbell (1969) has some accurate, if facetious, advice for harried administrators who need to produce gain scores (to provide data for summative evaluation). Many innovative administrators, with such grim national examples as Higher Horizons (Wrightstone, Forlano, Frankel, Lewis, Turner, & Bolger, 1964) and Headstart (Cicirelli, 1969) and countless local catastrophes, have displayed marked avoidance behavior in the planning and implementation of program evaluation (Jordan and Speiss, 1970). Perhaps

the solution is not to build bigger and better summative evaluations (Scriven, 1967), but to find an alternative approach.

Unit size classification. The second major type of evaluation model is the classification of design by the size of the information source, i.e., the unit to be evaluated (Pace, 1968). The size of the unit determines the criteria, and hence the variables, to be considered. For example, if the unit is small (explicitly defined, limited in scope and of short duration), large contextual variables are of marginal importance or irrelevant while behaviorally defined objectives are important. As the unit size becomes larger, behavioral objectives become increasingly irrelevant while contextual variables, which have greater opportunity for influence in a larger program of longer duration, become increasingly important.

This system allows the evaluator to view his unit in the context of the surrounding units or systems and to focus his questions accordingly. In fact, an evaluator who is providing information to different audiences is really describing the characteristics of his unit as part of different sized systems, and hence measuring his unit using different sets of variables. Just as an x-ray, a tape measure and a census form can be used to measure the same person, or unit, so the evaluator becomes radiologist, tailor, and census taker to his program.

Part of the appeal of this system is probably its similarity to environmental studies. Educational evaluation has been guilty of the same restriction of variables, what Pace calls single purpose planning, that kept agricultural experts measuring the height of the fertilized crop while ignoring the polluted runoff from the fields. Heranowicz (1969) has described this as the need for a macroanalytic approach. In short, this classification system should accomplish an aim of evaluation, which is not to attempt to simplify the educational process, but to portray it in all its complexities (Stake and Denny, 1969).

A second advantage of this classification by unit size is its similarity to systems analysis. The systems analysis approach is concerned with the relationships within each subsystem of inputs and outputs and the relationship between subsystems within a larger system (Wittrock, 1966; Alkin, 1967). Of particular interest to the evaluator is cost effectiveness analysis (Forbes, 1969) which studies the relationship between instructional objectives, institutional programs, measurements of achievement of the objectives, and cost of the system.

A third value of Pace's classification system is that it is deterministic, as the temporal classifications are not. Unit size determines variables and since, as Fortune (1969) points out, variables determine measurement, the evaluator can use the model to determine his evaluation strategy.

Variables

Population. The population, and the sampling from that population, are variables in an evaluation design. The dangers inherent in all but the most rigorous sampling techniques have been extensively documented (Campbell and Stanley, 1963; Campbell, 1969). Campbell has stated that the strongest solution in quasi-experimental design is the use of untreated comparison groups even where these cannot be assigned at random. Another suggestion is that the evaluator consider the logical groups, the naturally occurring subgroups, rather than the individual, when it is the logical group upon whom the program operates and with whom it would be replicated (Wardrop, 1968; Light and Smith, 1970).

Information system. The information system collects, processes and reports data on different variables to different audiences. Part of that reporting is the documentation of the program itself, and part of the program is the evaluation. Evaluations are obtrusive. Their effects can be "minimized or maximized, but they cannot be entirely neutralized." (Bloom, 1969.) This is similar to the problem faced by the researcher with the Hawthorne effect, although Cook (1967) has suggested that there is scant evidence of the mechanism by which the Hawthorne effect works, or of the long-range effect of that threat to external validity. For the purpose of replication it is perhaps best to regard the evaluation as part of the program, as a characteristic of the environment (Bloom, 1967) which should be documented, and perhaps even manipulated, i.e., treated as a variable. When the curriculum is regarded as eternally dynamic and the evaluation as the provider of data for change (Cooper, 1970), then the generalizability of the specific program may not be as important as the generalizability of the curriculum-evaluation relationship (Ahmann, 1967).

Goals. Using the Pace model, the evaluator begins deciding which variables are to be used for each evaluation unit. At each level he can try to determine what the goals actually are, keeping in mind that goals themselves are variables (Stake, 1970). Many writers, using such terms as congruence (Stake, 1967) and discrepancy (Provus, 1969), have provided detailed instructions in the process by which goals can be clarified. In this essentially dialectic process, staff and evaluator create a synthesis: a set of goals. In the dialectic process, however, the synthesis immediately becomes the thesis and the process begins again. Unfortunately, that is exactly what happens to the beautifully written, carefully typed set of goals. They are constantly changing, in themselves, and in their relation to other goals of the program (Stake and Denny, 1969; Brickell, 1969).

In the process of goal clarification, the evaluator must accept all goals of the staff, be they "taxonomic, mechanistic, humanistic, even scriptural" (Stake, 1967). Furthermore, he must be aware of the appropriateness of multiple criteria, just as he is aware of the value of multiple predictors for the criteria (Horst, 1966; Wittrock, 1966). He must try to specify program goals so that unspecified results can be described and studied (Bloom, 1969), but he must be willing to evaluate programs which have not yet clearly defined their goals (Pace, 1968).

Measurement

The type of variable determines the type of measurement (Fortune, 1969). Thus, a highly stable, easily measured variable, such as a behavioral objective, can often be measured with a single instrument. A very unstable, difficult to measure variable, such as those in the affective domain, will often need multivariant measurement techniques. The increasingly popular use of unobtrusive measures (Webb, Campbell, Schwartz, & Sechrest, 1966) is based on the assumption that, since all measurements have weaknesses, an attempt should be made to develop a program of obtrusive and unobtrusive measures which will have compensatory strengths and unshared weaknesses (Sechrest, 1968).

Selection of the measuring instruments is a crucial part of an evaluation design and the testing subprogram should itself be evaluated for its relevance to the total evaluation (Unks and Cox, 1968). Not only can poor measurement obscure, or even distort, information, it can destroy the credibility of the evaluation (Bloom, 1969). Measuring instruments which did not seem relevant to student, teacher, or administrator at the moment of administration, can hardly gain relevance by being tabulated and analyzed.

Reporting Information

Analysis, like measurement, is determined by the variables chosen (Fortune, 1969). However, the organization and presentation of data sometimes suggest methods for future collection, organization, and analysis (Forbes, 1969). In this manner the data processing serves as information to the evaluator about his design as well as providing information for other groups.

Guba and Stufflebeam (1968), stating that an evaluation should provide useful information, have suggested the following criteria of usefulness:

1. Internal validity--data corresponds to program;
2. External validity--generalizability;
3. Reliability--replicable;
4. Objectivity--publicness of interpretation;
5. Relevance--the decisions to be made;
6. Significance--priority of information;

7. Scope--information;
8. Credibility--information sources;
9. Timeliness--reporting;
10. Pervasiveness--all audiences;
11. Efficiency--proportion to the program.

The task, then, was to develop a useful evaluation of the language arts component of METEP.

CHAPTER III

EVALUATION DESIGN

The fall semester 1969 began with an evaluation which attempted to provide information to students, staff, METEP administration, the METEP simulation component, and non-METEP personnel. Information was collected on the population, program operation, curriculum, and program goals. Each student's use of the PCs and IAs (including time taken, PC and IA evaluation, and whether the student had passed or failed) was collected whenever a student attempted a PC (Appendix A). Unfortunately the evaluator had failed to realize the mammoth data mountain that was going to be built by having 110 students fill out a three-page uncoded questionnaire each time they attempted any one of the 28 PCs.

A data processing system using optical scanning forms (Appendix A), original computer programs (Appendix B) and packaged statistical analysis programs was developed at the close of the fall semester for use during the spring program. Data needed during the program were processed in computer programs written in Fortran by the evaluator for the Control Data Computer (CDC) model 3600, at the University of Massachusetts Computer Center. These programs were specifically designed to process incomplete data files and to present the material in an easily understandable format to the specified audiences. Packaged programs were used at the end of the program for analyzing the completed data.

The Statistical Package for the Social Sciences (SPSS) which was developed at Stanford (Nie, 1969) was adapted to the CDC 3600 by members of the Computer Center and School of Education, University of Massachusetts, at the beginning of the spring semester. SPSS is particularly well suited for processing completed data for simple statistical analyses. It is probably best known for its elegant formating and labeling capabilities, but it also has a well written manual, is designed to provide easy processing both by variable and by subgroup, and stores both original and transformed data on magnetic tape for later analysis. At present the SPSS program at the University of Massachusetts has very limited statistical capabilities (descriptive and two-way frequency tables) and can accommodate only 100 variables. Attempts are being made to incorporate all the statistical analyses provided in the original SPSS program and to increase the variable limit to 600.

The Biomedical Computer Programs (BMD) developed at UCLA (Dixon, 1968) have much greater statistical capabilities, but lack the label and format options of SPSS. They are also extremely inefficient for the processing of large numbers of variables in simple statistical analyses. The University of

Massachusetts Computer Center has six of the individual programs on the system and provides binary decks for the rest.

The spring semester schedule for the language arts program was generally the same as the fall schedule. The students participated in a five-week curriculum block after they had observed in their practice teaching classrooms and before they began their eight weeks of practice teaching. As before, the students could attempt the PCs in any order and use as many instructional alternatives as they felt necessary. This time, instead of requiring that all PCs be completed at the end of the five weeks, 20 of the revised PCs were due at the end of the five weeks, the remaining seven had to be completed successfully during the first four weeks of practice teaching. The Instructional Alternative (IA) system was enlarged to provide one of each of the 11 IA types for each PC. The 11 alternatives available for each PC were as follows:

1. Live lecture--schedule provided at beginning of program;
2. Taped lecture--taped at beginning of program;
3. Library packet--selected and annotated readings;
4. Library browsing--annotated bibliographies available;
5. Discussion with staff--office hours posted;
6. Discussion with others--classmates, master teachers, etc.;

7. Audiovisual material--filmstrips, TV tapes, displays, etc.;
8. Observation--in practice teaching classroom, observation corridor of laboratory school, or by appointment;
9. Practice--laboratory school students available, some programmed materials;
10. Pretest--PC itself becomes an instructional alternative;
11. Other--to be devised by the student.

The language arts program was also expanded to include a new category of student, METEP specialists. Three PCs were written for this group and a weekly seminar scheduled specifically for them.

During the spring semester the evaluator's emphasis was on the accuracy and timeliness of the reporting. The audiences remained the same as those identified during the fall semester: students (both generalists and specialists), staff, METEP administration, simulation staff, and non-METEP personnel. Each audience represented an evaluating unit, and, thus, needed information on different variables (Pace, 1968). The four categories of variables measured during the fall (population, program operation, curriculum, and program goals), were remeasured using revised instruments in the spring. Each audience received information only on those aspects of the variables of interest to it.

Although the reporting of information was organized by audience, the collecting of information was organized by variable. Thus the evaluator's report can be logically organized by variables. Each of the four variables in this evaluation will be discussed in a separate section of the next chapter within which the measuring and reporting procedures for both spring and fall semester will be described. Conclusions and recommendations for revisions in the evaluation design are in the following chapter.

CHAPTER IV

VARIABLES

Population

Fall Semester

Selection. During the fall semester all 110 students enrolled in the language arts methods course were included in the program. An early attempt to divide the course for some sort of controlled sampling was abandoned because many of the students were participating in METEP programs in other curriculum areas. The interns, students who chose a full semester of teaching rather than half a semester of methods courses and half a semester of teaching, proved to be an equally poor control group because of the high communication rate between the elementary education seniors, the students who were the great majority of both the interns and the student teachers.

Description. Although METEP was designed to have a data collection service, information collected during the Feasibility Study was left to the individual curriculum components. At the end of the program, students were asked to provide some data on their previous educational experiences (Appendix A). That information is summarized in Tables 1 and 2.

TABLE 1

INFORMATION ON STUDENTS: GENERAL

		Fall Semester	Spring Semester		
		METEP Generalists (n=110)	Lecture-Demonstration Section (n=32)	METEP Generalists (n=27)	METEP Specialists (n=35)
Age	Mean	21.7 yrs.	21.3 yrs.	21.9 yrs.	22.9 yrs.
	Range	20-41	20-25	20-33	19-51
Status	Undergrad.	101	27	24	13
	Graduate	4	5	2	19
Sex	Male	6	4	5	2
	Female	104	28	22	33
Own Elementary School Experience					
	Rural	15	2	4	11
	Suburban	57	26	17	19
	Urban	22	4	6	5
	Traditional	89	29	24	25
	Experimental	5	3	1	1

TABLE 2

INFORMATION ON STUDENTS: EXPERIENCE WITH CHILDREN

		Fall Semester	Spring Semester		
		METEP Generalists (n=110)	Lecture-Demonstration Section (n=32)	METEP Generalists (n=27)	METEP Specialists (n=35)
Number of individual experiences (baby-sitting, tutoring, etc.)	1-10x	31	5	2	1
	10-30x	25	10	9	3
	31+	52	17	16	31
Group experiences (camp, aide, community, etc.)	1-10x	47	18	16	7
	10-30x	28	4	4	5
	31+	34	10	6	23
Teaching	1-10x	103	28	23	6
	10-30x		2	3	2
	31+	7	2	1	27

A casual observer at that meeting might have noticed two statistics not included in the tables. The height of the students varied from five feet to six feet eight inches, and all the students were white. No information was collected on the 15 staff assistants, two of whom were black.

Spring

Selection. In the spring a number of programs were competing with METEP for students. The intern program operated as it had for the fall semester. Twenty-eight of the practice teaching students volunteered for the Model Elementary Training Sequence (METS). Although METS students had no formal curriculum training, they were encouraged to use METEP materials. All PC and IA information was made available to them. The remaining 59 students were offered a choice between the METEP program and a lecture-demonstration section taught by Dr. Helen O'Leary. Twenty-eight chose METEP. Some personal data, aptitude and attitude information were collected on the 59 when they met for a preprogram information meeting (Appendix A). The lecture-demonstration students were not tested at the end of the semester in hopes of avoiding the trap so vividly described by Pace (1968) who pointed out that the smaller the unit being evaluated, and thus the more specific the criteria, the greater the chance that the treated group, who have had explicitly relevant treatment, will perform better than those with the less relevant treatment.

Elizabeth Proper, research assistant to the Office of Teacher Preparation, School of Education, University of Massachusetts, did design a pilot evaluation of all the elementary teacher preparation programs. Excerpts from the report are in Appendix C.

In addition to the 27 generalists, 35 language arts specialists were included in the spring program. During the fall semester the 15 students who rated PCs, counseled students and helped administer the program and the evaluation were called staff assistants. In fact, the work they were doing was theoretically that of language arts specialists and so that category, and the accompanying PCs, were formally incorporated into the spring program. Personal data, aptitude and attitude measures (Appendix A) were collected at one of the first weekly seminars conducted by the program director, Masha Rudman.

General academic information on the students was not collected from either the generalists or the specialists and was not readily available from the University records. Grade point averages were not easily obtained and the pass/fail system at the School of Education invalidates such averages anyway. Freshman entrance examination scores were not consistently available for transfer students; entrance examinations for graduate students vary with the graduate program.

Description. Information on the population (Tables 1, 2, and 3) was designed to be used by those planning to replicate or revise the program. The language arts staff, the METEP administration, and METEP clients would all need to know the population with whom the program had been conducted in order to manipulate that variable in future programs.

Data from the Pre Program questionnaire Parts I and II were collected on Optical Scanning Standard Answer Form C (Appendix A). After the data had been transferred in a slightly revised format to IBM card by the Digitek 100 Optical Scanner, the data were processed in the SPSS program CODEBOOK (Nie, 1969). The data for both semesters are summarized in Tables 1, 2, and 3.

All students in the program were white. In fact, there were no black students in any of the regular elementary teacher training programs spring semester. It should be noted that the reported average age is slightly low. Not surprisingly, perhaps, those students not reporting their age, and therefore not included in the data, were all women somewhat above the average age. The students who chose to participate in the lecture-demonstration section rather than the METEP program, were not noticeably different on any of the variables reported

TABLE 3

INFORMATION ON STUDENTS: TEACHING PLANS, SPRING SEMESTER STUDENTS ONLY*

	Lecture-Demonstration Section (n=32)	METEP Generalists (n=27)	METEP Specialists (n=35)
I want to teach:			
rural	1	1	3
suburban	12	10	11
urban	7	4	8
anything, not urban	5	2	3
don't care	7	10	10
traditional	3	3	3
experimental	15	14	24
don't care	14	10	8
preschool	3	4	3
K-3	12	8	16
4-6	14	15	11
don't care	3	0	4
not elementary	0	0	1

*The information was not collected for fall semester.

from those who chose the METEP program. As might be expected, the specialists, more of whom were graduate students, had had more experience working with children.

Program Operation

Fall Semester

Information for students: program operation. At a general student meeting the beginning of the fall semester, the language arts staff explained the METEP program briefly and handed out a 110-page packet (26 pages of program information, 28 copies of the 3-page PC questionnaire) to each student. The program information included the PCs, the schedule of IAs, forms necessary for the preparation of some of the PCs, and general information about the location and use of facilities (Rudman, 1970).

When a student completed a written PC he was asked to hand it in along with the completed PC questionnaire in Masha Rudman's office. PCs were not rated unless accompanied by the completed questionnaire. The PC was rated by a staff assistant and returned to the student's folder in the office. The office was open from 9-5, five days a week. Each staff assistant was scheduled for two hours of office duty per week. PC questionnaires were also completed for oral demonstration PCs which were rated during office hours.

The student was expected to check his folder regularly for returned PCs (rated "pass" or "fail") and for any program or curriculum information which might have been placed there. Since lectures, only one of the IAs available for each PC, were optional, the lecture time could not be used for the giving of program or general curriculum information.

Information for students: individual progress. Students kept track of their progress in the program by checking their returned PCs and by consulting a master list on the back of the office door. This list, which had the PC numbers across the top and the students' names down the side, was kept up to date by the staff assistants who rated the PCs. They filled in the date the PC was passed on the master list as well as keeping a separate pass/fail list of all the students whom they had rated.

The system was far from efficient. At the end of the five weeks it was necessary to send a letter to each student which began: "According to our records, and we admit they may be wrong, you have not passed the following PCs." Students received little diagnostic information on their returned PCs from raters who had a minimum of 220 PCs to read, rate and record during the five weeks.

Information for administrators: program operation. The administration relied entirely on informal reporting, or complaining, by students and staff assistants to discover program constraints: a missing library packet, a lecture schedule mix-up, a shortage of TV monitors, the excessive workload of the 20 students who happened to be participating in four METEP programs simultaneously.

It was easy to check if the raters had visited the office to collect unrated PCs, but somewhat more difficult to tell whether PCs were sitting at home unread. Again student complaints were the main source of information.

Information for administrators: student progress. Information on the progress of each student was needed for counseling purposes. The master list provided the only organized source of information on student activities and it only had the date the PCs were passed.

In fact, it was even difficult to determine exactly who was enrolled in the program. Students entered late, changed courses, were participating in a different program with the same course number, or were enrolled but just hadn't passed in any PCs. The program was over before an accurate list was compiled.

Information for the evaluator. The difficulties of the design were clearly demonstrated by the slow and inaccurate data processing. Information could not be compiled in time for the November 15th report to the METEP administration. As the PC questionnaires piled up in cardboard boxes, the evaluator seriously considered weighing rather than processing the data. The eight staff assistants who patiently coded the questionnaire information (Appendix A) provided many helpful suggestions on precoding categories which were used spring semester. The comaraderie of that loyal group reminded the evaluator of the esprit of temporary groups so vividly described by Miles (1964). That spirit was never recaptured in the more institutionalized and efficient program of the spring semester.

Spring Semester

Information for students: program operation. The communication system for generalists was only slightly revised for the spring semester. Again after only one general meeting, the student folders in the office were the major communication link. The student's packet, this time 54 pages, included the revised PCs and IAs, general facilities information, the criteria upon which each PC would be judged, a statement of the goals of the program (Rudman, 1970), two pages of PC questionnaire instructions and 27 copies of the Optical Scanning General Coding Form (Appendix A). Thirteen pages of program information and three pages of curriculum materials were passed out through the student folders. The office was open and staffed by specialists five days and three evenings a week.

The specialists met once a week in a seminar which was used partially for program and curriculum information. Each specialist also had a folder which was used both for general information and as a means of passing messages directly between the rater and the rated.

Information for students: individual progress. The system of recording the progress of the generalists was redesigned to take advantage of the data processing equipment available at the University of Massachusetts, specifically the Digitek 100 Optical Scanner at the Counseling Center and the CDC 3600 computer and the unit record equipment at the Computer Center. When the student handed in a PC (or was rated on an oral PC) he was asked to hand in the answers to the PC questionnaire on an Optical Scanning General Coding Form (Appendix A). This form had space for 79 columns of information coded from 0 to 9. For the purposes of monitoring a student's progress, the only important information collected from the student was the student's language arts number, the PC number and the date the PC was turned in.

When the language arts specialist rated the student's work, he was asked to fill in additional information on the same form. The only information essential for the monitoring program was whether the student had passed or not passed. "Not pass" had been substituted for "fail" upon the discovery fall semester that raters were delaying the recording of the borderline PCs until they had discussed the PC with the student to clarify his work, i.e., to make sure he passed. The "not pass" rate was higher spring semester than was the "fail" rate fall semester (14 percent spring; 8 percent fall) which may be attributed to this change, to the decreased rating load which allowed more careful rating, or to both.

The Optical Scanning forms were taken to the Counseling Center twice a week where the data were transferred to IBM cards. These cards were filed by student in the MASTER program (Appendix B) which printed out a master list with the PCs across the top, the student names down the side, the date on which the PC was passed, and the totals per student and per PC. Twice during the semester the program STUDENT 1 (Appendix B) was run which provided one page of printout per student giving the number of not passes as well as the date passed. Each student's page was filed in his folder as an additional check of the records.

During the fall semester staff assistants acting as raters had been responsible for two PCs, rating all the students attempting those two. The raters found this procedure tedious and felt they had missed important sections of the language arts program. Upon their recommendation, the spring semester specialists were asked to rate at least one of each PC. A list of the PCs each specialist had rated was printed weekly from the program RATER (Appendix B). All the information necessary for the program (rater's number, PC number) was made available from the PC questionnaire. Since the rating of the generalists' PCs was one of the specialists'

PCs, the RATER printout provided the specialists with information about the scope of their performance.

A second specialists' PC, assisting in the administration of the program, was regarded as an expressive objective and so did not need to be rated. The third PC, the preparing of IAs for the generalists' PCs, was rated by the program director. A record was kept of the specific PC and IA number using a slightly revised PC questionnaire (Appendix A). A printout on the style of the master list, SPECPC (Appendix B) which displayed the information per PC and SPECIA (Appendix B) which displayed the information per IA, was available on a weekly basis. A second printout on the style of STUDENT 1, from the program SPECIAL (Appendix B) provided one page of printout per student and was filed in the specialists' folders near the end of the five weeks.

Information for administrators: program operation. While informal information from students was still an effective means of discovering program difficulties, specialists were assigned to check library packets, tapes, and other instructional material as part of their office duties. The printout from the program PC (Appendix B) provided additional assistance. The data for the program PC were collected on the PC questionnaire described earlier. Much of the information was designed to provide data about the curriculum and program goals and will be discussed in later chapters, but some of the information, particularly in the early weeks of the program, was useful for program management.

The printout from the program PC provided information on average time for each PC and IA, PC and IA evaluations, the number of multiple IAs, the number of students passing each PC and the levels of performance, and, upon the suggestion of the program director, the number of pass and not pass for each IA and the performance levels of those passing. During the first few weeks of the program, this information helped to ferret out poor IAs (no one passed who used them, low performance level, low student evaluation, high multiple IA use) or particularly difficult or ambiguously worded PCs (low pass rate, length of time on PC and IAs, number of multiple IAs, low performance level).

The program PC described above also printed out the average turn around time for rating each PC. Although this did not identify the slower raters, as it would have during the fall semester when raters were totally responsible for certain PCs, it did provide information about the rating program generally. The number of PCs rated by each specialist was printed out in the program RATER described earlier. There were so many more raters spring semester that all rating was done in the office. PCs still wandered off inside raters' notebooks and were found only with the greatest difficulty.

Information for administrators: student progress. The program STUDENT (Appendix B) provided more counseling information than would have been available from the MASTER printout. Data for this program were again taken from the PC questionnaire. A single page of information per student described the number of unsuccessful attempts for each PC, the date the PC was passed, and the performance level. Weekly printouts thus provided both comparative and historical counseling information.

A history of the performance level is worth recounting briefly. As mentioned earlier, staff and staff assistants had had no real counseling information fall semester. The notion of performance level was introduced reluctantly by the evaluator who, although she had carefully avoided suggesting the probable proportion of "minimals," "adequates," and "outstandings" anticipated at best a lengthy debate on the appropriateness of performance levels in a pass/fail system and, at worst, a discussion of the dangers of confusing peer referenced and criteria referenced measurements (Popham and Husek, 1969). However, the specialists, who after a week in the program were apparently conditioned to expect any sort of outrageous request from the evaluator, accepted the system without comment. Although the performance level system was not an official secret, neither of the printouts provided for the generalists (MASTER and STUDENT 1) included information on performance levels, and when the specialists rated PCs they were encouraged to provide lengthy diagnostic comments on the returned PCs rather than a simple performance level. At the end of the semester the total number of each level was:

minimal	182
adequate	423
outstanding	84

With all the elaborate data processing, it was still almost impossible to determine who was actually enrolled in the program. "Preventive counseling," calling those students who had passed in little or no work by the end of the second week, helped identify the program participants. While it was an administrative choice to decide what proportion of counseling time should be spent with borderline students, it was clearly the evaluator's problem to separate the students in difficulty from the ghosts. Both semesters a special language arts number was used to identify each student rather than the University ID which was longer and which would have required more card space and sorting time. The process of assigning these numbers, however, slowed down the information system during the early weeks of the program and made the processing of late enrolling students an unnecessarily lengthy procedure.

Information for the evaluator. The monitoring program was not entirely accurate. Most of the errors were caused by incorrectly completed optical scanning forms. The 0-9 General Coding Form (Appendix A) was difficult to use. It was very easy to mark information in the wrong columns, in which case PC #12 became either PC #20 or PC #1. Listing the cards on the IBM 407 was helpful in detecting misalligned columns. The listing was also used to check for logical errors, such as a rater marking a student not pass and then filling in the performance level. Students who found errors in the printouts for MASTER, STUDENT 1 or SPECIAL could contact the evaluator in person or through the evaluator's folder in the office.

Eight hundred eighty-six PC questionnaires for the 28 generalists were processed, or an average of 32 per student (range of 27 to 41). It was usually possible to collect the forms early one morning and have the printout the following afternoon. Processing time ranged from a four hour miracle to three days. Unfortunately, the counseling center equipment was not available on weekends when computer turnaround time was shortest. Much of the unit record equipment at the Computer Center was being repaired during the spring semester, making it necessary to use the computer for listing and duplicating work which would otherwise have been done on the peripheral machines.

Although the reporting time during the program, the highest priority during the spring semester, was vastly improved over the fall semester, the post program reporting was slower than had been anticipated, as some of the data required considerable processing. Post program analyses, such as tests of reliability, analysis of variance between groups in the program, and stepwise regression analysis on the data collected on the generalists, are described in the last section of this chapter with recommendations for revision in Chapter V.

Curriculum

Fall Semester

Performance criteria. Only minor changes in the PCs could be made during the program. Major revisions had to wait until the second half of the fall semester when the students were in the schools practice teaching. Theoretically the information from the PC questionnaire was available to help guide curriculum changes. In fact, however, the coding and processing of the data took so long that most of the changes were made before the information was available. A post program questionnaire designed to provide more rapid information (Appendix A) was available slightly earlier. Staff assistants acting as raters provided suggestions on the PCs they had read. Their information was based on the reading of the PCs during the program and the post program reading and coding of the PC questionnaires.

The PCs had been designed to reflect a hierarchy of teaching skills (Rudman, 1970). A chart designed for the November 15th report to the METEP administration describing each PC in terms of the five stages of the hierarchy became an important source of information for the revising of PCs (Appendix D). It was discovered that the PCs which had been unpopular, which had caused difficulty or had been excessively time consuming, often represented only one, or at the most two, stages of the hierarchy, while PCs judged both valuable and interesting by the students often required the students to demonstrate skills on a number of levels of the hierarchy.

Instructional alternatives. In the fall, a lecture IA was offered for each PC along with one or two other instructional alternatives. Suggestions for revising the IAs came from the same sources described above. Additional information was provided for revising specific aspects of some of the IAs from the open-ended questions in the PC questionnaire.

Spring Semester

Performance criteria: generalists. Information on the curriculum was reported to the curriculum directors. They in turn would report revisions on curriculum to non-METEP personnel.

Each of the generalists' PCs was discussed in detail in the weekly seminar for specialists. Specific attention was directed to the revising of the PC and the devising of additional PCs for the teaching hierarchy. Perhaps the most important revision was made at the end of the program when a sixth level of the hierarchy, evaluation, was added (Rudman, 1970). Revisions and additions in the PCs to cover this new level are being developed for next semester.

The program PC provided information on which to judge each PC and by which to compare it with other PCs. For example, PCs can be compared by the average time it took the students to prepare the PC (including IA time). Figure 1 presents the average student time per PC. A brief description of each PC appears in Table 4. A complete description may be found in the doctoral dissertation describing the curriculum (Rudman, 1970). As expected, the demonstration PCs (13, 20, 27) took the shortest time. The purpose of the chart was not to convince the staff to shorten such lengthy PCs as 1, 3 and 18 but to have them aware of these differences when revising existing PCs and developing new ones.

The averages in Figure 1 include those students who chose the option of "talking out" the PC, i.e., oral rather than written presentation. As one might expect, written presentation required more preparation time (an average of 112 minutes for all PCs) than oral presentation (an average of 59 minutes). When the oral option was first offered late in the fall semester, it had been assumed that rating time would be dramatically increased. In fact, however, raters reported spending an average

Figure 1.--Average Time Per PC.

The mean time for each of the METEP generalists' 27 performance criterion including time of instructional alternatives.

Information was collected on the PC questionnaire from the 28 generalists participating in the program spring semester 1970.

A brief list of the PCs appear in Table 4.

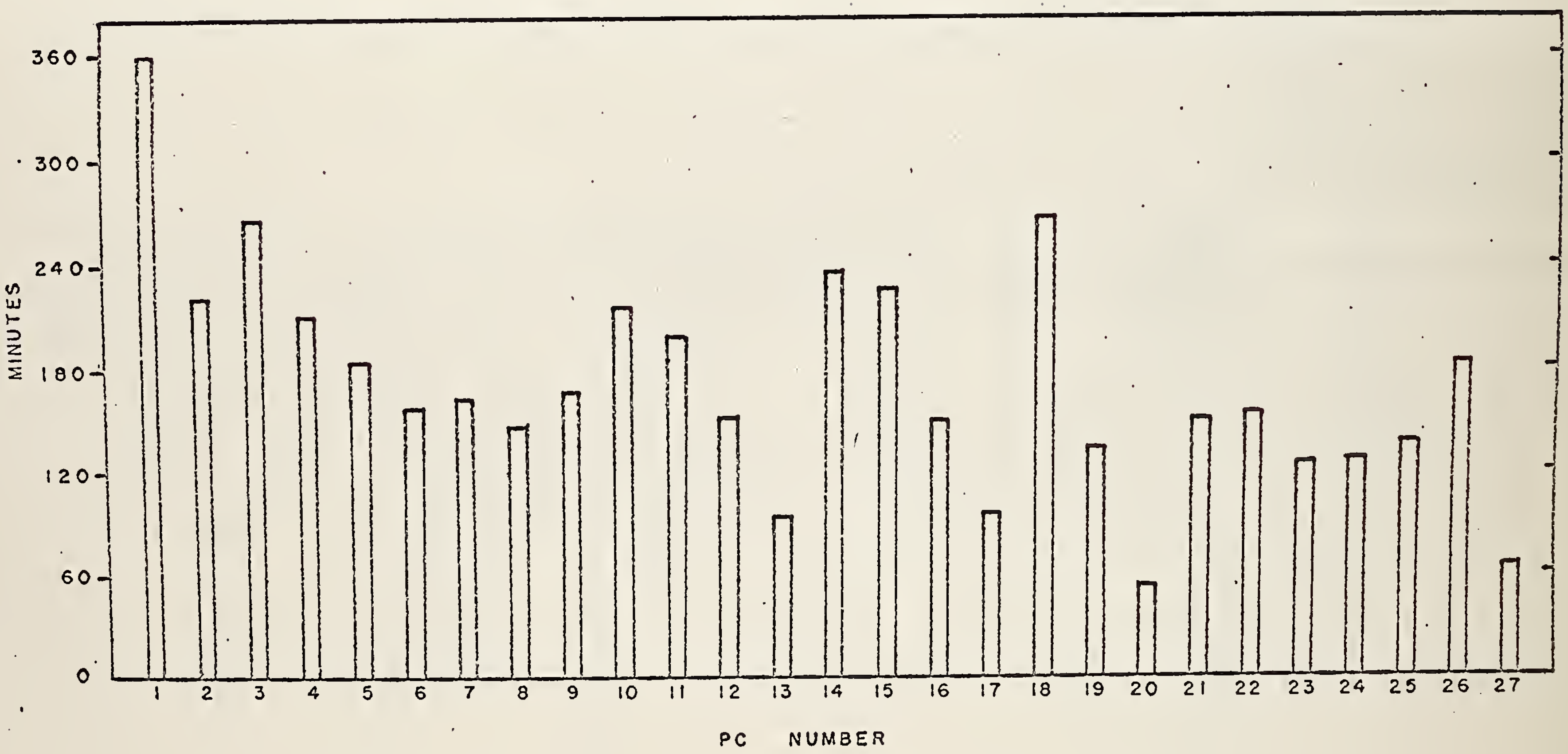

Figure 1

Average Time Per PC.

TABLE 4

THE 27 PERFORMANCE CRITERIA

Number of PC	Description
1	Comparison of basal reading texts
2	Discussion of basal readers in schools (expressive objective)
3	Reading readiness
4	Grouping for reading
5	Informal reading inventory
6	Comprehension skills
7	Word analysis skills
8	Phonics approach
9	i/t/a
10	Linguistic approach
11	Experience approach
12	Individualized approach
13	Demonstration of kits and machines
14	Special populations
15	Selecting professional texts
16	Evaluating reading objectives
17	Discussion of IQ testing (expressive objective)
18	Classroom library
19	Presenting a story
20	Demonstration of story reading
21	Creative writing
22	Spelling
23	Listening

TABLE 4.--Continued

Number of PC	Description
24	Speaking
25	Drama
26	Grammar
27	Handwriting demonstration

Source: Rudman, 1970.

of 15.1 minutes rating written PCs and an average of 14.8 minutes rating oral PCs. The staff had also assumed that if an oral option were available most of the PCs would be presented orally. During the spring, however, students chose the oral option only 10 percent of the time. These figures do not include the three demonstration PCs (13, 20, 27) or the two expressive objectives (2, 17) where students were given no choice of presentation methods.

Figure 2 illustrates another way of comparing PCs--by the number of unsuccessful attempts per PC. Such a chart illustrates, as does the PC program itself, the suggestion of Lindvall and Cox (1969) that evaluation should gather and present information on the performance of students so that it can provide information for the revision of the curriculum. As in Figure 1, it is not the evaluator's purpose to have the staff revise the difficult PCs (such as 4, 8 and 16) or the easy ones (such as 6, 20 and 27) but to make the staff aware of the differences.

Students spent an average of 90.3 hours in the language arts program. (Last summer the evaluator had estimated an average of 100 hours for 28 PCs.) Comments on the second page of the School of Education evaluation (Appendix C) suggest that the students did not expect to spend that much time in a five-week course (even when the PC deadline was extended another four weeks) while they were taking three other courses

Figure 2.--Total Number of Unsuccessful Attempts Per PC

Number of unsuccessful attempts ("not pass") made by METEP generalists on each performance criterion.

Information was collected on the PC questionnaire from the 28 generalists participating in the program spring semester 1970.

A brief list of the PCs appears in Table 4.

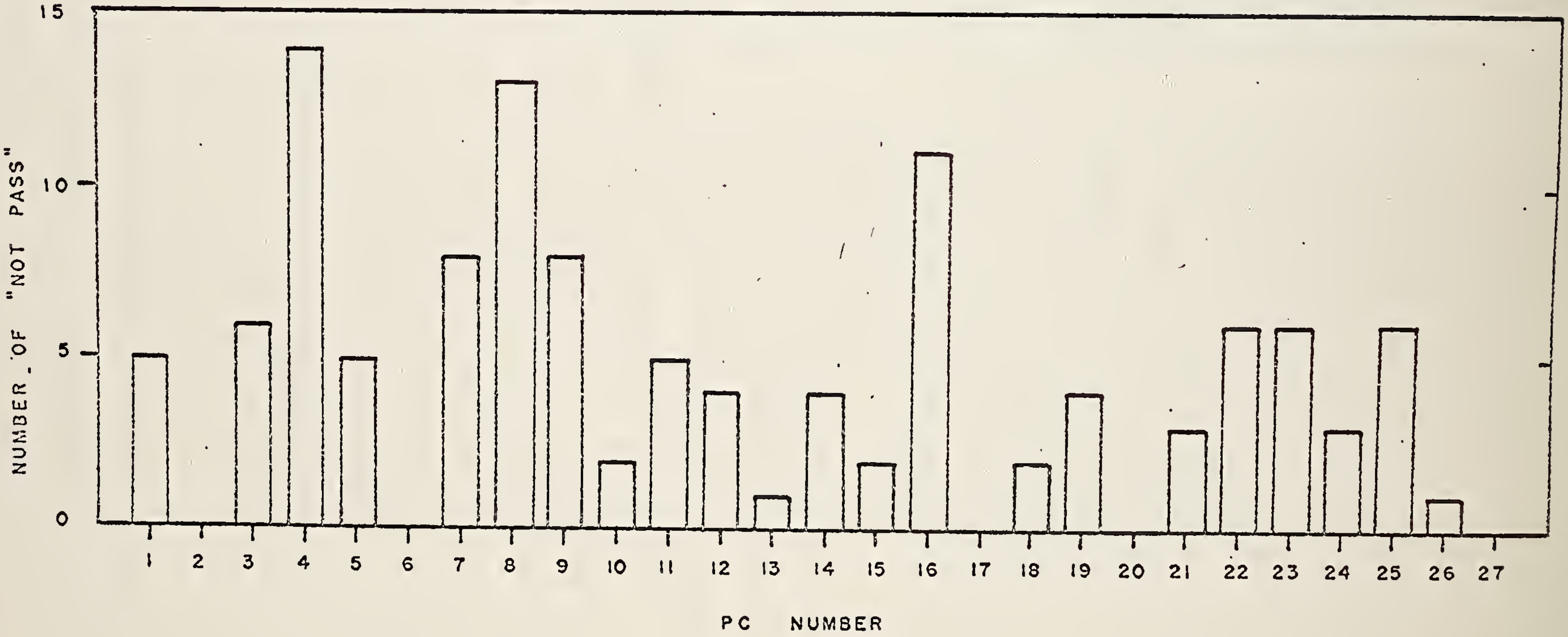

Figure 2

Total Number of Unsuccessful Attempts Per PC and for which they received only two academic credits.

In an attempt to provide some outside criteria against which to judge the individual PCs and the scope of the program, a follow-up questionnaire was devised and sent to the students then practice teaching, their supervisors and their master teachers (Appendix A). Not all of the students had university supervisors. Ten of the 22 students practice teaching were participating in the ESSO Field Teaching Environment which had trained master teachers to assume additional supervising responsibilities.

An additional problem arose in the returning of questionnaires. All questionnaires had arrived in the schools by Monday, May 4. On the previous Thursday, President Nixon had announced the sending of troops into Cambodia. On Thursday, May 7, the day a special late afternoon discussion had been scheduled after the Office of Elementary Teacher Preparation Evaluation Session, the student strike began. The discussion, which had been designed to gather suggestions for revising the program as well as to facilitate the returning of the questionnaires, was cancelled by the evaluator. Some of the students did return their questionnaires on that day or within the next few weeks.

Students practice teaching	22, number returned 6
Supervisors (not Esso)	12, number returned 1
Master teachers	22, number returned 13

Even with the problem of collecting responses, some information was obtained. Perhaps the most interesting information was not on the PCs, but on the practice teaching experience. Only half of the master teachers (7 out of 13) could report having had their students teach in all areas of the language arts. Two of the intermediate grade student teachers reporting were in departmentalized schools where they had had no language arts experience at all.

The questionnaire had been devised with "for example" printed under each rating situation as a check on the clarity of the hierarchy. Although few of the respondents filled in the examples, those who did demonstrated an understanding of the terms by providing examples relevant to the specific level of the hierarchy being rated.

Performance criteria: specialist. The same information from the PC program was available for the specialists PCs, although both the questionnaire and the program had to be slightly revised (Appendix A and B). Of particular interest is the specialists' evaluation of the PCs as learning experiences for them (Figure 3). The high rating that office hours received as a means of providing information on materials and methods testifies to the use the specialists made of Masha Rudman's private library during their time in the office. Information on the preparation of IAs was presented two ways: by PC and by IA, programs PCSPEC and IASPEC,

Figure 3.--Specialists Rating of Their Performance Criteria

The number of specialists rating their performance criteria on the hierarchy of teaching skills.

The information was collected on the PC questionnaire from the 35 specialists who participated in the program spring semester 1970.

A complete description of the teaching hierarchy can be found in Rudman (1970). The levels may be described briefly as follows:

1. proficiency
2. knowledge of the process
3. ability to diagnose
4. knowledge of methods and materials
5. ability to select appropriate methods and materials

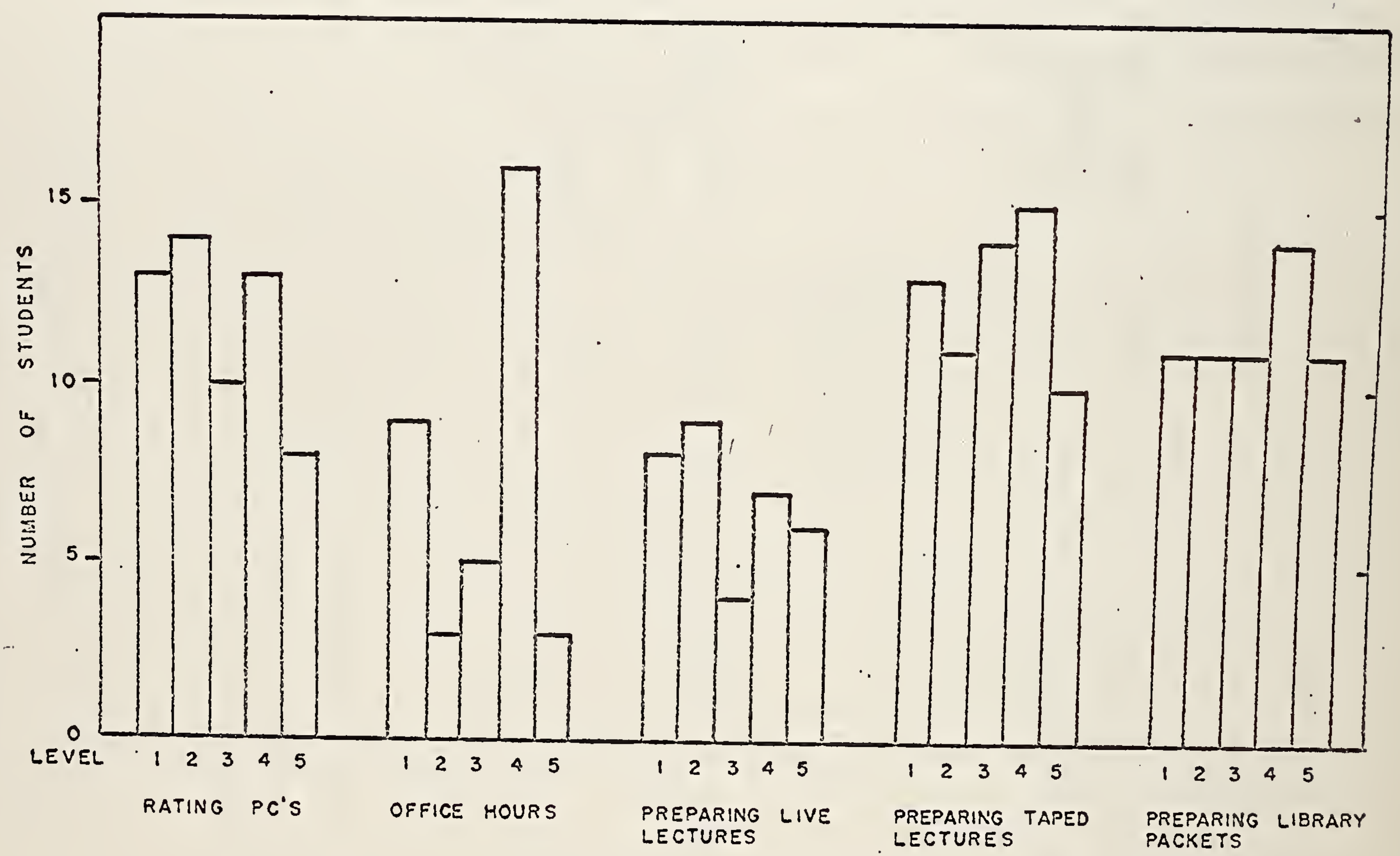

Figure 3

Specialists Rating of Their Performance Criteria respectively (Appendix B). These two separate printouts of the same data demonstrated the clustering of preparation on certain PCs, or certain PC groups, and, on the other hand, the clustering by certain IA types. The 35 generalists, some of whom prepared more than one IA reported preparing the following IA types:

Live Lectures	11
Taped Lectures	20
Library Packet	21
A-V	2

Theoretically there was also an outside criteria by which to judge an IA. If the students who used the IA gave it a low evaluation, failed to pass the PC after using it, or regularly used a second IA, the IA was not well prepared. This system worked for unrevised or unrevisable IAs, such as lectures or demonstrations. Library packets, however, were prepared by one specialist at the beginning of the program and often revised by others during the following weeks. It was impossible to discover which revision the student was evaluating.

Instructional alternatives. Spring semester it was decided to offer all 11 IA types for each of the PCs. The popularity of certain IA types can be demonstrated by a bar graph of the number of students selecting each IA type and the number who did not pass using that IA type (Figure 4).

Figure 4.--Number of Generalists Using Each IA Type

Total number of METEP generalists using each instructional alternative type and of that number those who did not pass the performance criteria.

The information was collected for the PC questionnaire from the 28 generalists who participated in the program spring semester 1970.

A complete listing of each IA type may be found in Rudman (1970). The IA types may be briefly described as follows:

1. Live lecture, prescheduled
2. Audio taped lecture, prepared at the beginning of program
3. Packet of library readings, on reserve in library
4. Browsing in the library, including annotated bibliographies
5. Discussion with staff, including specialists
6. Discussion with others, students, master teachers, etc.
7. Audio-visual materials
8. Observation in laboratory school, practice teaching classroom, etc.
9. Practice, with children, with equipment, programmed texts, etc.
10. Pretest, PC becomes an instructional alternative
11. Other, to be devised by the student

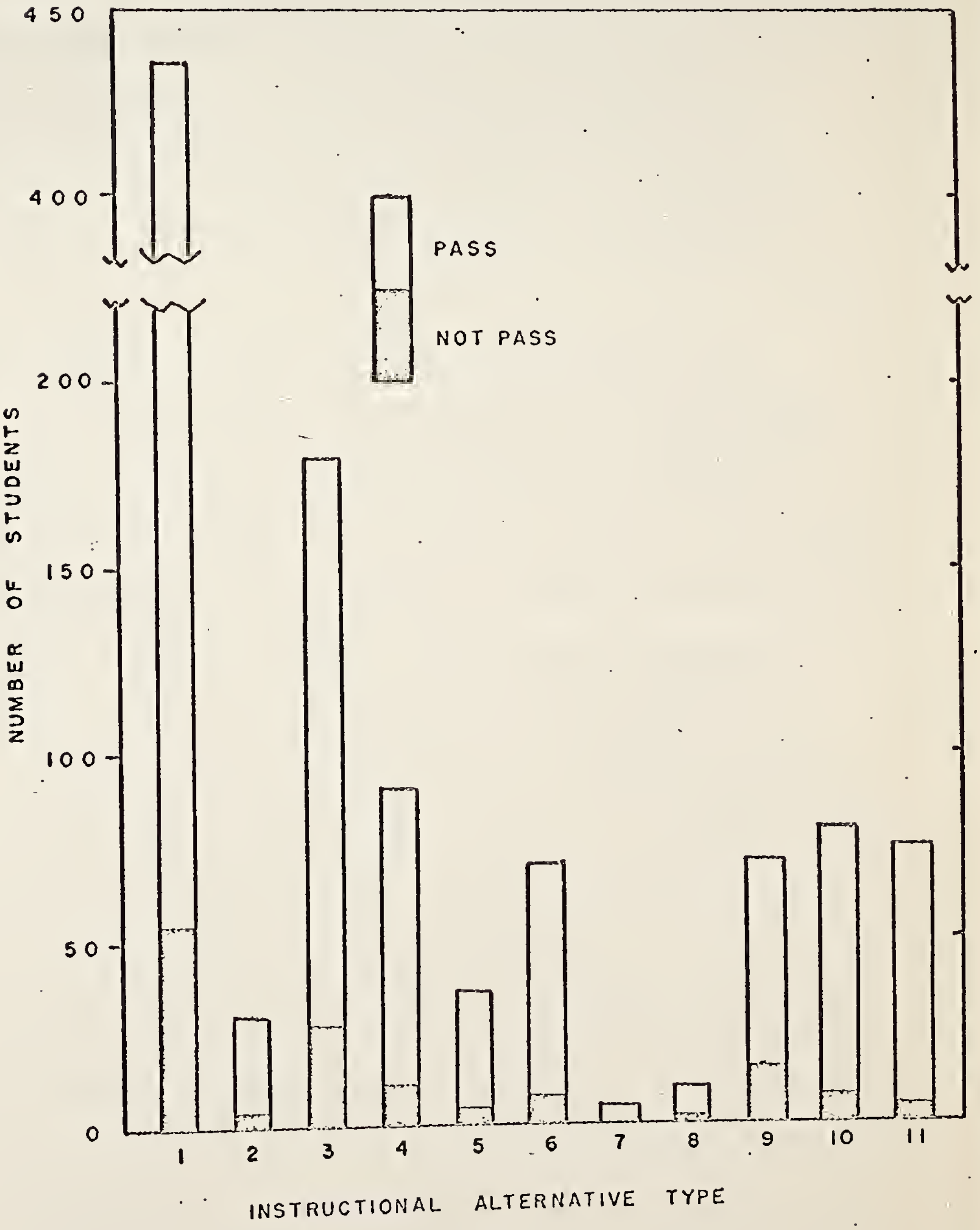

Figure 4

Number of Generalists Using Each IA Type

The efficiency of certain IA types is rather noticeable when the average IA times for the PCs are compared (Figure 5). Observation, for example, appears to require a rather leisurely attitude toward the program. Additional information was collected in a post program questionnaire (Appendix A). Results (Table 5) particularly the "no opinion" category, seem to reflect the same pattern of usage summarized in Figure 4.

The very limited use of A-V materials (Figure 4), specifically of the TV tapes, had a number of interrelated causes. Few of the students had had previous experience with TV tapes and, therefore, were not only shy of the tapes as a learning experience, but unable to operate the monitors. Furthermore, the check-out system for one-inch monitors at the School of Education was so complex that only the most determined students actually managed to put tape to machine.

Information on IA usage: time, number of students using the IA, as well as PC information was used by Thomas Richards in the designing and testing of ED Sim IV, a more sophisticated version of the simulation model used in the METEP Feasibility Study. Fall semester data were also recoded to the spring semester format for his use. Ed Sim IV in turn will be able to provide information on the distribution and program completion times for students, the distribution of resource use, and the cost in terms of resource requirements, for new

Figure 5.--Average Time Per IA

The mean time for each of the 11 instructional alternative types as reported by the METEP generalists.

Information was collected on the PC questionnaire from the 28 generalists participating in the program spring semester 1970.

A brief listing of the IA types may be found in the key accompanying Figure 4.

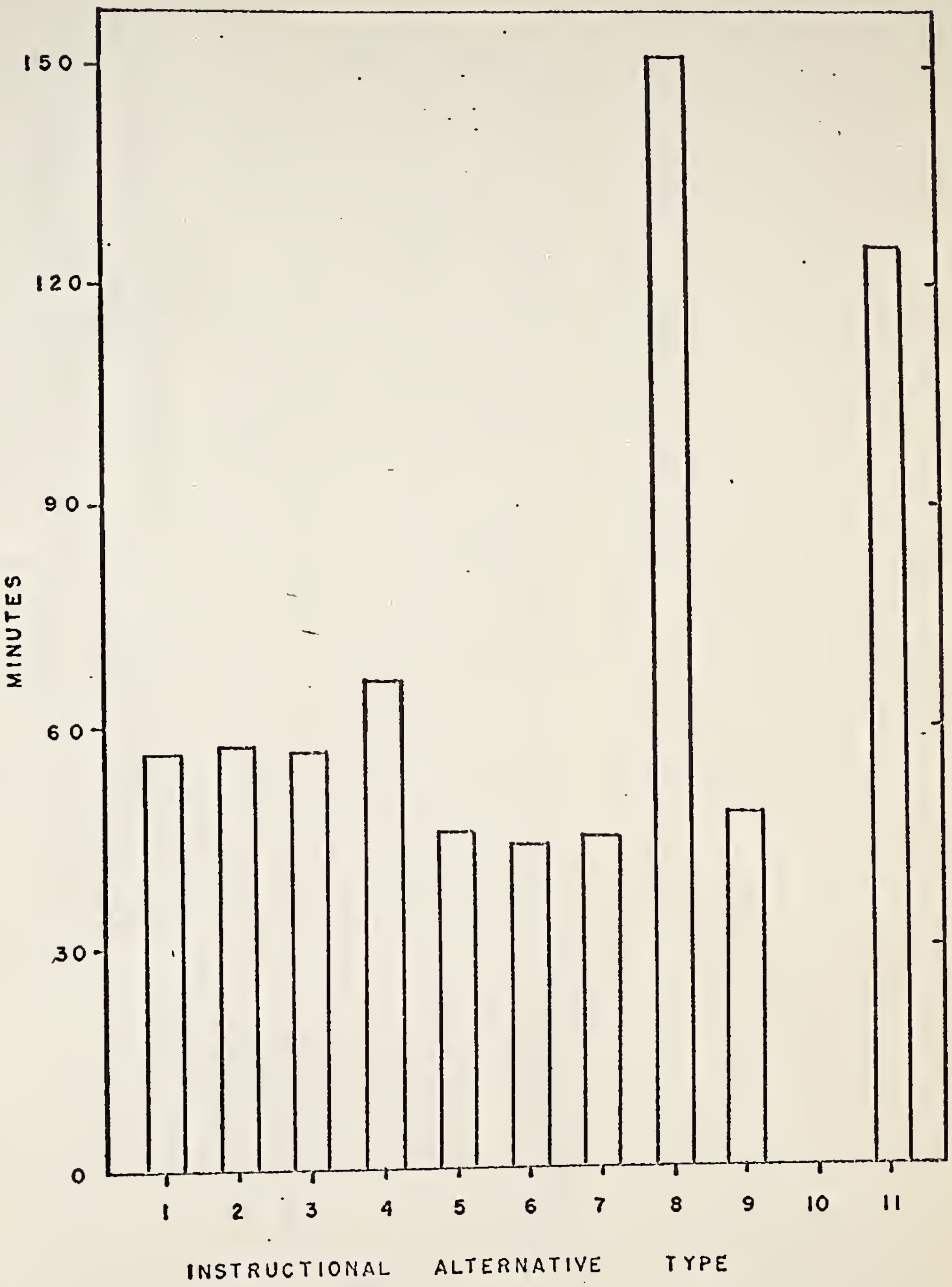

Figure 5

Average Time Per IA

TABLE 5

POST PROGRAM QUESTIONNAIRE: EVALUATION OF IA TYPES

IA Type	1	2	3	4	5	6	7	8	9	10	11
major strength	8	4	6	14	14	16	3	12	14	6	8
needs improving	13	6	14	7	6	6	6	6	3	4	4
major weakness	3	1	1	-	-	1	-	1	1	-	1
no opinion, never used	3	16	6	6	7	4	18	8	9	17	14

Responses from 27 METEP generalists.

variations of the language arts program (Richards, 1970).

Program Goals

Fall

The goals of the METEP program generally and the specific goals of the language arts component had been described in the final report of METEP Phase I (Allen and Cooper, 1968). At the beginning of the fall semester two separate attempts were made to provide some data related to the attainment of those goals (Appendix D).

A semantic differential (Osgood, Souci, and Tannenbaum, 1957) was chosen as an instrument for measuring attitude change. Students were given a two concept, 36 item semantic differential (SD) at the beginning and the end of the program. The concepts chosen were very broad, Learning and Discipline, and the 36 items (Appendix A) were taken from a semantic differential developed by Steve Rollins, Counselling Center, School of Education, University of Massachusetts, for the concepts Sex and Race. Unfortunately students were participating in courses in at least three other curriculum areas, so that any change could have been as easily attributed to one course as to another. Furthermore, neither the evaluator nor the program directors were happy about the choice of concepts or items. It was finally decided that the content of the instrument was not sufficiently enough related to the activities or the goals of the language arts program to justify its further use.

In an attempt to describe the student population and possibly to differentiate between the abilities of individual students, five short tests were given at the end of the program (Appendix E). Table 6 summarizes the tests. Two problems arose. Except for the Surface Development Test (French, 1963), the tests were so difficult to score that reliability was open to question. Secondly, there were no criteria against which to judge the tests. Although lectures had been offered for each PC, library packets and A-V material had not. It proved impossible to set any criterion for the quality or quantity of practical suggestions offered by the students and, finally, there were no criteria against which to judge the Utility Test (French, 1963) since the only information on the students at the end of the course was that all students had eventually passed all PCs. An attempt was made to set up an index of avoidance behavior (Mager,, 1968) by using the number of PCs attempted by a given date, but the dates had been recorded by the raters (i.e.,. date the PC was collected, not the date handed in) and many proved to be incorrect or missing.

Spring Semester

The evaluation of the program goals was much more

TABLE 6

SUMMARY OF FALL TEST BATTERY

Test Name	Source	Purpose
Oral Comprehension: memory for main ideas	Developed from suggestion by Dr. David Berliner, School of Education, U. Mass.	High scorers might prefer oral learning (lecture)
Written Comprehension: memory for main ideas	"	High scorers might prefer visual learning (reading)
Surface Development Test, Part I	French (1963)	High scorers might prefer 3 dimensional learning (A-V) following research of David Coffing (1970), School of Education, U. Mass.
Apparatus Test, most of Part I	"	High scorers might be more able to provide practical suggestions for improving the program
Utility Test, Part I	"	High scorers might do better in program which encourages continuous changing of mental set (choosing IAs, order of PCs)

Copies of the five tests are in Appendix E.

sophisticated, if not more successful, during the spring semester. The goals were rewritten a number of times (Appendix D) with the spring semester students receiving a description of the program goals in their curriculum packet. Information on the attainment of the language arts goals was designed to be reported to the language arts staff and non-METEP personnel. Two other groups at the School of Education, the Office of Elementary Teacher Preparation and the Dean's Office, ran concurrent evaluations designed to provide information specific to their goals (Appendix C).

At the beginning of the spring semester, a number of the language arts goals dealt with learning style. There were various ways to test this cluster of goals using the instructional alternative system offered in the program.

1. At the beginning and end of the program, students could be asked how well they thought they learned using various instructional modes and the group compared before and after the program;
2. At the beginning of the program, students could be asked which instructional alternatives they thought they might use for each PC and their predictions compared with their actual performance;
3. Before and after the program students could be asked to describe their feelings about each of the IA types offered;

4. An attempt could be made to assess how competent each student was when learning by certain instructional modes and his competence compared with his predicted use of them, his actual use, and his expressed feelings about each mode; and
5. When the students were practice teaching, they, their supervisors, and their master teachers could be asked how comfortable the students were using each IA type in each area of the language arts and their responses compared to their computed and reported preferences.

All of these approaches were tried.

Learning preference. Part II of the pre program and post program questionnaire asked both generalists and specialists how easily they thought they learned from each of the six instructional modes (Appendix A). Some students objected to the limitations of the three part answer, especially the lack of "it depends." Answers were recorded directly on Optical Scanning Standard Answer Form C. The answers were then transferred to IBM cards and processed in the SPSS program CODEBOOK (Nie, 1969). Even with the limitations of the 1-3 format, some general information on generalists and specialists before and after the program was collected and is summarized in Figure 6.

Those students who chose the lecture-demonstration section

Figure 6.--Report of Learning Preferences

The number of students reporting that they learned easily using six different instructional modes: lecture, reading, discussion, audio-visual materials, observation, practice. Information was collected on Part II of the pre program and post program questionnaire from:

group 1	32 students in the lecture demonstration section. Pre program questionnaire only.
group 2	27 METEP generalists. Both pre program and post program questionnaire.
group 3	35 METEP specialists. Both pre program and post program questionnaire.

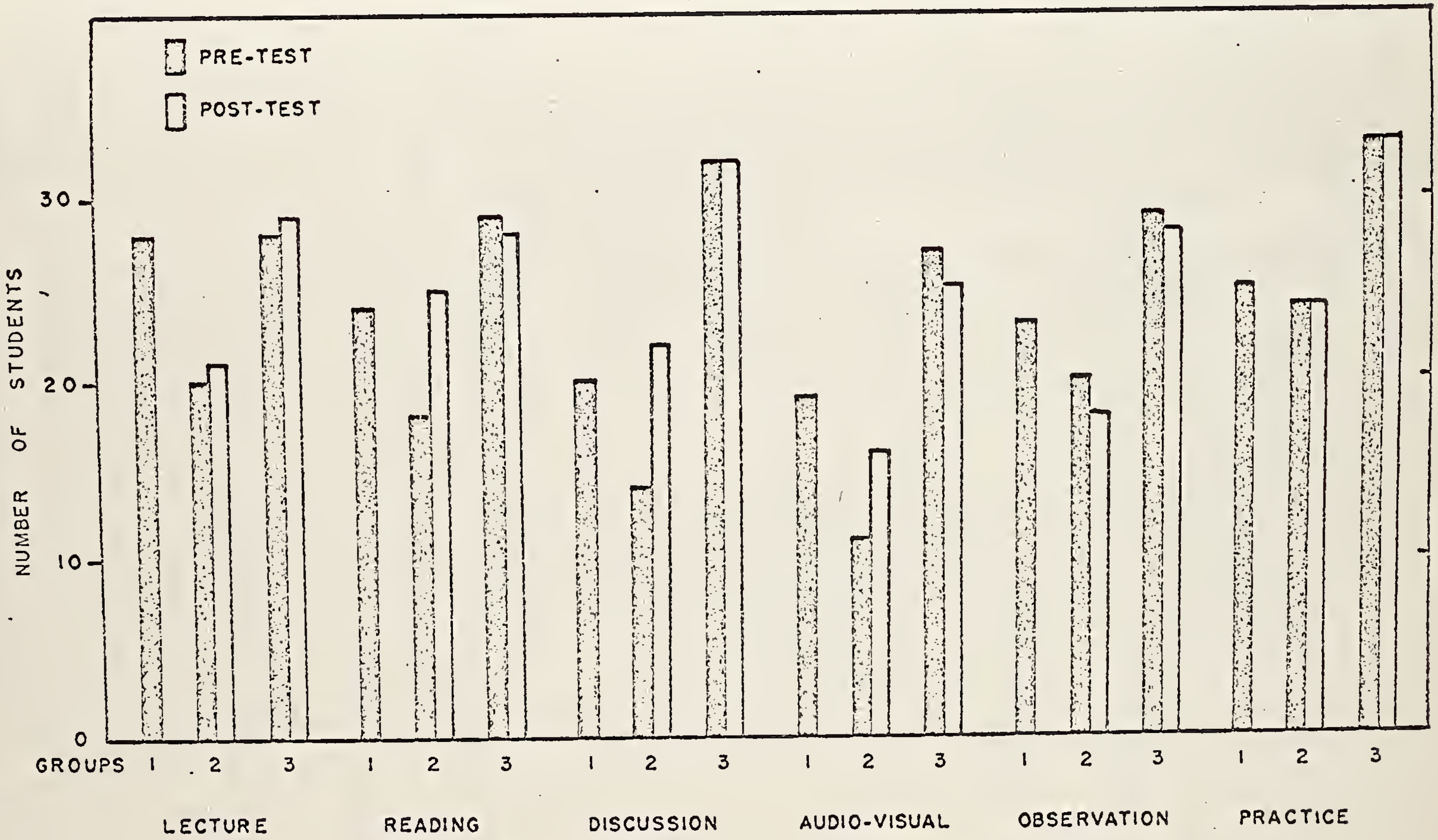

Figure 6

Report of Learning Preferences

rather than the METEP program were asked to fill out the same material at the beginning of the program only. They reported having a somewhat more positive view of the various learning modes than did the generalists at the beginning, although the generalists appeared to be equally positive by the end of the program (Figure 6).

Anticipated IAs. As part of the pre program questionnaire (Appendix A), generalists were asked to describe which instructional alternatives they intended to use for each PC. Students could choose only one IA per PC, which was somewhat unrealistic since only 4 of the 28 students reported using only one IA per PC during the program. Their anticipated use of each IA type (total for that IA type, not IA type per PC) was correlated with their actual use of each IA type, this data coming from the PC questionnaire cards. The correlations were run as part of a Stepwise Regression Program, BMD02R (Dixon, 1968). There was no significant correlation for any IA type between the number of IAs used and the number anticipated (Table 7). It should be added that the questionnaire may at least have served the pedogogical purposes of providing students with an overview of the program, both PCs and IAs, and with experience in using the 0-9 General Coding Form which they were to use for the PC questionnaires.

Attitude toward instructional modes. Both generalists and specialists were asked to complete a six concept semantic

TABLE 7

CORRELATION OF IAs USED WITH IAs ANTICIPATED: A CORRELATION OF TOTAL PER GENERALIST OF EACH IA TYPE USED AND EACH IA TYPE ANTICIPATED

IA Type	Correlation
1. Lecture	-.268
2. Taped Lecture	-.400
3. Library Packet	.257
4. Library Browsing	.028
5. Discussion with Staff	-.026
6. Discussion with Others	.311
7. Audio-visual	.392
8. Observation	.175
9. Practice	-.065
10. Pretest	.073
11. Other - students never anticipated using type 11.	

differential at the beginning and the end of the program (Appendix A). The six concepts were the six general IA types: lecture, reading, discussion, audio-visual, observation, and practice. The 14-item scale was selected from terms which the fall semester students had used to describe teaching qualities (Post program questionnaire, Appendix A). Fourteen pairs were chosen, then randomly ordered and their poles randomly reversed. The order of presentation of the items used for each concept and of the concepts themselves was the same for each administration. Students completed the SD directly on the 1-5 Optical Scanning Standard Answer Form C, thus by necessity reducing the 1-7 range recommended by Osgood, Souci and Tannenbaum (1957) to the 1-5 of the form.

The information was transferred directly to IBM cards and a program written to realign the randomly reversed poles, to provide a total for each concept and to punch the data for each concept on a single coded card for further analysis. A retest, or third administration of the SD was given to the specialists three weeks after the official post program session. In the intervening time, the specialists had had one week of vacation and one of the two final seminars.

A number of tests were made on the instrument itself in hopes of providing information for the future development of the instrument. The specialists' posttest and retest scores were used for a number of reliability checks: by student (per item and per concept), by item (for all items and per concept) and by concept score. Reliability by factor, recommended by Osgood, Souci and Tannenbaum (1957) was not attempted because of the controversial nature of the factor loading on new concepts which will be discussed later. The results are presented in Table 8. As might be expected the reliabilities using concept scores were higher than those using only the 1-5 item scores.

In order to develop a stronger instrument, each item was also examined separately. Correlation coefficients, averaged for each item across the six concepts, provided data on the reliability of each item (Table 8).

A second type of test, an examination of polarity, was done on each of the 14 items. This was simply a traditional item analysis using students in the top 17 percent (highest scores for the concept) and the students in the bottom 17 percent (lowest scores for the concept) for each of the six concepts. The responses generally were somewhat to the positive side of neutral which handicaps this type of analysis somewhat, and this approach completely ignores the factorial aspect of the instrument, but the distance between high group's mean and low group's mean, illustrated in Figure 7, does demonstrate the difference between strongly positive items, such as success-failure and relevant-irrelevant, and a more balanced item, such as student-content. Item analysis also

TABLE 8

SEMANTIC DIFFERENTIAL, RELIABILITY INFORMATION POSTTEST AND RETEST OF 21 METEP SPECIALISTS FOR 84 ITEMS, 6 CONCEPTS

Method 1

Average correlation coefficient:

per student, 84 items		.4820
per student, 6 concept scores		.6335
per item, all concepts		.4741
per item, concept:	Lecture	.6121
	Reading	.4448
	Discussion	.3950
	Audio-Visual	.4459
	Observation	.4563
	Practice	.4908
per concept score		.7400

Method 2

Average correlation coefficient for each item, all concepts

Item number		Item number	
1	.3146	8	.5512
2	.4901	9	.4424
3	.5595	10	.4859
4	.5556	11	.3482
5	.3894	12	.4102
6	.5716	13	.4125
7	.4133	14	.5129

Figure 7.--Item Analysis of Semantic Differential

Difference between means of high and low 17 percent of the students on each of the 6 concepts of the semantic differential.

Information was collected on the semantic differential form from 146 responses spring semester 1970:

32 students in the lecture-demonstration section. One pre program administration

27 METEP generalists. Pre program and post program administration.

35 METEP specialists. Pre program and post program administration.

The 14 semantic differential items:

	negative pole	positive pole
1	narrow	broad
2	teacher	student
3	insensitive	sensitive
4	rigid	flexible
5	phony	honest
6	content	student
7	useless	helpful
8	dull	exciting
9	failure	success
10	simple	sophisticated
11	irrelevant	relevant
12	passive	active
13	closed	open
14	cold	warm

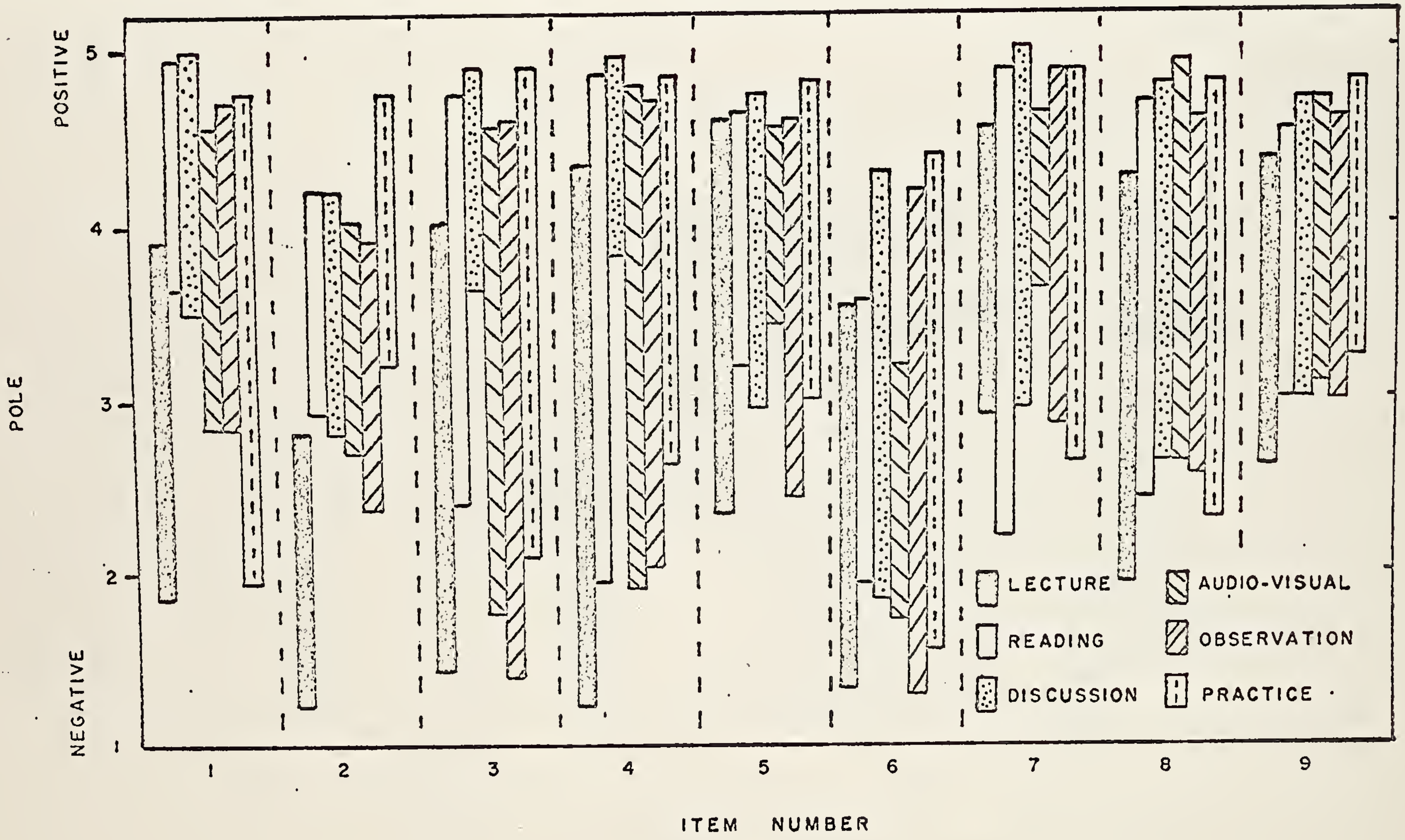

Figure 7

Item Analysis of Semantic Differential

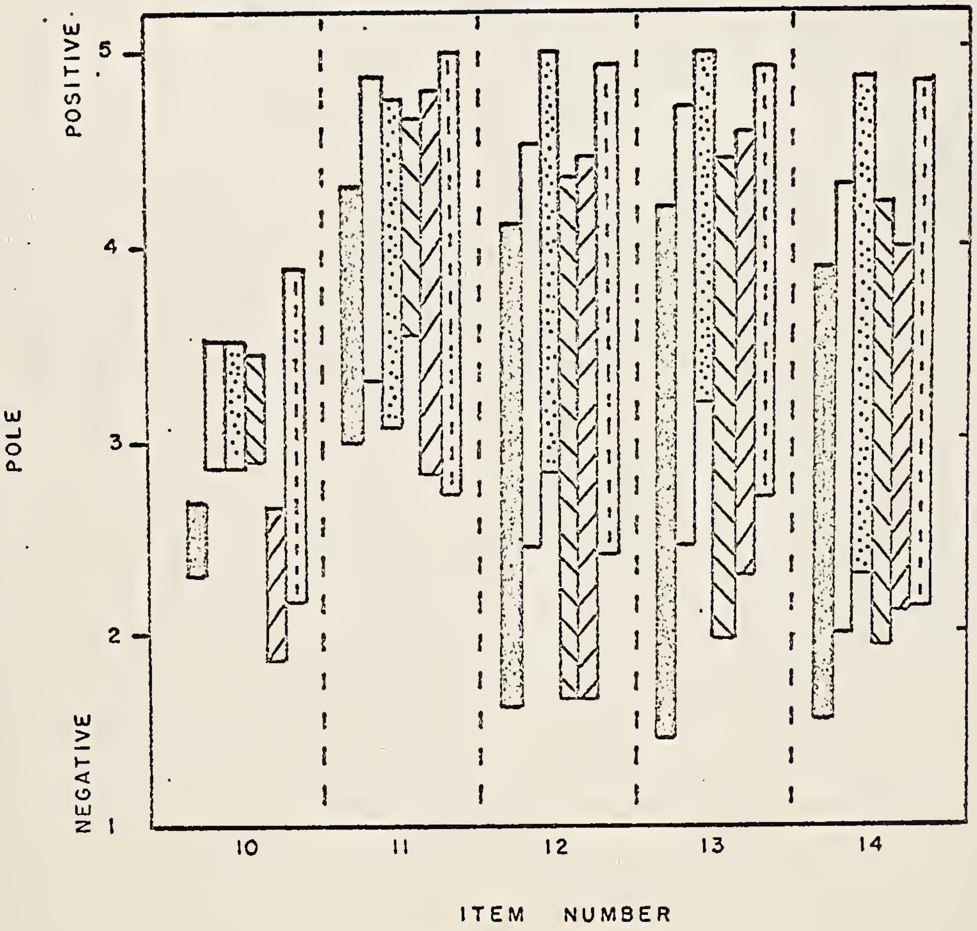

Figure 7 (Continued)

demonstrates the difference in the distance between means, for example sophisticated-simple with warm-cold, and the difference in the range of certain items when used with different concepts, such as sensitive-insensitive and flexible-rigid under the concept Discussion.

Both the item analysis and the reliability information should provide data for the designing of a better semantic differential for future programs. Both ignore the factorial aspect of the SD which is at the same time its most intriguing and most ambiguous dimension. If items had a known factorial content no matter what the concept with which they were used, the problem would be relatively simple. Stake (1970) argues that items do retain their factorial identity and that the evaluator should select items from previously developed scales. The developers of the semantic differential, Osgood, Souci and Tannenbaum (1957), however, found a high stability across subjects and items, but not across concepts and Kane (1969) found that some items used with educational concepts changed both factor and pole.

The scores from the semantic differential were used a number of different ways. The groups were compared by their mean scores on each concept. This information, summarized in Figure 8, suggests a tendency for the two METEP groups, generalists and specialists, to approach a common mean, one shared by the lecture-demonstration section students. The

Figure 8.--Mean Score Per Concept, Semantic Differential

Mean score on each of the six concepts: lecture, reading, discussion, audio-visual materials, observation, practice, for each of the following groups:

group 1	32 students in the lecture-demonstration section. Pre program administration only.
group 2	27 METEP generalists. Both pre program and post program administration.
group 3	35 METEP specialists. Both pre program and post program administration.

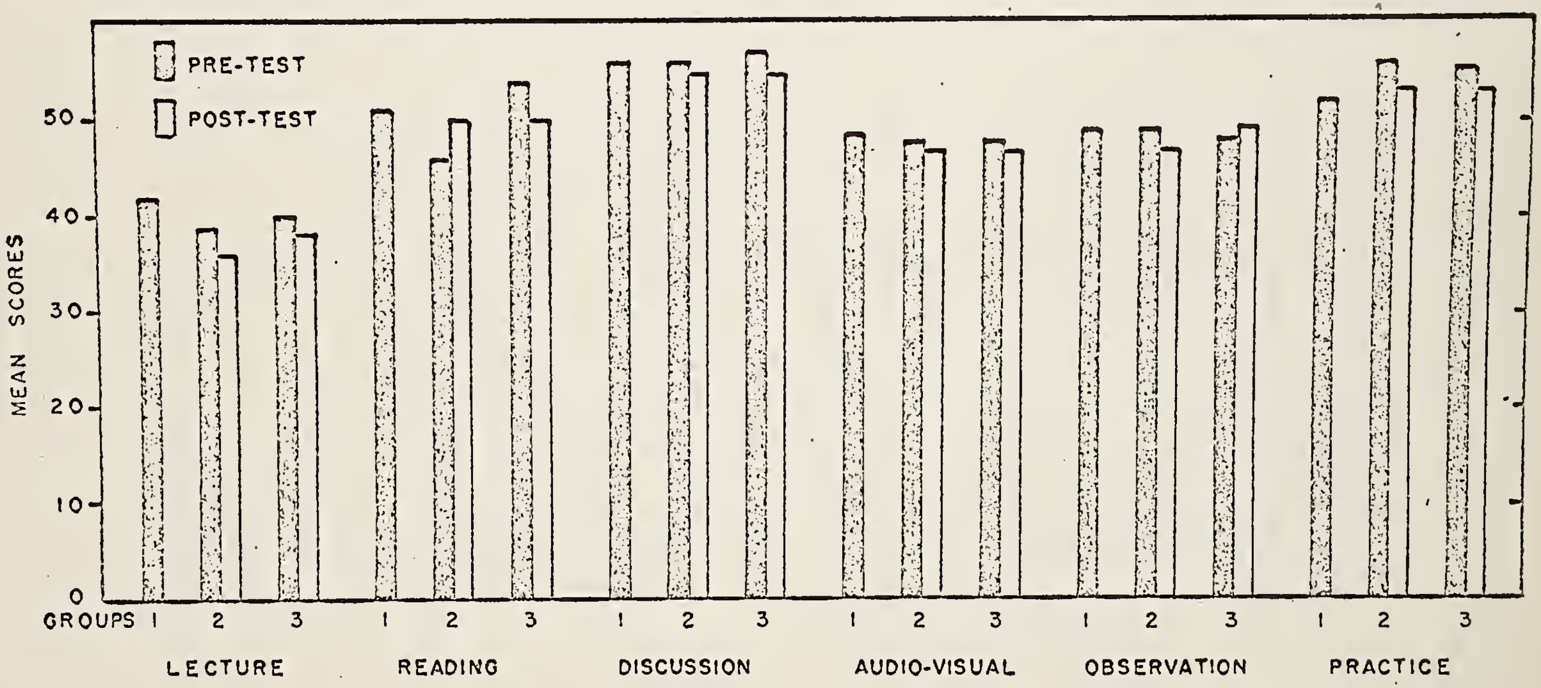

Figure 8

Mean Score Per Concept, Semantic Differential post program changes for the METEP groups can be compared to those in Figure 6. The semantic differential, except for reporting the same change in the generalists' view of reading, appears to have been more stable than the other instrument.

The pretest semantic differential scores were also used as predictors of student behavior. It had been hypothesized that the specialists who felt most favorably toward a certain mode of learning (had the high scores on the semantic differential for that concept) would be those specialists who would choose to prepare an Instructional Alternative of that type. Only Lecture (live and taped) and Reading Packets (specialists were not asked to prepare reading lists for library browsing) had enough IAs prepared to test this hypothesis. The results of an analysis of variance, BMD01V (Dixon, 1968), between the semantic differential scores of those who did and those who did not prepare an IA type failed to show a significant difference although the difference in means was in the predicted direction (Table 9). Correlations done with the information collected on the generalists will be described after a general discussion of the aptitude tests.

Competence with instructional modes. Four aptitude tests were given at the beginning of the program to the students choosing the lecture-demonstration section, to the METEP

TABLE 9

ANALYSIS OF VARIANCE: METEP SPECIALISTS

IA Prepared	Group	Number	Mean	sd		SS	DF	MS	F
				Semantic Differential Scores					
Lecture (live and taped)	did	19	41.11	11.30	between group	27.96	1	27.96	.2832
	did not	16	39.31	7.98	within group	3253.23	33	98.58	
Reading (packets)	did	16	55.69	7.27	between group	75.62	1	75.62	1.0367
	did not	19	52.74	9.49	within group	2407.12	33	73.94	
				Aptitude Test Scores					
Lecture (live and taped)	did	19	10.74	3.93	between group	23.31	1	23.31	2.0821
	did not	16	12.38	2.47	within group	369.43	33	11.19	
Reading (packets)	did	16	5.25	1.39	between groups	0.43	1	0.43	0.1072
	did not	19	5.47	2.41	within groups	133.74	33	4.05	

generalists, and the METEP specialists. The generalists received the same battery at the end of the program so that reliability information could be obtained. Table 10 summarizes the four tests, copies of which appear in Appendix E. The reliability information and a comparison of the mean scores for each of the three groups is presented in Table 11. The Auditory Letter Span and the First and Last Names Test had been substituted for the fall semester Oral and Written Comprehension Tests because of the greater ease in scoring. Neither test had as much face validity as the fall tests; the First and Last Names test had a very high average score (mean 11.2 out of a possible 14) and the Letter Span was difficult to administer uniformly and had a low average score (mean of 5.7 out of a possible 12). Because of the ambiguity of scoring the Utility Test, two scorers read each test (original and Xeroxed copy). Twenty-one percent of the tests which had more than a three point difference between scores had a third reader. An analysis by sex, suggested by Taylor and McKean (1968) on a similar test was not attempted because of the small number of men in the program (5 generalists, 2 specialists).

Like the semantic differential, the aptitude test scores were treated as predictive as well as descriptive data. It had been hypothesized that the specialists scoring highest on the test related to a specific instructional alternative would

TABLE 10

SUMMARY OF SPRING TEST BATTERY

Test Name	Source	Purpose of Test for METEP Program
Surface Development Test, Part I	(French, 1963)	Following the research of Dr. David Coffing, School of Education, U. Mass. High scorers might be more willing to attempt learning in 3 dimensions, i.e., audio-visual material.
Letter Span-Auditory (first 12 items)	" "	Replaced the difficult to score oral comprehension. High scorers might be more able to remember orally presented material, i.e., lectures.
First and Last Name Test	" "	Replaced the difficult to score written comprehension test. High scorers might be more able to remember material presented visually, i.e., reading.
Utility Test	" "	High scorers might do better in a program which encouraged continuous changing of mental set (choosing IAs, order of PCs, etc.).

Copies of the four tests are in Appendix E.

TABLE 11

SPRING TEST BATTERY: STATISTICAL INFORMATION

Test Name	Test-retest correlation	Lecture-demonstration section (n=28)	METEP generalists (n=26)	METEP specialists (n=35)	All 3 groups (n=89)
Surface Development (Possible score 0-30)	0.7580	11.04 (sd=7.16)	15.04 (sd=6.98)	12.34 (sd=9.38)	12.78 (sd=8.08)
First and Last Names (Possible score 0-19)	0.7667	11.21 (sd=3.40)	10.89 (sd=3.12)	11.34 (sd=3.40)	11.23 (sd=3.29)
Auditory Letter Span (Possible score 0-12)	0.5614	5.07 (sd=1.33)	5.15 (sd=1.08)	5.37 (sd=1.99)	5.14 (sd=1.67)
Utility (No score limit. Highest recorded score was 19)	0.7415	8.04 (sd=3.53)	9.07 (sd=3.01)	10.63 (sd=4.27)	9.36 (sd=3.83)

choose to prepare an IA of that type. An analysis of variance, BMD01V (Dixon, 1968), was run for the group who did and did not prepare lectures and for the group who did and did not prepare readings. The results (Table 9) failed to demonstrate any significant difference between the groups. Only two specialists prepared A-V IAs, so no A-V test could be run. There was no criteria against which to correlate the Utility Tests. Quantity scores, number of PCs rated, number of IAs prepared, were not logically acceptable standards of success in the program and performance levels had been given for only one of the three PCs, the preparing of the generalist IAs.

The pre program semantic differential scores and the aptitude test scores were correlated for the three groups (Table 12). This was probably the only time in the analysis of the data when low correlations were desirable since the building of a multiple predictive battery depends on the development of instruments which have low correlation among themselves but high correlation with the criteria.

A series of multiple correlations, Stepwise Regression (BMD02R, Dixon, 1968), was attempted for the generalists using information from the PC questionnaire (total number of each IA type used, total time reported for all attempts, total number of attempts, average time per attempt, total performance level for all 27 PCs), from the pre program questionnaire, part III (total number of each IA type anticipated),

TABLE 12

CORRELATION OF PRE PROGRAM SEMANTIC DIFFERENTIAL WITH APTITUDE BATTERY

	Lecture-demonstration section	METEP generalists	METEP specialists
SD concept: Lecture with Auditory Letter Span Test	-0.075	-0.088	-0.038
SD concept: Reading with First and Last Names Test	0.268	0.030	-0.151
SD concept: Audio-Visual with Surface Development Test	-0.040	0.201	0.089

semantic differential concept scores (pre program and the difference between pre program and post program scores), and aptitude battery scores. One correlation was run for each of the six IA types, using the number of that IA type used by the student as the dependent variable (Table 13). A seventh "success" correlation was run using the student's total performance level as the dependent variable (Table 13). As had been anticipated in this seventh correlation, the number of PCs attempted correlated negatively, although not significantly, both with the performance level (-0.168), and with the Utility Test score (-0.200). In all seven correlations, the evaluator's results have the rather dubious distinction of having both low correlation among predictors and low correlations with the criteria.

Teaching preference. Another variable which was to have been used, the students reported success using the various instructional modes in the classroom (Follow-up Questionnaire, Appendix A) was not used because of the problem of collecting the data which has already been described in Chapter VI. Students were also asked before and after the program how well they thought they would teach using each of the six instructional modes. Their responses are summarized in Figure 9. The direction of change on the post program questionnaire is similar to the change in their responses to how easily they thought they learned using the same six instructional modes (Figure 6).

TABLE 13

STEPWISE REGRESSION ANALYSIS: GENERALISTS

1. The lecture instructional alternatives used (both live and taped)

Step	Variable Entered	R	RSQ	Increase RSQ	F to enter	No. of Variables
1	Auditory letter span test	0.3934	0.1548	0.1548	4.5777	1
2	Pre Program SD	0.4139	0.1713	0.0166	0.4801	2
3	No. of lect. anticipated	0.4249	0.1805	0.0092	0.2571	3

(other variables included: post program SD, subtracted from pre program SD)

2. The reading instructional alternatives used (both packets and browsing)

Step	Variable Entered	R	RSQ	Increase RSQ	F to enter	No. of Variables
1	No. of reading anticipated	0.3362	0.1131	0.1131	3.1866	1
2	First and last names test	0.3830	0.1467	0.0337	0.9471	2
3	Pre program SD	0.4193	0.1758	0.0291	0.8115	3
4	Post program SD minus pre program SD	0.4360	0.1901	0.0143	0.3889	4

(no other variables included)

PART I

TABLE 13.--Continued

3. The audio-visual instructional alternatives used

Step	Variable Entered	R	RSQ	Increase RSQ	F to enter	No. of Variables
1	No. of A-V anticipated	0.3922	0.1538	0.1538	4.5448	1
2	Pretest SD	0.4706	0.2215	0.0676	2.0850	2
3	Posttest SD minus pretest	0.4945	0.2445	0.0231	0.7020	3
4	Surface development test	0.5025	0.2525	0.0079	0.2335	4

(other variable included: pre program SD)

4. The discussion instructional alternatives used (both with staff and with others)

Step	Variable Entered	R	RSQ	Increase RSQ	F to enter	No. of Variables
1	No. of discussion anticipated	0.2554	0.0652	0.0652	1.7439	1
2	Pre program SD	0.2675	0.0715	0.0063	0.1637	2
3	Post program SD minus pre program SD	0.2733	0.0747	0.0032	0.0786	3

(no other variable included)

PART II

TABLE 13.--Continued

Step	Variable Entered	R	RSQ	Increase RSQ	F to enter	No. of Variables
5.	The observation instructional alternatives used					
1	Pre program SD	0.2178	0.0475	0.0475	1.2455	1
2	Post SD, subtracted from pre program SD	0.3873	0.1500	0.1025	2.8952	2
3	No. of observation IAs anticipated	0.3901	0.1522	0.0022	0.0600	3
				(no other variables included)		
6.	The practice instructional alternatives used					
1	Pre program SD	0.2660	0.0708	0.0708	1.9037	1
2	Post program SD minus pre program SD	0.3135	0.0783	0.0275	0.7327	2
3	No. of practice IAs anticipated	0.3711	0.1377	0.0395	1.0524	3
				(no other variables included)		
	PART III					
7.	Program success (total performance levels for all 27 PCs)					
1	Average PC time/attempt	0.2971	0.0883	0.0883	2.4212	1
2	Total PC time for all attempts	0.4584	0.2101	0.1218	3.7005	2
3	Total no. of PCs attempted	0.5567	0.3099	0.0998	3.3257	3
4	Score on Utility Test	0.5700	0.3249	0.0151	0.4910	4
				(no other variables included)		

PART IV

Figure 9.--Report on Teaching Preferences

The number of students reporting that they thought they would teach easily using six different instructional modes: lecture, reading, discussion, audio-visual materials, observation, practice.

Information was collected on Part II of the pre program and post program questionnaire from:

group 1	32 students in the lecture demonstration section. Pre program questionnaire only.
group 2	27 METEP generalists. Both pre program and post program questionnaire.
group 3	35 METEP specialists. Both pre program and post program questionnaire.

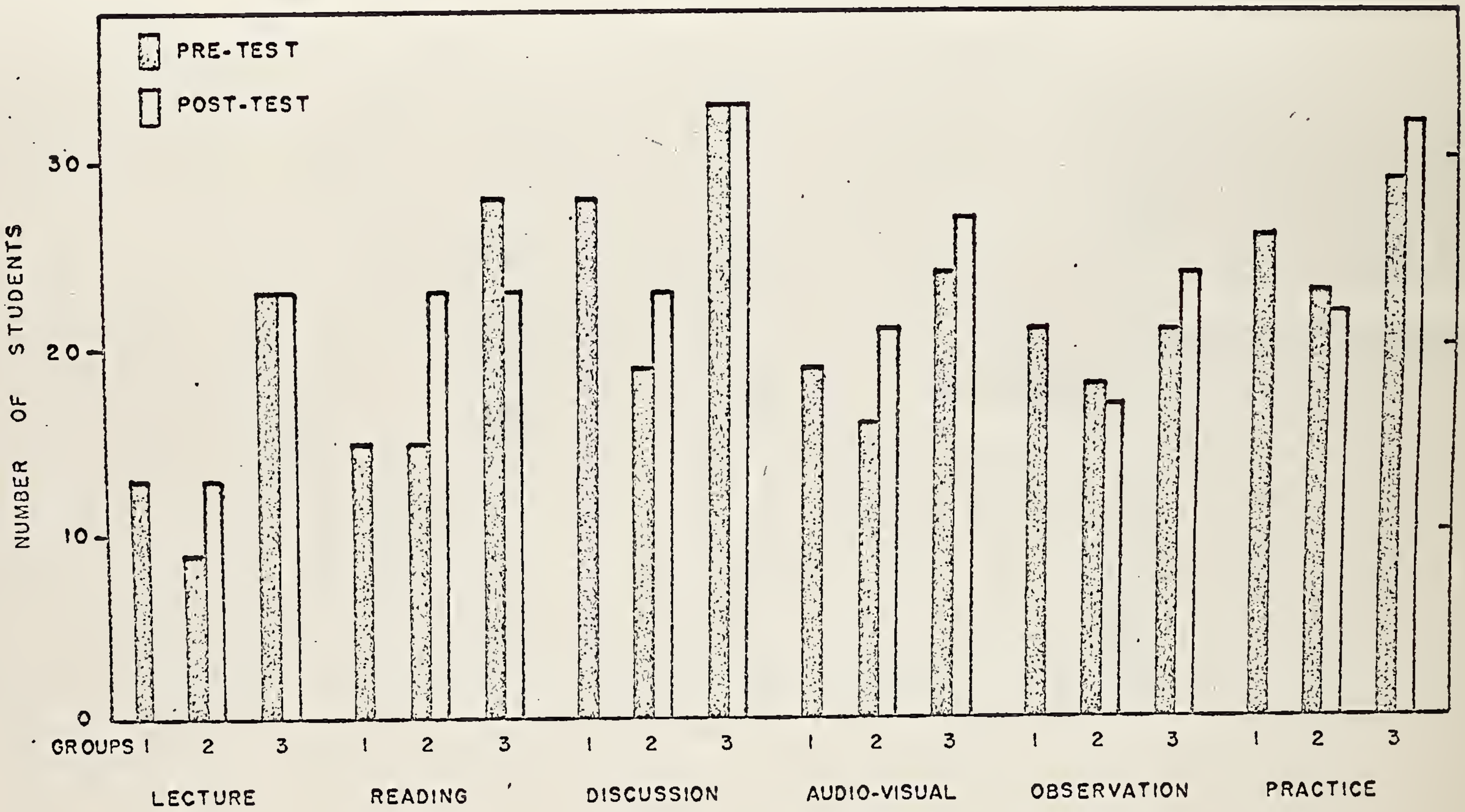

Figure 9

Report on Teaching Preferences

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

An evaluation of the language arts curriculum was designed after it became evident that a number of different audiences required different kinds of information about the program. Pace's unit size model (1968) provided a methodology by which each audience could be identified by the system of which it was a part and by which variables could be selected which would be appropriate to each system. The evaluation did not attempt to report directly to all audiences. It did provide information to the program staff which could be reported to various audiences outside the program, such as the METEP administration, the School of Education, and METEP clients.

Although there were a number of sources of information theoretically available, this evaluation concentrated on sources within the program itself. Four variables--population, program operation, curriculum, and program goals--were chosen for which data were collected.

The information collected on population was of the self-reporting type. It had been hoped that the study of the interaction of students and program activities examined as part of the information on program goals, would suggest some relatively stable and easily administered instrument which would help describe the characteristics of the population. Whether the blame can be laid on the instruments, or on the criteria, or, as is most likely on both, no such instrument was found.

Of the information collected, processed, and reported, that on program operation was the most complete. It was relatively easy to check the accuracy of the data against archival records, such as library sign out cards, and feedback from program participants.

The information collected within the program on the curriculum was reported in two ways: by the printout from computer programs, which was also used for information on program operation, and by a series of summary charts presented in Chapter IV. Information collected within the program was much easier to gather and verify than was that which the evaluator attempted to collect during the students' practice teaching experience. This time it was not the instrument, but the reliance on a single data collection strategy which was at fault.

All attempts to collect information on the fourth variable, program goals, failed. The range of choice provided on the self-reporting instrument, which was designed simply as support information for the stronger attitude and aptitude measure, was unrealistic. On the semantic differential some of the terms used were ambiguous, the 1-5 range may have been too narrow, and the use of the instrument as a measure of change was probably inappropriate. Some information was collected to help develop a stronger instrument. Similar information was collected on the aptitude tests each of which failed to correlate significantly with the appropriate criterion.

The evaluation succeeded in part. Information was provided to students about the program and their progress in it and to the staff about the students' progress, the operation of the program and the students' evaluation of the curriculum. Shortcomings appear to have been due to the limited scope of the information sources and the data collection instruments used rather than the methodology upon which the evaluation was based. The audiences which were given the highest priority by the evaluator, the students participating in the program and the staff operating the program, received the most complete information. That part of the evaluation, the feedback system, worked. It can be transferred with rather minor changes to other performance based curriculum programs. Other parts of the evaluation are not ready to be used elsewhere. The evaluation has been described in detail with the hope of providing information on instruments and data processing which could be useful in the development of the rest of the evaluation design.

Recommendations

The evaluation, like the curriculum or the population, is a variable in the program. Any aspect of an evaluation design can, of course, be changed: the methodology on which it is based, the source of information, or systems which are identified, the variables which are measured, the measuring instruments, the method of data processing by audience, the format, scope, or timing of the reporting. Since most of the recommendations are of a rather practical nature, dealing more with instruments and data processing than with methodology, they will be discussed in terms of the four variables used in this evaluation.

Population. Information on population is necessary when comparing the success of two versions of the program; thus population information becomes increasingly important as the sources of information expand. Such comparisons would be greatly enhanced by the development of an instrument for collection of easily obtained and relevant population data. The fluctuation in the population of a traditionally structured university class, to say nothing of the problems of the population in a modular credit system, influence any collection system. There are at least three alternative systems to be used separately or in combination: the development of a minimal data instrument to be used on all participants; the development of a longer instrument to be used on a random sample of participants; the development of a university student data file from which relevant information could be obtained easily.

Program operation. Any informal information system is subject to a special kind of sampling bias. What kind of student doesn't come to office hours? Open ended questions on the PC questionnaire, occasional seminars with randomly chosen students, even periodically scheduled group meetings might lessen this bias.

A special problem for evaluation is that the credibility of computer printout is seriously damaged by a single illogical number. Bounds error statements written into the computer programs which inform the evaluator of the type and location of the error while bypassing the incorrect data in the calculations would greatly enhance the evaluator-program staff relations. Many of the errors on the PC questionnaire were caused by poor formating on an already difficult to use form. Special formats should be printed which would lessen this chance of error. A more sophisticated storage system has been developed by Frederick deFriesse (1970) which can be used in conjunction with a revised set of evaluator's computer programs.

Information returned to the students should not only be accurate but be presented as humanely as possible. Such formatting changes as the use of full names and the elimination of -0 as the method for indicating no information might improve the reporting system.

Curriculum. The data provided by the evaluator from the PC questionnaire allow the program staff to revise individual PCs and IAs whenever necessary. Unfortunately this very act of revision makes the collection of future data more difficult. Did the student evaluating the IA use the new version or the old? Some coding method designed to identify each revision might help assure the evaluator of the accuracy of his data.

Collecting information from students after they leave the program is time consuming and expensive and tends to produce a very biased sample. If these problems can be solved, there are a number of other sources of information available including the elementary students in the practice teacher's classroom, their parents, other school officials, specially trained observers, and all the groups involved in the teacher's first regular classroom teaching assignment. Comparative curriculum data will soon be available from the Center for Teacher Education and from METEP clients. Ed Sim IV is also available to provide information on alternative curricular and program operation plans.

One of the aspects of the curriculum, the sequencing of performance criteria and the relationship between sequencing and the teaching hierarchy was not investigated in this evaluation. Certain data are available for this study, such as the order in which students attempted the PCs from the PC questionnaire, and the sequence reflected in the lecture schedule, to begin to investigate sequencing. A monitoring system, such as Continuous Achievement Monitoring (Gorth, 1970) might provide the basis of a study of the relationship between the student, the PC and the hierarchy.

The evaluation did not collect information on the reliability of the individual performance criteria. Procedures for collecting inter-rater reliability could easily be included in the program. Such reliability information would help the curriculum developers in the preparation of performance criteria and the subsequent increase in reliability of the performance criteria would provide the evaluator with a more reliable information source for the evaluation design.

Program goals. As program goals change, it is necessary to develop new instruments for measuring goals attainment. Instruments in this study focused on the rather narrow comparison of program activity and certain measurable aptitudes and attitudes. There are, therefore, at least four alternatives for the development of future goal information: the strengthening of the instruments used, the development of instruments designed specifically for the measurement purpose, the use of different criteria for the goals both within and outside of the program, and a refocusing on other program goals.

CHAPTER VI

SUMMARY

An evaluation was designed for a performance curriculum in the language arts as part of the Model Elementary Teacher Education Program (Cooper, 1970; Rudman, 1970). Both the curriculum and the evaluation were tested during the Fall semester of 1969 with 110 language arts generalists. During the Spring semester of 1970, 28 language arts generalists and 35 language arts specialists participated in a revised program. The evaluation, which was based on Pace's unit size model (1968), attempted to identify the different sized systems of which the language arts program was a part and to collect information on those variables relevant to each system. Data were collected on four variables: population, program operation, curriculum, and program goals.

Population. During this first year of the program no attempt was made to control the population. Background information was collected from the students; processed, using the Statistical Package for the Social Sciences (Nie, 1969); and reported as frequency tables for those groups planning to replicate or revise the program. Information on certain attitudes and aptitudes was collected as part of the information on another variable, program goals. Academic information which was to have been collected from the University of Massachusetts student files was found to be difficult to obtain, and incomplete.

Program operation. An informal communication system using student folders, office hours for the generalists and additional weekly seminars for the specialists provided information to the program staff on the operation of the program. Additional information was collected from the PC questionnaire which was completed by the student and his rater each time a performance criterion (PC) was attempted. The information was processed in a system which used the Digitek 100 Optical Scanner at the Counseling Center, the unit record equipment, and the Control Data Corporation 3600 computer at the Computer Center, University of Massachusetts and specially written computer programs. A variety of printouts were available to describe to the administration the progress of each student (MASTER and STUDENT for the generalists, RATER, SPECIAL, SPECPC, SPECIA for the specialists). Information on the operation of each PC and its accompanying instructional alternatives (IAs) was available from other printouts (PC for the generalists, PCSPEC, IASPEC for the specialists).

Students also needed information on the program and their own progress in it. In addition to the program packet available at the beginning of the semester, students received mimeographed and personal messages through their folders, could come to office hours, and had computer printouts (MASTER, STUDENT 1 for the generalists, RATER, SPECIAL, SPECPC, SPECIA for the specialists) which described their progress in the program.

Curriculum. The informal communication system described under program operation also provided information on the curriculum. Additional information on the PCs and IAs, including amount of use, time spent, student evaluation, and student performance, was available from the processed PC questionnaires (PC for the generalists, PCSPEC, IASPEC for the specialists). Summary charts describing the use of PCs and IAs were prepared by the evaluator. The information collected from the PC questionnaires was generally collaborated in a post program questionnaire. Collection problems prevented the follow-up questionnaire, which was designed to collect information from the generalists practice teaching, their University supervisors, and their master teachers, from receiving any statistical analysis, but did provide some general information on the relationships between the curriculum and the practice teaching experience.

Program goals. During the program, goals became more specific and more easily communicated--a list of program goals was included in the students' packets spring semester. A number of the goals were concerned with the interaction of the student and the instructional alternatives. Instruments used to collect data on the student's attitude toward and his use of instructional alternative types included the pre and post program questionnaire, a pre and post program semantic differential, an aptitude battery, a pre program prediction of the instructional alternatives to be used, a follow-up questionnaire used with the practice teaching students, and the number of each IA type actually used in the program. Information was also collected on the reliability of some of the instruments. Data were processed using various Biomedical Programs (Dixon, 1968).

There was no significant correlation between the number of instructional alternatives of any given type used and the generalists' scores on any other instrument. There was no significant difference between the specialists who chose to prepare certain kinds of instructional alternatives and their scores on either the semantic differential or aptitude tests for that same IA type; nor was there any significant correlation between the total performance level of the generalists (the total score reflecting the level of performance in the program) and an aptitude score, their total time in the program, or the number of PCs attempted.

The evaluation did not attempt to report directly to all audiences. It did provide information to the program staff which could be used in reporting to audiences outside the program. Perhaps the most successful part of the evaluation was the system for reporting student activity to the students and the staff, the feedback system. The problems which occurred in collecting the other information appear to have been caused by the limited score of the information sources used and the weaknesses in measuring instruments employed rather than the methodology on which the evaluation was based. Recommendations for future evaluations include a number of suggestions about practical problems of data collection and processing as well as the use of expanded information sources.

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APPENDIX A

DATA COLLECTING INSTRUMENTS

Fall semester: PC questionnaire
PC coding information
Semantic Differential
Final Questionnaire

Spring semester: PC questionnaire for generalists
PC questionnaire for specialists
Semantic Differential
Pre Program Questionnaire
Post Program Questionnaire
Follow-up Questionnaire

Reading and Language Arts

Performance Criteria Questionnaire

PC#______________ Date Completed __________ Name___________

1. How long did it take to complete the evaluation (the criterion without counting the IA)__________________.

2. Evaluate the PC in terms of its worth to you as a student, and your estimate of its worth to you as a teacher.

____

____

____

____

____

____

3. Can you suggest a better PC in this general area?

____

____

____

____

____

____

4. How many times have you attempted this PC?____________

5. How many Instructional Alternatives did you use for

this PC?__________________

Reading and Language Arts

Instructional Alternative Questionnaire

PC#______ Date ___________ Name __________________________

The answers to these items will not influence the grading of this PC, but the PC cannot be graded until this page has been returned. We will use the information to revise and evaluate the program.

1. Which IA did you select? #________

   Title Description ____________________________________

2. How long did it take you?______________________________

3. What was your reason for selecting this IA?

   ____

   ____

   ____

   ____

4. Which parts of the IA (materials, readings, tapes, lectures, experiences, etc.) were the most helpful to you?

   ____

   ____

   ____

   ____

5. Which parts of the IA were the least helpful?

   ____

   ____

   ____

   ____

6. Evaluate the total IA in terms of its worth to you.

Extremely Helpful_________ Useless___________

Comments____

7. Why didn't you choose the other IA offered on the sheet?

8. Can you suggest another IA you might have preferred?

Coding Sheet for Performance Criteria Questionnaire

1 2 3 Student number (remember #8 = 008, 124 = 024)

5 6 PC number (#4 = 04)

8 9 10 time to complete PC in minutes ("1/2 hr" = 030; 2-1/2 hrs = 150)

15 Answers PC q #2, evaluate PC in terms of total worth

0 = no answer
1 = terrible, worthless, poor etc.
2 = undecided,
3 = good, great, valuable etc.
4 = no value as student, but good as teacher
5 = great as student experience, no value as teacher

(teacher includes as student teacher)

16 Answers PC q #3, can you suggest better PC

0 = no answer
1 = minor suggestion (more, less, procedural)
2 = major suggestion (new activity, changing purpose)

20 Answer #4, number of times attempted

0 = no answer
1 = first (some students write "0" meaning they did not try it before)
2 = second
3 = more

21 Answers #5, number of instructional alternatives

0 = no IA used
1 = one
2 = two (sometimes list two here, but mixed up PC activity, such as giving IRI with IA activity. IF practice was the IA, they must not have received credit for the practice)
3 = more than two

(this completes all the questions answered on the "PC q" page)

page two, coding sheet

25 Answers, which IA did you take

0 = none (or no answer) includes pretest
1 = the lecture (no matter what IA # the lecture is
2 = reading and browsing in library
3 = Audio-Visual (TV, filmstrip, record)
4 = Observation
5 = Practice
6 = Lecture and Library
7 = Lecture and A-V
8 = Lecture and practice
9 = Other

28 If student pretested, why?

0 = no answer, or did not pretest (took an IA)
1 = thought I could do it (or wanted to try)
2 = previous experience (general)
3 = previous experience in academic course (such as speech course for reading story)
4 = other

30 31 32 Time spent in lecture (check lecture schedule) in minutes (60 minutes = 060)

If student did not take lecture IA, skip all of questions in the 30's (same for other IAs)

36 Answer what was your reason for selecting this IA (and also why didn't you select other)

0 = no answer
1 = I learn better listening to someone
2 = want an evaluation of topic (controversies)
3 = like to be able to ask questions
4 = most convenient (or other inconvenient)
5 = other

37 Answers: which parts the most, least helpful

0 = no answer
1 = specific suggestions
2 = suggestions too vague to be of help

page three, coding sheet

38 Answers; evaluate IA's worth to you

0 = no answer
1 = worthless
2 = undecided
3 = good, as preparation for passing PC
4 = good, as expressive objective (just doing IA would have been good, even if there weren't a PC)

39 Answers, suggestions for a different IA

0 = no answer, or none
1 = minor suggestions or very vague
2 = major suggestions (change IA type, activity)

40 41 42 Library time, in minutes (if library IA not taken skip to #50)

45 Answers: your reason for selecting this IA (and also why didn't you select the other IA)

0 = no answer, or "none"
1 = I learn better working at my own pace
2 = I get more points of view from reading than just listening to one person talk
3 = like it when it includes examination of materials used in schools (teacher's manuals, cum. files, kits etc.)
4 = like to be able to read only part I need, not have to sit through whole lecture for it.
5 = more convenient
6 = other

46 Answers: which part the least or most helpful

0 = no answer
1 = specific suggestions
2 = suggestions too vague to be of help

page four, coding sheet

Answers: evaluate IAs worth to you

47

0 = no answer
1 = worthless
2 = undecided
3 = good, as preparation for passing PC
4 = good, as expressive objective
5 = other

Answers: suggestions for different IA

48

0 = none
1 = minor suggestions
2 = major suggestions

50 51 52 A-V time in minutes (if no AV IA taken skip to 60)

Ans: reason for taking this IA (or for not taking other)

55

0 = no answer
1 = like to watch tapes, learn easily that way
2 = like tapes, but equipment was hard to get hold of
3 = more convenient
4 = other

Ans: which part least, most helpful

56

(code under #46)

Ans: evaluate worth to you

57

(code under 47)

Ans: suggestions

58

(code under 48)

60 61 62 time for Observation in minutes (if no observation skip to 70)

page five, coding sheet

Ans: reasons for selecting this IA

65

0 = no answer
1 = like to observe classrooms (generally)
2 = like to observe where I know children (as in school where I will teach)
3 = convenient to do it while out observing place where I will practice teach)
4 = like to observe when I know just what I am looking for
5 = other

see codes under 46, 47, 48

66 67 68

time for Practice in minutes (if no, skip to 80)

70 71 72

Ans: reasons for selecting this IA

75

0 = no answer
1 = like programmed materials (books, kits) where I can work on my own
2 = like practice work which includes working with children
3 = more convenient
4 = other

see codes under 46, 47, 48

76 77 78

pass or fail

80

1 = pass
2 = fail

______ ______ ______

The perfect rater's list will include:

1. accurate dates received (numbers filled in)
2. accurate dates returned
3. failed PC will be in right hand columns
4. the dates will have the month and day (9/28, 10/31 etc.)

page six, coding sheet

5. the student numbers will be exactly the same on the raters list as on the questionnaire master list. There is some problem of repeated numbers around the K's, and the last few numbers especially should be checked.

Suggested procedure for mounting this operation

1. arrange questionnaires in order of master list numbers (marking numbers on questionnaires as you go)

2. check rating list, filling in dates, putting "fail" on proper questionnaires for later reference in filling out questionnaire coding sheet (#80)

3. fill out the coding sheets

Please try to keep all the questionnaires in order as you go along.

If for any reason you (or I) need to go back to them, they will be ready (heaven forbid we should need to).

!!! Mary-Alice

As I read the questionnaires for PC #_____ I came across the following suggestions which might be considered when the PC (and the IAs) are being revised.

(Include both common suggestions and those which you find particularly interesting)

S.D.
FORM 1

STUDENT I.D.__________
DATE____________________

LEARNING
CONCEPT

1.	GOOD	___:___:___:___:___:	BAD
2.	POTENT	___:___:___:___:___:	IMPOTENT
3.	PESSIMISTIC	___:___:___:___:___:	OPTIMISTIC
4.	DARK	___:___:___:___:___:	LIGHT
5.	COMMONPLACE	___:___:___:___:___:	BIZARRE
6.	INCOMPLETE	___:___:___:___:___:	COMPLETE
7.	CURRENT	___:___:___:___:___:	UNTIMELY
8.	DEEP	___:___:___:___:___:	SHALLOW
9.	SUCCESSFUL	___:___:___:___:___:	UNSUCCESSFUL
10.	SMALL	___:___:___:___:___:	LARGE
11.	FALLING	___:___:___:___:___:	RISING
12.	BOTTOM	___:___:___:___:___:	TOP
13.	MALE	___:___:___:___:___:	FEMALE
14.	MEANINGLESS	___:___:___:___:___:	MEANINGFUL
15.	PASSIVE	___:___:___:___:___:	ACTIVE
16.	USEFUL	___:___:___:___:___:	USELESS
17.	SLOW	___:___:___:___:___:	FAST
18.	FORWARD	___:___:___:___:___:	BACKWARD
19.	COMPLEX	___:___:___:___:___:	SIMPLE
20.	TRUE	___:___:___:___:___:	FALSE
21.	SHARP	___:___:___:___:___:	DULL
22.	NEGATIVE	___:___:___:___:___:	POSITIVE

S.D.
FORM 1

STUDENT I.D.____________
DATE____________________

LEARNING
CONCEPT

23. NEW ___:___:___:___:___: OLD

24. DISHONEST ___:___:___:___:___: HONEST

25. TOUGH ___:___:___:___:___: TENDER

26. OPEN ___:___:___:___:___: CLOSED

27. BLAND ___:___:___:___:___: SAVORY

28. RESPECTFUL ___:___:___:___:___: DISRESPECTFUL

29. THOUGHTFUL ___:___:___:___:___: THOUGHTLESS

30. INTERESTING ___:___:___:___:___: UNINTERESTING

31. RELIGIOUS ___:___:___:___:___: IRRELIGIOUS

32. SMOOTH ___:___:___:___:___: ROUGH

33. WET ___:___:___:___:___: DRY

34. SLOPPY ___:___:___:___:___: NEAT

35. COLD ___:___:___:___:___: HOT

36. FRIEND ___:___:___:___:___: ENEMY

S.D.
FORM 1

STUDENT I.D.________
DATE________________

DISCIPLINE
CONCEPT

1. GOOD ___:___:___:___:___: BAD
2. POTENT ___:___:___:___:___: IMPOTENT
3. PESSIMISTIC ___:___:___:___:___: OPTIMISTIC
4. DARK ___:___:___:___:___: LIGHT
5. COMMONPLACE ___:___:___:___:___: BIZARRE
6. INCOMPLETE ___:___:___:___:___: COMPLETE
7. CURRENT ___:___:___:___:___: UNTIMELY
8. DEEP ___:___:___:___:___: SHALLOW
9. SUCCESSFUL ___:___:___:___:___: UNSUCCESSFUL
10. SMALL ___:___:___:___:___: LARGE
11. FALLING ___:___:___:___:___: RISING
12. BOTTOM ___:___:___:___:___: TOP
13. MALE ___:___:___:___:___: FEMALE
14. MEANINGLESS ___:___:___:___:___: MEANINGFUL
15. PASSIVE ___:___:___:___:___: ACTIVE
16. USEFUL ___:___:___:___:___: USELESS
17. SLOW ___:___:___:___:___: FAST
18. FORWARD ___:___:___:___:___: BACKWARD
19. COMPLEX ___:___:___:___:___: SIMPLE
20. TRUE ___:___:___:___:___: FALSE
21. SHARP ___:___:___:___:___: DULL
22. NEGATIVE ___:___:___:___:___: POSITIVE

S.D.
FORM 1

STUDENT I.D.________
DATE ________________

DISCIPLINE
CONCEPT

23. NEW ___:___:___:___:___: OLD

24. DISHONEST ___:___:___:___:___: HONEST

25. TOUGH ___:___:___:___:___: TENDER

26. OPEN ___:___:___:___:___: CLOSED

27. BLAND ___:___:___:___:___: SAVORY

28. RESPECTFUL ___:___:___:___:___: DISRESPECTFUL

29. THOUGHTFUL ___:___:___:___:___: THOUGHTLESS

30. INTERESTING ___:___:___:___:___: UNINTERESTING

31. RELIGIOUS ___:___:___:___:___: IRRELIGIOUS

32. SMOOTH ___:___:___:___:___: ROUGH

33. WET ___:___:___:___:___: DRY

34. SLOPPY ___:___:___:___:___: NEAT

35. COLD ___:___:___:___:___: HOT

36. FRIEND ___:___:___:___:___: ENEMY

Final Questionnaire

Name______________________________ class # ___ ___ ___
1 2 3

I.D.#______________________________
sex (male = 1, female = 2) ___ 6

class (graduate = 1, undergraduate = 2) ___ 7

marital status (single = 1, married = 2) ___ 8

age ___ ___
11 12

I. Describe your own school experiences:

A. Elementary

1 = urban, traditional
2 = urban, innovative
3 = suburban, traditional
4 = suburban, innovative
5 = rural, traditional
6 = rural, innovative
7 = moved around, had variety of experiences
8 = other______________________________ ___
15

B. Junior High

(please use code under I.A.)

8 = other:______________________________ ___
16

C. Senior High

(please use code under I.A.)

8 = other:______________________________ ___
17

II. Describe your previous experience with children:

A. Individual work (baby sitting, tutoring, etc.)

0 = never

page two

Class number ______ ______ ______

1 = infrequently
2 = once/week for one year (or every day for one summer)
3 = more than that
4 = other:

________________________________ ___ 20

B. Group work with children (community service, teacher's aide, camp counseling, etc.)

(please use code under II.A.)

4 = other ________________________________ ___ 21

C. I have worked mostly with:

0 = none
1 = preschool children
2 = children in grades 1-3
3 = children in grades 4-6
4 = teenagers
5 = other:

________________________________ ___ 22

D. I have taught school before:

0 = no
1 = elementary, one year
2 = elementary more than one year
3 = secondary, one year
4 = secondary more than one year
5 = other:

________________________________ ___ 23

E. I have children at home (check age of oldest child)

0 = none
1 = infant to 1 year
2 = ages 2-5
3 = ages 6-10
4 = older
5 = other:

________________________________ ___ 24

page three

Class # ___ ___ ___
1 2 3

III. Describe your practice teaching position

A. grade level

0 = I will not be practice teaching
1 = kindergarten
2 = primary
3 = intermediate (4-6)
4 = other:

____________________ ___30

B. general description

(Please use code on previous page I.A.)

8 = other:____________________ ___31

C. I really wanted to practice teach in:

(Please use code on previous page I.A.)

8 = other:____________________

page four

Class # ___ ___ ___
1 2 3

Thoughts on the METEP Language Arts Program

I. General problems:

A. On the whole the Language Arts program has been (you may choose two):

1 = excellent preparation
2 = all right, I guess
3 = too traditional in orientation
4 = too innovative in orientation
5 = not specific enough, need more techniques
6 = too specific, need more philosophy
7 = poor, I am really worried about starting my practice teaching
8 = other:

________________________________ ___ ___
6 7
(opt.)

B. My advice to a next semester senior would be

1 = try to get in to the METEP Language Arts program
2 = try to get in to a Language Arts methods section
3 = switch to the intern program
4 = one program is pretty much like another, it doesn't make any difference which one you take
5 = get out of elementary ed. completely
6 = other:

________________________________ ___
8

C. When you revise the rating (grading) system:

1 = I liked having different raters
2 = it would be better if one person had rated all my work
3 = just doing the PC is enough, there is no need to rate the work
4 = other:

________________________________ ___
10

page five

Class #______________

D. When you revise the questionnaires:

1 = OK as they are, a necessary evil
2 = I like being able to make suggestions
3 = should use a "choices provided" form like this one
4 = questionnaires are a terrible nuisance, drop
5 = other: ____________________________

____ 15

II. When you revise the PCs:

A. circle on line 1 = should be kept just as they are
2 = keep, but shorten the assignment
3 = keep as option for those interested in that area
4 = drop, but replace with another covering area
5 = drop, do not replace
6 = other ____________________________

1 = 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
23 24 25 26 27 28

2 = 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
23 24 25 26 27 28

3 = 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
23 24 25 26 27 28

4 = 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
23 24 25 26 27 28

5 = 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
23 24 25 26 27 28

6 = 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
23 24 25 26 27 28

Class #__________

page six

B. Next semester:

1 = same number of PCs (approximately) in the 5 weeks
2 = fewer PCs in 5 weeks
3 = all of the PCs (approximately) but more time
4 = other:

______________________________ ___
45

III. Lectures:

A. In general (you may choose two)

0 = I don't learn enough that way
1 = I like them, learn better listening to someone else
2 = like them, want an evaluation of topic (controversies)
3 = like them because I can ask questions
4 = like them because they are often most convenient
5 = other:

____________________________ ___ ___
47 48 (opt)

B. When you revise the lectures (please answer only for those you attended):

circle on line 1 = keep as they were this semester
2 = revise to better prepare for PC
3 = revise completely
4 = other:

____

1 = 1 3 4 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22 23
24 25 26 27 28

2 = 1 3 4 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22 23
24 25 26 27 28

3 = 1 3 4 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22 23
24 25 26 27 28

4 = 1 3 4 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 22 23
24 25 26 27 28

Class #__________

page seven

IV. Library (includes reading packets and browsing) (1,2,3 class#)

A. In general (you may choose two):

0 = I don't learn enough that way
1 = I like to, Learn better working at my own pace
2 = Like to, get more points of view than just listening to one person
3 = like to, especially when it includes examination of materials actually used in the schools
4 = like to, when I only need to know a little bit and don't want to sit through lecture
5 = other:

________________________________ ____ ____
5 6
(opt)

B. When you revise the library IAs (please answer only for those you used):

circle one line 1 = keep as they were
2 = revise, better preparation for PC
3 = revise completely
4 = other:

____

1 = 1 4 5 7 8 9 11 13 14 15 17 19 20 21 24 26 27 28

2 = 1 4 5 7 8 9 11 13 14 15 17 19 20 21 24 26 27 28

3 = 1 4 5 7 8 9 11 13 14 15 17 19 20 21 24 26 27 28

4 = 1 4 5 7 8 9 11 13 14 15 17 19 20 21 24 26 27 28

V. Audio-visual (includes TV tapes, filmstrips, records, films)

A. In general (you may choose two)

0 = I don't learn well watching tapes
1 = I like them, learn easily that way
2 = don't mind watching tapes, if someone else runs machine
3 = next time I would learn how to run TV monitor
4 = getting TV monitors was too inconvenient this time
5 = other:

________________________________ ____ ____
28 29
(opt)

Class #__________

page eight

B. When you revise the A-V IAs (please answer only for those you used):

circle on line 1 = keep
2 = revise for better preparation
3 = revise completely
4 = other: ____________________

1 = 3 6 9 10 18 19 23 27

2 = 3 6 9 10 18 19 23 27

3 = 3 6 9 10 18 19 23 27

4 = 3 6 9 10 18 19 23 27

VI. Observation

A. In general (you may choose two)

0 = I don't learn enough just observing
1 = I like to observe in a regular classroom, but not in the Mark's Meadow observation corridor
2 = I like to observe if I know the children (classroom or corridor)
3 = I like to observe if I know exactly what I am looking for
4 = I enjoy observing, I learn a lot that way
5 = other:

______________________________ 40 41 (opt)

B. When you revise the Observation IAs (please answer only for those you used)

circle on line 1 = keep
2 = revise for better preparation
3 = revise completely
4 = other: ____________________

1 = 4 13 20 21

2 = 4 13 20 21

3 = 4 13 20 21

4 = 4 13 20 21

page nine

Class number ______________

VII. Practice

A. In general (you may choose two)

0 = I don't learn enough that way
1 = I like programmed materials (books, kits, etc.) where I can work on my own
2 = Like practice which includes working with children
3 = am uncomfortable practicing on children
4 = other:

____________________ ___ ___
48 49 (opt)

B. When you revise the practice IAs (please answer only for those you used):

circle line 1 = keep
2 = revise for better preparation
3 = revise completely
4 = other:

____

1 = 3 7 12 18 22 25

2 = 3 7 12 18 22 25

3 = 3 7 12 18 22 25

4 = 3 7 12 18 22 25

VIII. These are some common suggestions made for next semester. Please judge each one on a scale from 1 to 5

1 = terrible idea, absolutely awful
2 = poor
3 = no thoughts (or can't decide)
4 = all right I guess
5 = absolutely great, brilliant

The program is great; keep it just the same ___ 58 page ten

Class number ____________

The most important change would be less work (longer time, less PCs, something, anything, just less work) ____ 59

Spend the time improving the IAs (better lectures, readings, etc.) ____ 60

Make procedures (questionnaires, handing in, rating, etc.) less complicated ____ 61

Provide more time for small group discussions ____ 62

Provide more times when whole groups get together ____ 63

Have just a few required PCs, and a large pool of optional ones, so that people could work intensively in areas important to them ____ 64

Drop METEP approach, give a good methods course ____ 65

Other (s) ____66

IX. My teaching plans:

A. for next year

0 = I do not plan to teach
1 = grad. school, then teaching
2 = hope to teach nursery school (head start)
3 = hope to teach kindergarten
4 = hope to teach primary
5 = hope to teach intermediate
6 = want to switch to secondary
7 = other:

____________________________________ ____ 70

B. The two most important considerations in choosing my first job will be:

1 = commuting distance to my family

page eleven

Class number ________

2 = school in rural area
3 = school in suburban area
4 = school in urban area
5 = innovativeness of school system
6 = for first job, want rather stable school system
7 = working conditions (equipment, facilities, salary)
8 = assurance that I can teach on grade level of my choice
9 = other:

________________________________ ___ 71 ___ 72

C. I anticipate that the most important preparation for teaching will be (rank in order of importance):

1 = my own experience in elementary school
2 = my liberal arts courses at the University
3 = my foundations courses
4 = my methods courses (METEP and others)
5 = my practice teaching
6 = my previous work with children (camp, tutoring, etc.)
7 = other:

____

first _____ 75

second _____

third _____

fourth _____

fifth _____

sixth _____

seventh ___ 81

X. Final thoughts

A. What do you think the METEP Language Arts staff values most highly in a teacher?

1.

page twelve (last page)

Name____________________ Class #______________

2.

3.

4.

5.

B. What do you value most highly in a teacher?

1.

2.

3.

4.

5.

Any last comments? suggestions? any area you feel has not been covered in this questionnaire?

Performance Criteria Questionnaire

The numbers on the left indicate the columns to be blackened in. This will be the only record of your having passed in a PC. Be sure to use pencil and to mark spaces carefully.

column	information
A. PC information general	
1,2,3	LA number (assigned after first meeting)
5,6,7	date PC passed in (feb.13=213, March 21=321)
10,11	PC# (PC# 3=03)
13	PC written or talked out 1 = written 2 = talked out 3 = not applicable
15,16,17	PC time in minutes. Do not include IA time. (15 min. = 015, 2 hrs. = 120)
B. This PC has helped me demonstrate	
20	my own proficiency
21	my knowledge of the process (sequence of skills, levels of development, etc.)
22	my ability to diagnose a child's needs and abilities
23	my knowledge of the variety of approaches and materials
24	my ability to select appropriate methods and materials for the child
25	none of the above because PC is inappropriate
26	none of the above because IAs were inadequate

1=yes
2=somewhat
3=no

PC Questionnaire, page two

C. First IA

30,31 IA# (Please use the following code)

1 = lecture
2 = lecture on audio tape
3 = library folder of readings
4 = browsing in the library
5 = informal discussion with staff
6 = informal discussion with others
7 = audio-visual materials (including TV tapes)
8 = observation
9 = practice
10 = pretest (taking the PC without taking any IA. If "10" is written in columns 30,31, do not fill in the rest of the questionnaire.
11 = other

35,36,37 Time in minutes to do this IA

38 This IA helped me prepare for the PC:

1 = very well
2 = not enough so that I felt confident
3 = hardly at all

D. Second IA

40,41 IA# (Please use the.code above. If only one IA taken, do not fill in this line, or the rest of the questionnaire.)

45,46,47 Time in minutes to do this IA

48 This IA helped me prepare for the PC: (please use code above)

E. Third IA

50,51 IA# (Please use the code above. If only two IAs taken, do not fill in this line, or the rest of the questionnaire.)

55,56,57 Time in minutes to do this IA

58 This IA helped me prepare for the PC: (Please use code above.)

Rater's Information (revised February 8, 1970)

Using the same digitex form used by the student, please fill in the following information:

65,66	rater's number
70,71,72	date PC returned to student (Feb 3 = 203, March 11 = 311)
75	rating 1 = did not pass 2 = passed
76	description of performance 1 = minimal pass 2 = competent 3 = outstanding
77,78	time taken to rate PC in minutes (5 min=05, 1/2 hr=30)
79	please mark a "9"

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
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9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
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7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Performance Criteria Questionnaire

Form for Specialists

The numbers on the left indicate the columns to be blackened in. This will be the only record of your having passed in a PC. Be sure to use pencil and to mark spaces carefully.

PC #30 = rating generalist PCs

#35 = office hours, assisting in program operation

#1-27 generalist PC number of IA you prepared

column	information
A. PC information general	
1,2,3	LA number (assigned after first meeting)
5,6,7	date PC passed in (Feb.13=213, March 21=321)
10,11	PC# (PC# 3 = 03)
12,13	if PC=1-27 IA type you prepared
15,16,17	PC time in minutes. Do not include IA time. (15 min. = 015, 2 hrs. = 120)
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PC Questionnaire, page two   Form for Specialists

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11=other

35,36,37 Time in minutes to do this IA

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1=very well
2=not enough so that I felt confident
3=hardly at all

D. Second IA

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48 This IA helped me prepare for the PC: (please use code above)

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Semantic Differential
(Jan. 28 and March 27)

1. Please fill in your name on the alphabetic section of the digitex form.

2. As you fill in the answers, keep careful watch of the numbers beside the item. Believe it or not, the strange numbering system makes life easier--even for you.

3. Please follow all the rules of the answer sheet world: use pencil, darken spaces completely, make erasures carefully, etc.

4. Also please follow the rules of semantic differentials:

   a. If the concept is closely related to the descriptive term, i.e. "lecture" to "broad," mark the space nearest the descriptive term.

example 1) 1 2 3 4 5
broad ___ : ___ : ___ : ___ : ___ narrow

or, if you believe it to be closely related to "narrow," mark the space nearest that descriptive term.

example 2) 1 2 3 4 5
broad ___ : ___ : ___ : ___ : ___ narrow

   b. If the concept is slightly related to either term, mark the next space away from the descriptive term.

example 3) 1 2 3 4 5
broad ___ : ___ : ___ : ___ : ___ narrow

example 4) 1 2 3 4 5
broad ___ : ___ : ___ : ___ : ___ narrow

   c. If the concept is neutral on that descriptive term, or irrelevant, darken the middle space.

example 5) 1 2 3 4 5
broad ___ : ___ : ___ : ___ : ___ narrow

* * * * *

Semantic Differential p. 2

Concept: Lecture

	1		2		3		4		5	
11. broad	____	:	____	:	____	:	____	:	____	narrow
12. teacher	____	:	____	:	____	:	____	:	____	student
13. sensitive	____	:	____	:	____	:	____	:	____	insensitive
14. flexible	____	:	____	:	____	:	____	:	____	rigid
15. honest	____	:	____	:	____	:	____	:	____	phony
16. content	____	:	____	:	____	:	____	:	____	student
17. useless	____	:	____	:	____	:	____	:	____	helpful
18. exciting	____	:	____	:	____	:	____	:	____	dull
19. success	____	:	____	:	____	:	____	:	____	failure
20. simple	____	:	____	:	____	:	____	:	____	sophisticated
21. irrelevant	____	:	____	:	____	:	____	:	____	relevant
22. passive	____	:	____	:	____	:	____	:	____	active
23. open	____	:	____	:	____	:	____	:	____	closed
24. cold	____	:	____	:	____	:	____	:	____	warm

Concept: Reading

31. broad	____	:	____	:	____	:	____	:	____	narrow
32. teacher	____	:	____	:	____	:	____	:	____	student
33. sensitive	____	:	____	:	____	:	____	:	____	insensitive
34. flexible	____	:	____	:	____	:	____	:	____	rigid
35. honest	____	:	____	:	____	:	____	:	____	phony
36. content	____	:	____	:	____	:	____	:	____	student
37. useless	____	:	____	:	____	:	____	:	____	helpful
38. exciting	____	:	____	:	____	:	____	:	____	dull

Semantic Differential p. 3

(concept reading continued)

39. success ____ : ____ : ____ : ____ : ____ failure

40. simple ____ : ____ : ____ : ____ : ____ sophisticated

41. irrelevant ____ : ____ : ____ : ____ : ____ relevant

42. passive ____ : ____ : ____ : ____ : ____ active

43. open ____ : ____ : ____ : ____ : ____ closed

44. cold ____ : ____ : ____ : ____ : ____ warm

Concept: Discussion

51. broad (etc. same list)

. . . 64. cold

Concept: Audio-visual

91. broad (etc. same list)

. . . 104. cold

Concept: Observation

111. broad (etc. same list)

. . . 124. cold

Concept: Practice

131. broad (etc. same list)

. . . 144. cold

YOUR LAST NAME | YOUR FIRST NAME | MI

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

TEACHER ONLY: STUDENT ABSENT FOR PART:
I II III IV ☐ ☐ ☐ ☐

STUDENT NUMBER
0 1 2 3 4 5 6 7 8 9

SEMESTER: FALL ☐ SPRING ☐

A ☐ B ☐

BIRTH DATE MO YEAR | SEX
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
0 1 2 3 4 5 6 7 8 9

GRADE
1 2 3 4 5 6 7 8 9 10 11 12 G S

FORM OF THIS TEST IS:
A ☐ 1
B ☐ 2
C ☐ 3
D ☐ 4

1 2 3 4 5 6

TEST

I 1 ☐1 ☐2 ☐3 ☐4 ☐5	6 ☐1 ☐2 ☐3 ☐4 ☐5	11 ☐1 ☐2 ☐3 ☐4 ☐5	16 ☐1 ☐2 ☐3 ☐4 ☐5	21 ☐1 ☐2 ☐3 ☐4 ☐5	26 ☐1 ☐2 ☐3 ☐4 ☐5	31 ☐1 ☐2 ☐3 ☐4 ☐5	36 ☐1 ☐2 ☐3 ☐4 ☐5
2 ☐1 ☐2 ☐3 ☐4 ☐5	7 ☐1 ☐2 ☐3 ☐4 ☐5	12 ☐1 ☐2 ☐3 ☐4 ☐5	17 ☐1 ☐2 ☐3 ☐4 ☐5	22 ☐1 ☐2 ☐3 ☐4 ☐5	27 ☐1 ☐2 ☐3 ☐4 ☐5	32 ☐1 ☐2 ☐3 ☐4 ☐5	37 ☐1 ☐2 ☐3 ☐4 ☐5
3 ☐1 ☐2 ☐3 ☐4 ☐5	8 ☐1 ☐2 ☐3 ☐4 ☐5	13 ☐1 ☐2 ☐3 ☐4 ☐5	18 ☐1 ☐2 ☐3 ☐4 ☐5	23 ☐1 ☐2 ☐3 ☐4 ☐5	28 ☐1 ☐2 ☐3 ☐4 ☐5	33 ☐1 ☐2 ☐3 ☐4 ☐5	38 ☐1 ☐2 ☐3 ☐4 ☐5
4 ☐1 ☐2 ☐3 ☐4 ☐5	9 ☐1 ☐2 ☐3 ☐4 ☐5	14 ☐1 ☐2 ☐3 ☐4 ☐5	19 ☐1 ☐2 ☐3 ☐4 ☐5	24 ☐1 ☐2 ☐3 ☐4 ☐5	29 ☐1 ☐2 ☐3 ☐4 ☐5	34 ☐1 ☐2 ☐3 ☐4 ☐5	39 ☐1 ☐2 ☐3 ☐4 ☐5
5 ☐1 ☐2 ☐3 ☐4 ☐5	10 ☐1 ☐2 ☐3 ☐4 ☐5	15 ☐1 ☐2 ☐3 ☐4 ☐5	20 ☐1 ☐2 ☐3 ☐4 ☐5	25 ☐1 ☐2 ☐3 ☐4 ☐5	30 ☐1 ☐2 ☐3 ☐4 ☐5	35 ☐1 ☐2 ☐3 ☐4 ☐5	40 ☐1 ☐2 ☐3 ☐4 ☐5
II 41 ☐1 ☐2 ☐3 ☐4 ☐5	46 ☐1 ☐2 ☐3 ☐4 ☐5	51 ☐1 ☐2 ☐3 ☐4 ☐5	56 ☐1 ☐2 ☐3 ☐4 ☐5	61 ☐1 ☐2 ☐3 ☐4 ☐5	66 ☐1 ☐2 ☐3 ☐4 ☐5	71 ☐1 ☐2 ☐3 ☐4 ☐5	76 ☐1 ☐2 ☐3 ☐4 ☐5
42 ☐1 ☐2 ☐3 ☐4 ☐5	47 ☐1 ☐2 ☐3 ☐4 ☐5	52 ☐1 ☐2 ☐3 ☐4 ☐5	57 ☐1 ☐2 ☐3 ☐4 ☐5	62 ☐1 ☐2 ☐3 ☐4 ☐5	67 ☐1 ☐2 ☐3 ☐4 ☐5	72 ☐1 ☐2 ☐3 ☐4 ☐5	77 ☐1 ☐2 ☐3 ☐4 ☐5
43 ☐1 ☐2 ☐3 ☐4 ☐5	48 ☐1 ☐2 ☐3 ☐4 ☐5	53 ☐1 ☐2 ☐3 ☐4 ☐5	58 ☐1 ☐2 ☐3 ☐4 ☐5	63 ☐1 ☐2 ☐3 ☐4 ☐5	68 ☐1 ☐2 ☐3 ☐4 ☐5	73 ☐1 ☐2 ☐3 ☐4 ☐5	78 ☐1 ☐2 ☐3 ☐4 ☐5
44 ☐1 ☐2 ☐3 ☐4 ☐5	49 ☐1 ☐2 ☐3 ☐4 ☐5	54 ☐1 ☐2 ☐3 ☐4 ☐5	59 ☐1 ☐2 ☐3 ☐4 ☐5	64 ☐1 ☐2 ☐3 ☐4 ☐5	69 ☐1 ☐2 ☐3 ☐4 ☐5	74 ☐1 ☐2 ☐3 ☐4 ☐5	79 ☐1 ☐2 ☐3 ☐4 ☐5
45 ☐1 ☐2 ☐3 ☐4 ☐5	50 ☐1 ☐2 ☐3 ☐4 ☐5	55 ☐1 ☐2 ☐3 ☐4 ☐5	60 ☐1 ☐2 ☐3 ☐4 ☐5	65 ☐1 ☐2 ☐3 ☐4 ☐5	70 ☐1 ☐2 ☐3 ☐4 ☐5	75 ☐1 ☐2 ☐3 ☐4 ☐5	80 ☐1 ☐2 ☐3 ☐4 ☐5
III 81 ☐1 ☐2 ☐3 ☐4 ☐5	86 ☐1 ☐2 ☐3 ☐4 ☐5	91 ☐1 ☐2 ☐3 ☐4 ☐5	96 ☐1 ☐2 ☐3 ☐4 ☐5	101 ☐1 ☐2 ☐3 ☐4 ☐5	106 ☐1 ☐2 ☐3 ☐4 ☐5	111 ☐1 ☐2 ☐3 ☐4 ☐5	116 ☐1 ☐2 ☐3 ☐4 ☐5
82 ☐1 ☐2 ☐3 ☐4 ☐5	87 ☐1 ☐2 ☐3 ☐4 ☐5	92 ☐1 ☐2 ☐3 ☐4 ☐5	97 ☐1 ☐2 ☐3 ☐4 ☐5	102 ☐1 ☐2 ☐3 ☐4 ☐5	107 ☐1 ☐2 ☐3 ☐4 ☐5	112 ☐1 ☐2 ☐3 ☐4 ☐5	117 ☐1 ☐2 ☐3 ☐4 ☐5
83 ☐1 ☐2 ☐3 ☐4 ☐5	88 ☐1 ☐2 ☐3 ☐4 ☐5	93 ☐1 ☐2 ☐3 ☐4 ☐5	98 ☐1 ☐2 ☐3 ☐4 ☐5	103 ☐1 ☐2 ☐3 ☐4 ☐5	108 ☐1 ☐2 ☐3 ☐4 ☐5	113 ☐1 ☐2 ☐3 ☐4 ☐5	118 ☐1 ☐2 ☐3 ☐4 ☐5
84 ☐1 ☐2 ☐3 ☐4 ☐5	89 ☐1 ☐2 ☐3 ☐4 ☐5	94 ☐1 ☐2 ☐3 ☐4 ☐5	99 ☐1 ☐2 ☐3 ☐4 ☐5	104 ☐1 ☐2 ☐3 ☐4 ☐5	109 ☐1 ☐2 ☐3 ☐4 ☐5	114 ☐1 ☐2 ☐3 ☐4 ☐5	119 ☐1 ☐2 ☐3 ☐4 ☐5
85 ☐1 ☐2 ☐3 ☐4 ☐5	90 ☐1 ☐2 ☐3 ☐4 ☐5	95 ☐1 ☐2 ☐3 ☐4 ☐5	100 ☐1 ☐2 ☐3 ☐4 ☐5	105 ☐1 ☐2 ☐3 ☐4 ☐5	110 ☐1 ☐2 ☐3 ☐4 ☐5	115 ☐1 ☐2 ☐3 ☐4 ☐5	120 ☐1 ☐2 ☐3 ☐4 ☐5
IV 121 ☐1 ☐2 ☐3 ☐4 ☐5	126 ☐1 ☐2 ☐3 ☐4 ☐5	131 ☐1 ☐2 ☐3 ☐4 ☐5	136 ☐1 ☐2 ☐3 ☐4 ☐5	141 ☐1 ☐2 ☐3 ☐4 ☐5	146 ☐1 ☐2 ☐3 ☐4 ☐5	151 ☐1 ☐2 ☐3 ☐4 ☐5	156 ☐1 ☐2 ☐3 ☐4 ☐5
122 ☐1 ☐2 ☐3 ☐4 ☐5	127 ☐1 ☐2 ☐3 ☐4 ☐5	132 ☐1 ☐2 ☐3 ☐4 ☐5	137 ☐1 ☐2 ☐3 ☐4 ☐5	142 ☐1 ☐2 ☐3 ☐4 ☐5	147 ☐1 ☐2 ☐3 ☐4 ☐5	152 ☐1 ☐2 ☐3 ☐4 ☐5	157 ☐1 ☐2 ☐3 ☐4 ☐5
123 ☐1 ☐2 ☐3 ☐4 ☐5	128 ☐1 ☐2 ☐3 ☐4 ☐5	133 ☐1 ☐2 ☐3 ☐4 ☐5	138 ☐1 ☐2 ☐3 ☐4 ☐5	143 ☐1 ☐2 ☐3 ☐4 ☐5	148 ☐1 ☐2 ☐3 ☐4 ☐5	153 ☐1 ☐2 ☐3 ☐4 ☐5	158 ☐1 ☐2 ☐3 ☐4 ☐5
124 ☐1 ☐2 ☐3 ☐4 ☐5	129 ☐1 ☐2 ☐3 ☐4 ☐5	134 ☐1 ☐2 ☐3 ☐4 ☐5	139 ☐1 ☐2 ☐3 ☐4 ☐5	144 ☐1 ☐2 ☐3 ☐4 ☐5	149 ☐1 ☐2 ☐3 ☐4 ☐5	154 ☐1 ☐2 ☐3 ☐4 ☐5	159 ☐1 ☐2 ☐3 ☐4 ☐5
125 ☐1 ☐2 ☐3 ☐4 ☐5	130 ☐1 ☐2 ☐3 ☐4 ☐5	135 ☐1 ☐2 ☐3 ☐4 ☐5	140 ☐1 ☐2 ☐3 ☐4 ☐5	145 ☐1 ☐2 ☐3 ☐4 ☐5	150 ☐1 ☐2 ☐3 ☐4 ☐5	155 ☐1 ☐2 ☐3 ☐4 ☐5	160 ☐1 ☐2 ☐3 ☐4 ☐5

GRADE

INSTRUCTOR

SCHOOL

Pre Program Questionnaire, Part I
(Jan. 28, 1970)

A. Holding the digitex form horizontally, please

1. Print your name, then blacken the letter boxes just as directed on the form (last name first).

2. Below the names are some more columns:

    a. use columns #5 and #6 to print, and then blacken, your age

    b. use the column marked "grade" to describe your academic status:
    3=undergraduate
    4=graduate

    c. Fill in the column marked "sex"

    d. Fill in the columns marked "student number"

B. Turning the digitex form vertically, and beginning with number 41

Describe your previous experience with children:

41. individual (baby sitting, tutoring, etc.)

    1=1-10 times
    2=11-30 times
    3=more than that

42. group work (club, church, camp, teacher aide, etc.)

    1=1-10 times
    2=11-30 times
    3=more than that

43. teaching

    1=1-10 times
    2=11-30 times
    3=more than that

Pre Program Questionnaire, Part I, Jan. 28, 1970

Describe your own elementary school experience

44.

1=rural
2=suburban
3=urban

45.

1=traditional
2=experimental
3=had an opportunity to experience both

Program Questionnaire, Part II

A. Eventually I want to teach in:

86.
1=rural
2=suburban
3=urban
4=anything, but not urban
5=don't care

87.
1=traditional
2=experimental
3=don't care

88.
1=preschool
2=grades K-3
3=grades 4-6
4=don't care
5=don't want to teach elementary

B. I think I learn easily from

91. lecture
92. reading
93. discussion
94. audio-visual
95. observation
96. practice

1=yes
2=have no idea
3=no

C. I think I will probably teach easily using:

101. lecture
102. reading
103. discussion
104. audio-visual
105. observation
106. practice

1=yes
2=have no idea
3=no

YOUR LAST NAME — YOUR FIRST NAME — MI

(A B C D E F G H I J K L M N O P Q R S T U V W X Y Z in each name column)

TEACHER ONLY: STUDENT ABSENT FOR PART: I II III IV ☐ ☐ ☐ ☐

STUDENT NUMBER (0 1 2 3 4 5 6 7 8 9 in each column)

FORM OF THIS TEST IS: A ☐ 1 ☐ B ☐ 2 ☐ C ☐ 3 ☐ D ☐ 4 ☐

SEMESTER: FALL ☐ SPRING ☐ A ☐ B ☐

1	2	3	4	5	6	GRADE	BIRTH DATE MO	YEAR	SEX
0	0	0	0	0	0		JAN	0	
1	1	1	1	1	1	3	FEB	1	
2	2	2	2	2	2	4	MAR	2	
3	3	3	3	3	3	5	APR	3	
4	4	4	4	4	4	6	MAY	4	
5	5	5	5	5	5	7	JUN	5	
6	6	6	6	6	6	8	JUL	6	
7	7	7	7	7	7	9	AUG	7	
8	8	8	8	8	8	10	SEP	8	
9	9	9	9	9	9	11	OCT	9	
						12	NOV		
						F	DEC		
						S			

SCHOOL ______ INSTRUCTOR ______ GRADE ______ TEST ______

I

1 ☐1 ☐2 ☐3 ☐4 ☐5	6 ☐1 ☐2 ☐3 ☐4 ☐5	11 ☐1 ☐2 ☐3 ☐4 ☐5	16 ☐1 ☐2 ☐3 ☐4 ☐5	21 ☐1 ☐2 ☐3 ☐4 ☐5	26 ☐1 ☐2 ☐3 ☐4 ☐5	31 ☐1 ☐2 ☐3 ☐4 ☐5	36 ☐1 ☐2 ☐3 ☐4 ☐5
2 ☐1 ☐2 ☐3 ☐4 ☐5	7 ☐1 ☐2 ☐3 ☐4 ☐5	12 ☐1 ☐2 ☐3 ☐4 ☐5	17 ☐1 ☐2 ☐3 ☐4 ☐5	22 ☐1 ☐2 ☐3 ☐4 ☐5	27 ☐1 ☐2 ☐3 ☐4 ☐5	32 ☐1 ☐2 ☐3 ☐4 ☐5	37 ☐1 ☐2 ☐3 ☐4 ☐5
3 ☐1 ☐2 ☐3 ☐4 ☐5	8 ☐1 ☐2 ☐3 ☐4 ☐5	13 ☐1 ☐2 ☐3 ☐4 ☐5	18 ☐1 ☐2 ☐3 ☐4 ☐5	23 ☐1 ☐2 ☐3 ☐4 ☐5	28 ☐1 ☐2 ☐3 ☐4 ☐5	33 ☐1 ☐2 ☐3 ☐4 ☐5	38 ☐1 ☐2 ☐3 ☐4 ☐5
4 ☐1 ☐2 ☐3 ☐4 ☐5	9 ☐1 ☐2 ☐3 ☐4 ☐5	14 ☐1 ☐2 ☐3 ☐4 ☐5	19 ☐1 ☐2 ☐3 ☐4 ☐5	24 ☐1 ☐2 ☐3 ☐4 ☐5	29 ☐1 ☐2 ☐3 ☐4 ☐5	34 ☐1 ☐2 ☐3 ☐4 ☐5	39 ☐1 ☐2 ☐3 ☐4 ☐5
5 ☐1 ☐2 ☐3 ☐4 ☐5	10 ☐1 ☐2 ☐3 ☐4 ☐5	15 ☐1 ☐2 ☐3 ☐4 ☐5	20 ☐1 ☐2 ☐3 ☐4 ☐5	25 ☐1 ☐2 ☐3 ☐4 ☐5	30 ☐1 ☐2 ☐3 ☐4 ☐5	35 ☐1 ☐2 ☐3 ☐4 ☐5	40 ☐1 ☐2 ☐3 ☐4 ☐5

II

41 ☐1 ☐2 ☐3 ☐4 ☐5	46 ☐1 ☐2 ☐3 ☐4 ☐5	51 ☐1 ☐2 ☐3 ☐4 ☐5	56 ☐1 ☐2 ☐3 ☐4 ☐5	61 ☐1 ☐2 ☐3 ☐4 ☐5	66 ☐1 ☐2 ☐3 ☐4 ☐5	71 ☐1 ☐2 ☐3 ☐4 ☐5	76 ☐1 ☐2 ☐3 ☐4 ☐5
42 ☐1 ☐2 ☐3 ☐4 ☐5	47 ☐1 ☐2 ☐3 ☐4 ☐5	52 ☐1 ☐2 ☐3 ☐4 ☐5	57 ☐1 ☐2 ☐3 ☐4 ☐5	62 ☐1 ☐2 ☐3 ☐4 ☐5	67 ☐1 ☐2 ☐3 ☐4 ☐5	72 ☐1 ☐2 ☐3 ☐4 ☐5	77 ☐1 ☐2 ☐3 ☐4 ☐5
43 ☐1 ☐2 ☐3 ☐4 ☐5	48 ☐1 ☐2 ☐3 ☐4 ☐5	53 ☐1 ☐2 ☐3 ☐4 ☐5	58 ☐1 ☐2 ☐3 ☐4 ☐5	63 ☐1 ☐2 ☐3 ☐4 ☐5	68 ☐1 ☐2 ☐3 ☐4 ☐5	73 ☐1 ☐2 ☐3 ☐4 ☐5	78 ☐1 ☐2 ☐3 ☐4 ☐5
44 ☐1 ☐2 ☐3 ☐4 ☐5	49 ☐1 ☐2 ☐3 ☐4 ☐5	54 ☐1 ☐2 ☐3 ☐4 ☐5	59 ☐1 ☐2 ☐3 ☐4 ☐5	64 ☐1 ☐2 ☐3 ☐4 ☐5	69 ☐1 ☐2 ☐3 ☐4 ☐5	74 ☐1 ☐2 ☐3 ☐4 ☐5	79 ☐1 ☐2 ☐3 ☐4 ☐5
45 ☐1 ☐2 ☐3 ☐4 ☐5	50 ☐1 ☐2 ☐3 ☐4 ☐5	55 ☐1 ☐2 ☐3 ☐4 ☐5	60 ☐1 ☐2 ☐3 ☐4 ☐5	65 ☐1 ☐2 ☐3 ☐4 ☐5	70 ☐1 ☐2 ☐3 ☐4 ☐5	75 ☐1 ☐2 ☐3 ☐4 ☐5	80 ☐1 ☐2 ☐3 ☐4 ☐5

III

81 ☐1 ☐2 ☐3 ☐4 ☐5	86 ☐1 ☐2 ☐3 ☐4 ☐5	91 ☐1 ☐2 ☐3 ☐4 ☐5	96 ☐1 ☐2 ☐3 ☐4 ☐5	101 ☐1 ☐2 ☐3 ☐4 ☐5	106 ☐1 ☐2 ☐3 ☐4 ☐5	111 ☐1 ☐2 ☐3 ☐4 ☐5	116 ☐1 ☐2 ☐3 ☐4 ☐5
82 ☐1 ☐2 ☐3 ☐4 ☐5	87 ☐1 ☐2 ☐3 ☐4 ☐5	92 ☐1 ☐2 ☐3 ☐4 ☐5	97 ☐1 ☐2 ☐3 ☐4 ☐5	102 ☐1 ☐2 ☐3 ☐4 ☐5	107 ☐1 ☐2 ☐3 ☐4 ☐5	112 ☐1 ☐2 ☐3 ☐4 ☐5	117 ☐1 ☐2 ☐3 ☐4 ☐5
83 ☐1 ☐2 ☐3 ☐4 ☐5	88 ☐1 ☐2 ☐3 ☐4 ☐5	93 ☐1 ☐2 ☐3 ☐4 ☐5	98 ☐1 ☐2 ☐3 ☐4 ☐5	103 ☐1 ☐2 ☐3 ☐4 ☐5	108 ☐1 ☐2 ☐3 ☐4 ☐5	113 ☐1 ☐2 ☐3 ☐4 ☐5	118 ☐1 ☐2 ☐3 ☐4 ☐5
84 ☐1 ☐2 ☐3 ☐4 ☐5	89 ☐1 ☐2 ☐3 ☐4 ☐5	94 ☐1 ☐2 ☐3 ☐4 ☐5	99 ☐1 ☐2 ☐3 ☐4 ☐5	104 ☐1 ☐2 ☐3 ☐4 ☐5	109 ☐1 ☐2 ☐3 ☐4 ☐5	114 ☐1 ☐2 ☐3 ☐4 ☐5	119 ☐1 ☐2 ☐3 ☐4 ☐5
85 ☐1 ☐2 ☐3 ☐4 ☐5	90 ☐1 ☐2 ☐3 ☐4 ☐5	95 ☐1 ☐2 ☐3 ☐4 ☐5	100 ☐1 ☐2 ☐3 ☐4 ☐5	105 ☐1 ☐2 ☐3 ☐4 ☐5	110 ☐1 ☐2 ☐3 ☐4 ☐5	115 ☐1 ☐2 ☐3 ☐4 ☐5	120 ☐1 ☐2 ☐3 ☐4 ☐5

IV

121 ☐1 ☐2 ☐3 ☐4 ☐5	126 ☐1 ☐2 ☐3 ☐4 ☐5	131 ☐1 ☐2 ☐3 ☐4 ☐5	136 ☐1 ☐2 ☐3 ☐4 ☐5	141 ☐1 ☐2 ☐3 ☐4 ☐5	146 ☐1 ☐2 ☐3 ☐4 ☐5	151 ☐1 ☐2 ☐3 ☐4 ☐5	156 ☐1 ☐2 ☐3 ☐4 ☐5
122 ☐1 ☐2 ☐3 ☐4 ☐5	127 ☐1 ☐2 ☐3 ☐4 ☐5	132 ☐1 ☐2 ☐3 ☐4 ☐5	137 ☐1 ☐2 ☐3 ☐4 ☐5	142 ☐1 ☐2 ☐3 ☐4 ☐5	147 ☐1 ☐2 ☐3 ☐4 ☐5	152 ☐1 ☐2 ☐3 ☐4 ☐5	157 ☐1 ☐2 ☐3 ☐4 ☐5
123 ☐1 ☐2 ☐3 ☐4 ☐5	128 ☐1 ☐2 ☐3 ☐4 ☐5	133 ☐1 ☐2 ☐3 ☐4 ☐5	138 ☐1 ☐2 ☐3 ☐4 ☐5	143 ☐1 ☐2 ☐3 ☐4 ☐5	148 ☐1 ☐2 ☐3 ☐4 ☐5	153 ☐1 ☐2 ☐3 ☐4 ☐5	158 ☐1 ☐2 ☐3 ☐4 ☐5
124 ☐1 ☐2 ☐3 ☐4 ☐5	129 ☐1 ☐2 ☐3 ☐4 ☐5	134 ☐1 ☐2 ☐3 ☐4 ☐5	139 ☐1 ☐2 ☐3 ☐4 ☐5	144 ☐1 ☐2 ☐3 ☐4 ☐5	149 ☐1 ☐2 ☐3 ☐4 ☐5	154 ☐1 ☐2 ☐3 ☐4 ☐5	159 ☐1 ☐2 ☐3 ☐4 ☐5
125 ☐1 ☐2 ☐3 ☐4 ☐5	130 ☐1 ☐2 ☐3 ☐4 ☐5	135 ☐1 ☐2 ☐3 ☐4 ☐5	140 ☐1 ☐2 ☐3 ☐4 ☐5	145 ☐1 ☐2 ☐3 ☐4 ☐5	150 ☐1 ☐2 ☐3 ☐4 ☐5	155 ☐1 ☐2 ☐3 ☐4 ☐5	160 ☐1 ☐2 ☐3 ☐4 ☐5

Preprogram Questionnaire, Part III

We would like to know what IAs you anticipate using. We would also like to know how sure you are of the choices you make. Please use the accompanying 10-answer digitex form.

PC# 1 Comparison of children's reading texts

(5,6) I intend to use IA:

11=lecture
12=lecture on tape
13=library folder of readings
14=browsing in library (suggested list avail.)
15=informal discussion with staff
(not during lecture)
16=informal discussion with others
17=audio-visual materials (including TV tape)
18=observation
19=practice
20=pretest (taking PC without taking any IA)
21=other

(7) In making the choice among IAs, I am

1=just guessing
2=pretty sure I will take that IA
3=very sure

PC# 2 Discussion, Beginning Reading

(8,9) I intend to use IA (see code above)

(10) In making the choice among IAs, I am (see code above)

PC# 3 Reading Readiness

(11,12) I intend to use IA (see code above)

(13) In making the choice among the IAs, I am (see code above)

PC# 4 Grouping children for reading

(14,15) I intend to use IA:

11=lecture
12=lecture on tape
13=library folder of readings
14=browsing in library (suggested list avail)
15=informal discussion with staff
(not during lecture)
16=informal discussion with others
17=audio-visual materials (including TV tape)
18=observation
19=practice
20=pretest (taking PC without taking any IA)
21=other

(16) In making the choice among IAs, I am

1=just guessing
2=pretty sure I will take that IA
3=very sure

PC# 5 Informal Reading Inventory

(17,18) I intend to use IA (see code above)

(19) In making the choice among IAs, I am (see code above)

PC# 6 Skills-comprehension

(20,21) I intend to use IA (see code above)

(22) In making the choice among IAs, I am (see code above)

PC# 7 Word Analysis skills

(23,24) I intend to use IA (see code above)

(25) In making the choice among IAs, I am (see code above)

PC# 8 Phonics as an approach to teaching reading

(26,27) I intend to use IA:

11=lecture
12=lecture on tape
13=library folder of readings
14=browsing in library (suggested list avail)
15=informal discussion with staff
(not during lecture)
16=informal discussion with others
17=audio-visual materials (including TV tape)
18=observation
19=practice
20=pretest (taking PC without taking any IA)
21=other

(28) In making the choice among IAs, I am

1=just guessing
2=pretty sure I will take that IA
3=very sure

PC# 9 i/t/a - modified alphabet for beginning reading

(29,30) I intend to use IA (see code above)

(31) In making the choice among IAs, I am (see code above)

PC# 10 Linguistic approach to reading

(32,33) I intend to use IA (see code above)

(34) In making the choice among IAs, I am (see code above)

PC#11 Experience approach to reading

(35,36) I intend to use IA (see code above)

(37) In making the choice among IAs, I am (see code above)

PC# 12 Individualized approach to reading

(38,39) I intend to use IA:

11=lecture
12=lecture on tape
13=library folder of readings
14=browsing in library (suggested list avail)
15=informal discussion with staff
(not during lecture)
16=informal discussion with others
17=audio-visual materials (including TV tape)
18=observation
19=practice
20=pretest (taking PC without taking any IA)
21=other

(40) In making the choice among IAs, I am

1=just guessing
2=pretty sure I will take that IA
3=very sure

PC# 13 Kits and machines used in teaching Reading and L.A.

(41,42) I intend to use IA (see code above)

(43) In making the choice among IAs, I am (see code above)

PC# 14 Teaching reading to special populations

(44,45) I intend to use IA (see code above)

(46) In making the choice among IAs, I am (see code above)

PC# 15 Tour of library - selecting professional texts

(47,48) I intend to use IA (see code above)

(49) In making the choice among IAs, I am (see code above)

Preprogram questionnaire, Part III

page 5

PC# 16 Evaluation of reading objectives

(50,51) I intend to use IA:

11=lecture
12=lecture on tape
13=library folder of readings
14=browsing in library (suggested list avail)
15=informal discussion with staff
(not during lecture)
16=informal discussion with others
17=audio-visual materials (including TV tape)
18=observation
19=practice
20=pretest (taking PC without taking any IA)
21=other

(52) In making the choice among IAs, I am

1=just guessing
2=pretty sure I will take that IA
3=very sure

PC# 17 I.Q. = no choice

PC# 18 Class library - selecting books for class library

(53,54) I intend to use IA (see code above)

(55) In making the choice among IAs, I am (see code above)

PC# 19 Three ways to tell a story

(56,57) I intend to use IA (see code above)

(58) In making the choice among IAs, I am (see code above)

PC# 20 Read story aloud

(59,60) I intend to use IA (see code above)

(61) In making the choice among IAs, I am (see code above)

PC# 21 Approaches to creative writing

(62,63) I intend to use IA:

11=lecture
12=lecture on tape
13=library folder of readings
14=browsing in library (suggested list avail)
15=informal discussion with staff
  (not during lecture)
16=informal discussion with others
17=audio-visual materials (including TV tape)
18=observation
19=practice
20=pretest (taking PC without taking an IA)
21=other

(64) In making the choice among IAs, I am

1=just guessing
2=pretty sure I will take that IA
3=very sure

PC# 22 Approaches to teaching spelling

(65,66) I intend to use IA (see code above)

(67) In making the choice among IAs, I am (see code above)

PC# 23 Approaches to teaching listening

(68,69) I intend to use IA (see code above)

(70) In making the choice among IAs, I am (see code above)

PC# 24 Approaches to teaching speaking

(71,72) I intend to use IA (see code above)

(73) In making the choice among IAs, I am (see code above)

PC# 25 Approaches to teaching drama

(74,75) I intend to use IA:

11=lecture
12=lecture on tape
13=library folder of readings
14=browsing in library (suggested list avail)
15=informal discussion with staff
(not during lecture)
16=informal discussion with others
17=audio-visual materials (including TV tape)
18=observation
19=practice
20=pretest (taking PC without taking an IA)
21=other

(76) In making the choice among IAs, I am

1=just guessing
2=pretty sure I will take that IA
3=very sure

PC# 26 Approaches to teaching grammar

(77,78) I intend to use IA (see code above)

(79) In making the choice among IAs, I am (see code above)

PC# 27 Approaches to teaching handwriting

80, 81
(80,81) I intend to use IA (see code above)

82
(82) In making the choice among IAs, I am (see code above)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
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7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
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4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
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6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

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Post Program Questionnaire, Part I

A. Fill in your LA number in columns 1,2,3 (below alphabetic section)

B. Starting with #11, please evaluate the following aspects of the Language Arts program:

1 = major strength
2 = needs improving but should be kept
3 = major weakness
4 = never used it, no opinion

11. Performance Criteria
12. Lecture IAs
13. Lecture on tape IAs
14. Library folder of readings IAs
15. Browsing in the library IAs
16. Informal discussion with staff IAs
17. Informal discussion with others IAs
18. Audio-visual IAs
19. Observation IAs
20. Practice IAs
21. Pretesting (instead of IAs)
22. Other IAs
23. Rating system
24. Record keeping system
25. Program as preparation for practice teaching
26. Program as personal learning experience

Program Questionnaire, Part II

A. Eventually I want to teach in:

86.
1=rural
2=suburban
3=urban
4=anything, but not urban
5=don't care

87.
1=traditional
2=experimental
3=don't care

88.
1=preschool
2=grades K-3
3=grades 4-6
4=don't care
5=don't want to teach elementary

B. I think I learn easily from

91. lecture
92. reading
93. discussion
94. audio-visual
95. observation
96. practice

1=yes
2=have no idea
3=no

C. I think I will probably teach easily using:

101. lecture
102. reading
103. discussion
104. audio-visual
105. observation
106. practice

1=yes
2=have no idea
3=no

YOUR LAST NAME

YOUR FIRST NAME

M.I.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

TEACHER ONLY:
STUDENT ABSENT
FOR PART:
I II III IV

SEMESTER:
FALL ☐
SPRING ☐

A ☐
B ☐

FORM OF
THIS TEST
IS:
A ☐ 1
B ☐ 2
C ☐ 3
D ☐ 4

GRADE						BIRTH DATE		SEX	STUDENT NUMBER
1	2	3	4	5	6	MO	YEAR	S E X	
						JAN	0		0
						FEB	1		1
						MAR	2		2
						APR	3		3
						MAY	4		4
						JUN	5		5
						JUL	6		6
						AUG	7		7
						SEP	8		8
						OCT	9		9
						NOV			
						DEC			

TEST

GRADE

INSTRUCTOR

I

1 ☐1 ☐2 ☐3 ☐4 ☐5	6 ☐1 ☐2 ☐3 ☐4 ☐5	11 ☐1 ☐2 ☐3 ☐4 ☐5	16 ☐1 ☐2 ☐3 ☐4 ☐5	21 ☐1 ☐2 ☐3 ☐4 ☐5	26 ☐1 ☐2 ☐3 ☐4 ☐5	31 ☐1 ☐2 ☐3 ☐4 ☐5	36 ☐1 ☐2 ☐3 ☐4 ☐5
2 ☐1 ☐2 ☐3 ☐4 ☐5	7 ☐1 ☐2 ☐3 ☐4 ☐5	12 ☐1 ☐2 ☐3 ☐4 ☐5	17 ☐1 ☐2 ☐3 ☐4 ☐5	22 ☐1 ☐2 ☐3 ☐4 ☐5	27 ☐1 ☐2 ☐3 ☐4 ☐5	32 ☐1 ☐2 ☐3 ☐4 ☐5	37 ☐1 ☐2 ☐3 ☐4 ☐5
3 ☐1 ☐2 ☐3 ☐4 ☐5	8 ☐1 ☐2 ☐3 ☐4 ☐5	13 ☐1 ☐2 ☐3 ☐4 ☐5	18 ☐1 ☐2 ☐3 ☐4 ☐5	23 ☐1 ☐2 ☐3 ☐4 ☐5	28 ☐1 ☐2 ☐3 ☐4 ☐5	33 ☐1 ☐2 ☐3 ☐4 ☐5	38 ☐1 ☐2 ☐3 ☐4 ☐5
4 ☐1 ☐2 ☐3 ☐4 ☐5	9 ☐1 ☐2 ☐3 ☐4 ☐5	14 ☐1 ☐2 ☐3 ☐4 ☐5	19 ☐1 ☐2 ☐3 ☐4 ☐5	24 ☐1 ☐2 ☐3 ☐4 ☐5	29 ☐1 ☐2 ☐3 ☐4 ☐5	34 ☐1 ☐2 ☐3 ☐4 ☐5	39 ☐1 ☐2 ☐3 ☐4 ☐5
5 ☐1 ☐2 ☐3 ☐4 ☐5	10 ☐1 ☐2 ☐3 ☐4 ☐5	15 ☐1 ☐2 ☐3 ☐4 ☐5	20 ☐1 ☐2 ☐3 ☐4 ☐5	25 ☐1 ☐2 ☐3 ☐4 ☐5	30 ☐1 ☐2 ☐3 ☐4 ☐5	35 ☐1 ☐2 ☐3 ☐4 ☐5	40 ☐1 ☐2 ☐3 ☐4 ☐5

II

41 ☐1 ☐2 ☐3 ☐4 ☐5	46 ☐1 ☐2 ☐3 ☐4 ☐5	51 ☐1 ☐2 ☐3 ☐4 ☐5	56 ☐1 ☐2 ☐3 ☐4 ☐5	61 ☐1 ☐2 ☐3 ☐4 ☐5	66 ☐1 ☐2 ☐3 ☐4 ☐5	71 ☐1 ☐2 ☐3 ☐4 ☐5	76 ☐1 ☐2 ☐3 ☐4 ☐5
42 ☐1 ☐2 ☐3 ☐4 ☐5	47 ☐1 ☐2 ☐3 ☐4 ☐5	52 ☐1 ☐2 ☐3 ☐4 ☐5	57 ☐1 ☐2 ☐3 ☐4 ☐5	62 ☐1 ☐2 ☐3 ☐4 ☐5	67 ☐1 ☐2 ☐3 ☐4 ☐5	72 ☐1 ☐2 ☐3 ☐4 ☐5	77 ☐1 ☐2 ☐3 ☐4 ☐5
43 ☐1 ☐2 ☐3 ☐4 ☐5	48 ☐1 ☐2 ☐3 ☐4 ☐5	53 ☐1 ☐2 ☐3 ☐4 ☐5	58 ☐1 ☐2 ☐3 ☐4 ☐5	63 ☐1 ☐2 ☐3 ☐4 ☐5	68 ☐1 ☐2 ☐3 ☐4 ☐5	73 ☐1 ☐2 ☐3 ☐4 ☐5	78 ☐1 ☐2 ☐3 ☐4 ☐5
44 ☐1 ☐2 ☐3 ☐4 ☐5	49 ☐1 ☐2 ☐3 ☐4 ☐5	54 ☐1 ☐2 ☐3 ☐4 ☐5	59 ☐1 ☐2 ☐3 ☐4 ☐5	64 ☐1 ☐2 ☐3 ☐4 ☐5	69 ☐1 ☐2 ☐3 ☐4 ☐5	74 ☐1 ☐2 ☐3 ☐4 ☐5	79 ☐1 ☐2 ☐3 ☐4 ☐5
45 ☐1 ☐2 ☐3 ☐4 ☐5	50 ☐1 ☐2 ☐3 ☐4 ☐5	55 ☐1 ☐2 ☐3 ☐4 ☐5	60 ☐1 ☐2 ☐3 ☐4 ☐5	65 ☐1 ☐2 ☐3 ☐4 ☐5	70 ☐1 ☐2 ☐3 ☐4 ☐5	75 ☐1 ☐2 ☐3 ☐4 ☐5	80 ☐1 ☐2 ☐3 ☐4 ☐5

III

81 ☐1 ☐2 ☐3 ☐4 ☐5	86 ☐1 ☐2 ☐3 ☐4 ☐5	91 ☐1 ☐2 ☐3 ☐4 ☐5	96 ☐1 ☐2 ☐3 ☐4 ☐5	101 ☐1 ☐2 ☐3 ☐4 ☐5	106 ☐1 ☐2 ☐3 ☐4 ☐5	111 ☐1 ☐2 ☐3 ☐4 ☐5	116 ☐1 ☐2 ☐3 ☐4 ☐5
82 ☐1 ☐2 ☐3 ☐4 ☐5	87 ☐1 ☐2 ☐3 ☐4 ☐5	92 ☐1 ☐2 ☐3 ☐4 ☐5	97 ☐1 ☐2 ☐3 ☐4 ☐5	102 ☐1 ☐2 ☐3 ☐4 ☐5	107 ☐1 ☐2 ☐3 ☐4 ☐5	112 ☐1 ☐2 ☐3 ☐4 ☐5	117 ☐1 ☐2 ☐3 ☐4 ☐5
83 ☐1 ☐2 ☐3 ☐4 ☐5	88 ☐1 ☐2 ☐3 ☐4 ☐5	93 ☐1 ☐2 ☐3 ☐4 ☐5	98 ☐1 ☐2 ☐3 ☐4 ☐5	103 ☐1 ☐2 ☐3 ☐4 ☐5	108 ☐1 ☐2 ☐3 ☐4 ☐5	113 ☐1 ☐2 ☐3 ☐4 ☐5	118 ☐1 ☐2 ☐3 ☐4 ☐5
84 ☐1 ☐2 ☐3 ☐4 ☐5	89 ☐1 ☐2 ☐3 ☐4 ☐5	94 ☐1 ☐2 ☐3 ☐4 ☐5	99 ☐1 ☐2 ☐3 ☐4 ☐5	104 ☐1 ☐2 ☐3 ☐4 ☐5	109 ☐1 ☐2 ☐3 ☐4 ☐5	114 ☐1 ☐2 ☐3 ☐4 ☐5	119 ☐1 ☐2 ☐3 ☐4 ☐5
85 ☐1 ☐2 ☐3 ☐4 ☐5	90 ☐1 ☐2 ☐3 ☐4 ☐5	95 ☐1 ☐2 ☐3 ☐4 ☐5	100 ☐1 ☐2 ☐3 ☐4 ☐5	105 ☐1 ☐2 ☐3 ☐4 ☐5	110 ☐1 ☐2 ☐3 ☐4 ☐5	115 ☐1 ☐2 ☐3 ☐4 ☐5	120 ☐1 ☐2 ☐3 ☐4 ☐5

IV

121 ☐1 ☐2 ☐3 ☐4 ☐5	126 ☐1 ☐2 ☐3 ☐4 ☐5	131 ☐1 ☐2 ☐3 ☐4 ☐5	136 ☐1 ☐2 ☐3 ☐4 ☐5	141 ☐1 ☐2 ☐3 ☐4 ☐5	146 ☐1 ☐2 ☐3 ☐4 ☐5	151 ☐1 ☐2 ☐3 ☐4 ☐5	156 ☐1 ☐2 ☐3 ☐4 ☐5
122 ☐1 ☐2 ☐3 ☐4 ☐5	127 ☐1 ☐2 ☐3 ☐4 ☐5	132 ☐1 ☐2 ☐3 ☐4 ☐5	137 ☐1 ☐2 ☐3 ☐4 ☐5	142 ☐1 ☐2 ☐3 ☐4 ☐5	147 ☐1 ☐2 ☐3 ☐4 ☐5	152 ☐1 ☐2 ☐3 ☐4 ☐5	157 ☐1 ☐2 ☐3 ☐4 ☐5
123 ☐1 ☐2 ☐3 ☐4 ☐5	128 ☐1 ☐2 ☐3 ☐4 ☐5	133 ☐1 ☐2 ☐3 ☐4 ☐5	138 ☐1 ☐2 ☐3 ☐4 ☐5	143 ☐1 ☐2 ☐3 ☐4 ☐5	148 ☐1 ☐2 ☐3 ☐4 ☐5	153 ☐1 ☐2 ☐3 ☐4 ☐5	158 ☐1 ☐2 ☐3 ☐4 ☐5
124 ☐1 ☐2 ☐3 ☐4 ☐5	129 ☐1 ☐2 ☐3 ☐4 ☐5	134 ☐1 ☐2 ☐3 ☐4 ☐5	139 ☐1 ☐2 ☐3 ☐4 ☐5	144 ☐1 ☐2 ☐3 ☐4 ☐5	149 ☐1 ☐2 ☐3 ☐4 ☐5	154 ☐1 ☐2 ☐3 ☐4 ☐5	159 ☐1 ☐2 ☐3 ☐4 ☐5
125 ☐1 ☐2 ☐3 ☐4 ☐5	130 ☐1 ☐2 ☐3 ☐4 ☐5	135 ☐1 ☐2 ☐3 ☐4 ☐5	140 ☐1 ☐2 ☐3 ☐4 ☐5	145 ☐1 ☐2 ☐3 ☐4 ☐5	150 ☐1 ☐2 ☐3 ☐4 ☐5	155 ☐1 ☐2 ☐3 ☐4 ☐5	160 ☐1 ☐2 ☐3 ☐4 ☐5

The Commonwealth of Massachusetts
University of Massachusetts
Amherst 01002

SCHOOL OF EDUCATION

April 28, 1970

Hi!

You have already received a letter from Bill Fanslow asking you to attend an evaluation session at 2:30, Thursday, May 7th in the Mark's Meadow Auditorium.

We would like to invite you to join us immediately after that session (about 4:15) in the kindergarten room of Mark's Meadow for coffee and donuts, for a celebration of completed PC's, for a discussion of the Language Arts program, and for returning the checklists which accompany this letter.

We are now beginning to revise the program for next fall. Please come on the 7th. We need your help in making those changes.

Sincerely,

Masha Rudman

Mary Alice Wilson

nmb

There are four packets of material:

1. course evaluation. Please complete, being sure to fill in the course number (261).

2. a check list. Please fill it in, returning it to us on May 7th. If you cannot join us, be sure we get the check list anyway.

3. a cover letter and a second copy of the check list. Please ask your supervisor to fill it in and return it to us, either by delivering it to room 2, by mailing it, or by using you as a personal courier on May 7th.

4. another copy of the cover letter and check list. Please ask your master teacher to fill it in and return it to us (using any of the above delivery methods). In any case, we would like all three copies returned to us by May 7th.

Thank you.

The Commonwealth of Massachusetts
University of Massachusetts
Amherst 01002

SCHOOL OF EDUCATION

Your student teacher participated in a performance criteria program in Language Arts this semester. The following checklist asks you to rate him on certain aspects of the program. Your answers will be of great help to us in revising the course for the fall semester. Please do not hesitate to add additional comments on the back of these pages or on extra paper.

In order to use the material from this checklist, we must have the completed form in our office by Thursday, May 7th. Your student teacher will be coming here on that date and can bring it, or you may mail it to:

Masha Rudman
School of Education
University of Massachusetts
Amherst, Massachusetts 01002

Thank you for your help.

Masha Rudman

Mary Alice Wilson

nmb

Please rate ____________________ on the following scales.

1 = minimal
2 = adequate
3 = outstanding

	Reading	Writing	Speaking	Listening
1. personal skill in Language Arts. for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__
2. knowledge of skills and sequence of skills for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__
3. ability to diagnose a child's needs for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__

____

1 = minimal
2 = adequate
3 = outstanding

	Reading	Writing	Speaking	Listening
4. knowledge of a variety of approaches and materials for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__
5. ability to select appropriate materials for each student for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__
6. ability to use "lecture approach" (for example giving class directions, explanations etc.) to help students learn for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__

____

1 = minimal
2 = adequate
3 = outstanding

	Reading	Writing	Speaking	Listening
7. ability to have the child use reading material to help him learn for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__
8. ability to use discussion to help students learn for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__
9. ability to use audio-visual materials (movies, filmstrips, displays) to help students learn for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__

1 = minimal
2 = adequate
3 = outstanding

	Reading	Writing	Speaking	Listening
10. ability to use observational techniques to help students learn for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__
11. ability to provide practice (not just workbook pages) as a technique to help students learn for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__
12. an awareness of his own learning and teaching style for example	1__2__3__	1__2__3__	1__2__3__	1__2__3__

____

.1 = minimal
2 = adequate
3 = outstanding

	Reading	Speaking	Listening
13. an acceptance of the validity of other learning and teaching styles	1__2__3__	1__2__3__	1__2__3__
for example			
14. a willingness to attempt more than one learning and teaching style i.e. willingness to take risks	1__2__3__	1__2__3__	1__2__3__
for example			
15. a commitment to seek and use a multiplicity of learning and teaching styles	1__2__3__	1__2__3__	1__2__3__
for example			

This check list was filled out by: student teacher___master teacher___supervisor___ (check one)

APPENDIX B

COMPUTER PROGRAMS USED IN THE INFORMATION SYSTEM

Programs for METEP generalists: MASTER

STUDENT

STUDENT1

PC

Programs for METEP specialists: RATER

SPECIAL

SPECIA

SPECPC

IASPEC

PCSPEC

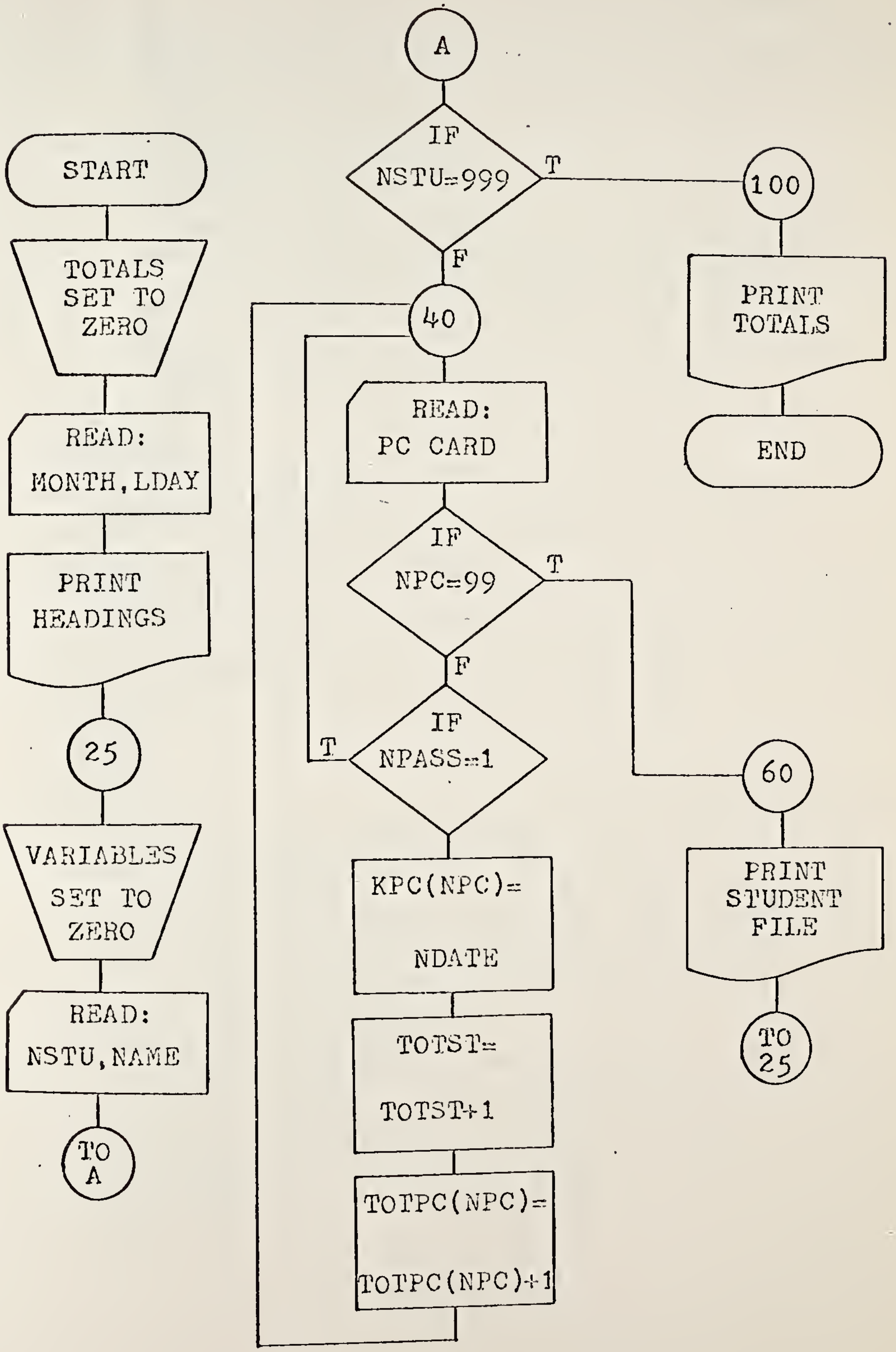
Program: MASTER

The program was designed to print out a master list with the generalist's name down the side and the PC numbers across the top. The date the PC was passed was entered into the array along with the total number of PCs passed per student and per PC. The printout was to be used by the students to check their records and to compare themselves with other students and by the staff to gain an overview of the progress of the students and the PCs.

Information was collected on the PC questionnaire completed by the generalist and his rater whenever a PC was attempted.

A flow chart explaining the logic of the program, a listing of the program, and a sample page of printout are included.

MASTER


START
TOTALS SET TO ZERO
READ: MONTH, LDAY
PRINT HEADINGS
25
VARIABLES SET TO ZERO
READ: NSTU, NAME
TO A
A
IF NSTU=999
T
F
40
READ: PC CARD
IF NPC=99
T
F
IF NPASS=1
T
KPC(NPC)= NDATE
TOTST= TOTST+1
TOTPC(NPC)= TOTPC(NPC)+1
100
PRINT TOTALS
END
60
PRINT STUDENT FILE
TO 25

```
FTN5.48                                                   09/20/70
      PROGRAM MASTER
C          PROGRAM DESIGNED TO PRODUCE LIST WITH STUDENT NAMES, DATE PCS
C          PASSED, TOTAL PER STUDENT AND PER PC
C          INPUT DATA INCLUDES-
C             DATE PROGRAM IS RUN,MONTH (1A5), LDAY(1I2)
C             STUDENT NUMBER,NSTU(1I3)
C             STUDENT NAME,NSTU(1A8)
C             PC NUMBER, NPC (1I2)
C             DATE PC PASSED, NDATE (1I3)
C             WHETHER STUDENT PASSED OR FAILED, NPASS (1I1), PASS=2
C          CALCULATED VARIABLES INCLUDE-
C             TOTAL PCS PASSED BY EACH STUDENT, TOTST (1F3.0)
C             TOTAL NUMBER OF STUDENTS PASSING EACH PC,TOTPC (27F4.0)
C          PROGRAM WRITTEN FOR 27 PCS, UNLIMITED STUDENTS
C          ADDITIONAL PCS ONLY FORMAT PROBLEM
      DIMENSION KPC(27),TOTPC(27)
C          VARIABLES FOR LAST LINE (TOTALS) SET TO ZERO
      DO 10 I=1,27
      TOTPC(I)=0.0
   10 CONTINUE
C     DATE PROGRAM BEING RUN READ AND PRINTED IN TITLE
      READ(60,20) MONTH,LDAY
   20 FORMAT(1A5,1X,1I2)
      WRITE(61,22) MONTH,LDAY
   22 FORMAT(1X,*MASTER LIST FOR *,1A5,1X,1I2,//)
C     COLUMN HEADINGS FOR  LIST PRINTED
      WRITE(61,24)
   24 FORMAT (1X,*NO. NAME      1  2  3  4  5  6  7  8  9 10
     111 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 2
     227 TOT.*,//)
C          VARIABLES USED FOR EACH STUDENT SET TO ZERO
   25 TOTST=0.0
      NSTU=0
      NAME=8H
      DO 28 I=1,27
      KPC(I)=0
   28 CONTINUE
C     TITLE CARD FOR STUDENT,S FILE READ, ONLY FIRST 8 LETTERS OF NAME
C     MORE COULD BE ADDED IF FORMAT OF LIST CHANGED
      READ(60,30) NSTU,NAME
   30 FORMAT(1I3,1X,1A8)
C     IF STATEMENT TO READ DUMMY STUDENT NUMBER (999) AT END OF DATA DECK
      IF (NSTU.EQ.999) GO TO 100
C     INDIVIDUAL CARD PER PC FILED BEHIND STUDENTS TITLE CARD
C          IF STATEMENT TO END DATA DECK,WRITE OUT TOTALS FOR ALL STUDENTS
      IF(NSTU.EQ.999) GO TO 100
   40 READ(60,50)NPC,NDATE,NPASS
   50 FORMAT(9X,1I2,58X,1I3,2X,1I1)
C     IF STATEMENT TO FIND DUMMY PC CARD (99) AT END OF STUDENT,S FILE
      IF (NPC.EQ.99) GO TO 60
C     IF STATEMENT TO SKIP PCS FAILED,READ THE NEXT PC CARD
      IF(NPASS.EQ.1) GO TO 40
C     DATE PC PASSED BECOMES  VALUE IN PC ARRAY (27 PCS)
      KPC(NPC)=NDATE
C     TOTAL PCS PASS FOR THE STUDENT CALCULATED
      TOTST=TOTST+1.
```

```
FTN5.48                                                                    09/20/70
      C      TOTAL STUDENTS PASSING GIVEN PC(NPC) CALCULATED
             TOTPC(NPC)=TOTPC(NPC)+1.
      C       NEW PC CARD READ
             GO TO 40
      C      IF STUDENTS,S PC FILE COMPLETE,NUMBER,NAME,DATES PASSED AND TOTAL
      C      WRITTEN OUT
          60 WRITE(61,70) NSTU,NAME,(KPC(I),I=1,27),TOTST
          70 FORMAT (1X,1I3,1X,1A8,27I4,1X,1F3.0,//)
      C      NEW STUDENT FILE BEGUN
             GO TO 25
      C      IF ALL STUDENTS FILES FINISHED,TOTALS PER PC WRITTEN OUT
         100 WRITE(61,110) (TOTPC(I),I=1,27)
         110 FORMAT(1X,*TOTAL PER PC*,27F4.0)
      C      PROGRAM COMPLETE
             GO TO 900
         900 STOP
      C      AFTER END AND FORTRAN CARDS.DATA STACKED AS FOLLOWS-
      C      A. MONTH AND DAY (1 CARD, NOT REPEATED)
      C      B. STUDENT NUMBER AND NAME CARD
      C      C. PC CARD (UP TO 27 PASSED,NPASS=2, INFINITE NOT PASS,NPASS=1)
      C      D. DUMMY PC (NPC=99) TO END STUDENT,S FILE
      C      E. REPEAT B,C,D SEQUENCE INDEFINIETLY
      C      F. DUMMY STUDENT NUMBER (NSTU=999) TO FINISH DATA DECK
             END
```

```
MASTER LIST FOR   MAY  1

NO. NAME       1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  2 7 TOT.

110 BEGLEY   223 313 312 316 316 217 302 305 217 219 223 218 319 302 414 304 317 309 413 415 312 312 311 309 309 313 414  27

115 BENNOTTI 316 313 316 426 320 316 426 415 316 317 319 316   0 320 320 414 317 320 320 428 320 414 320 414 320 414 428  26

125 BOZEK    217 313 204 226 227 226 310 306 213 312 302 218 415 302 312 305 317 310 312 415 316 312 305 306 310 316 415  27

130 CANAVAN  224 313 317 302 311 219 304 316 415 226 315 309 414 304 317 415 317 223 303 413 302 309 415 311 309 415 414  27

135 DELASCO  311 313 311 415 219 304   0 413 220 310 312 223 319 310 414 415 317 320 415 410 312 415 320 320 320 320 410  26

140 DITRAPAN 316 317 309 319 218 311 320 318 217 304 302 318 303 317 220 319 317 223 311 303 318 317 309 309 415 316 318  27

143  DONOVAN 218 313 415 413 415 302 319 320 304 413 317 311 412 304 318 320 317 320 317 312 312 317 320 317 319 413 413  27

145 DRYER    316 319 413 414 319 320 414 309 303 319 319 320 310 310 414 320 317 414 311 310 320 414 320 320 320 414 319  27

170 GREEN    415 313 320 416 320 318 415 320 306 320 415 320 415 416 320 415 317 415 320 415 312 319 316 318 312 416 320  27

175 HAGGERTY 309 313 320 318 415 312   0 415 312 312 318 320 316 309 318 318 317 311   0 414 331 320 414 416 319 415   0  24

180 HASS     303 313 320 414 310 317 319 319 220 310 415 303 415 415 320 316 317 312 319 413 320 319 309 309 320 320 414  27

190 JABLONSK 209 313 316 209 205 302 302 311 218 302 302 217 316 226 302 309 317 311 309 316 317 319 309 317 316 317 319  27

195 JENKINS  212 313 316 312 218 212 316 310 217 223 311 304 414 305 302 226 317 223 312 318 317 316 302 316 303 316 413  27

TOTAL PER PC  13  13  13  13  13  13  11  13  13  13  13  13  12  13  13  13  13  13  12  13  13  13  13  13  13  13  12
```

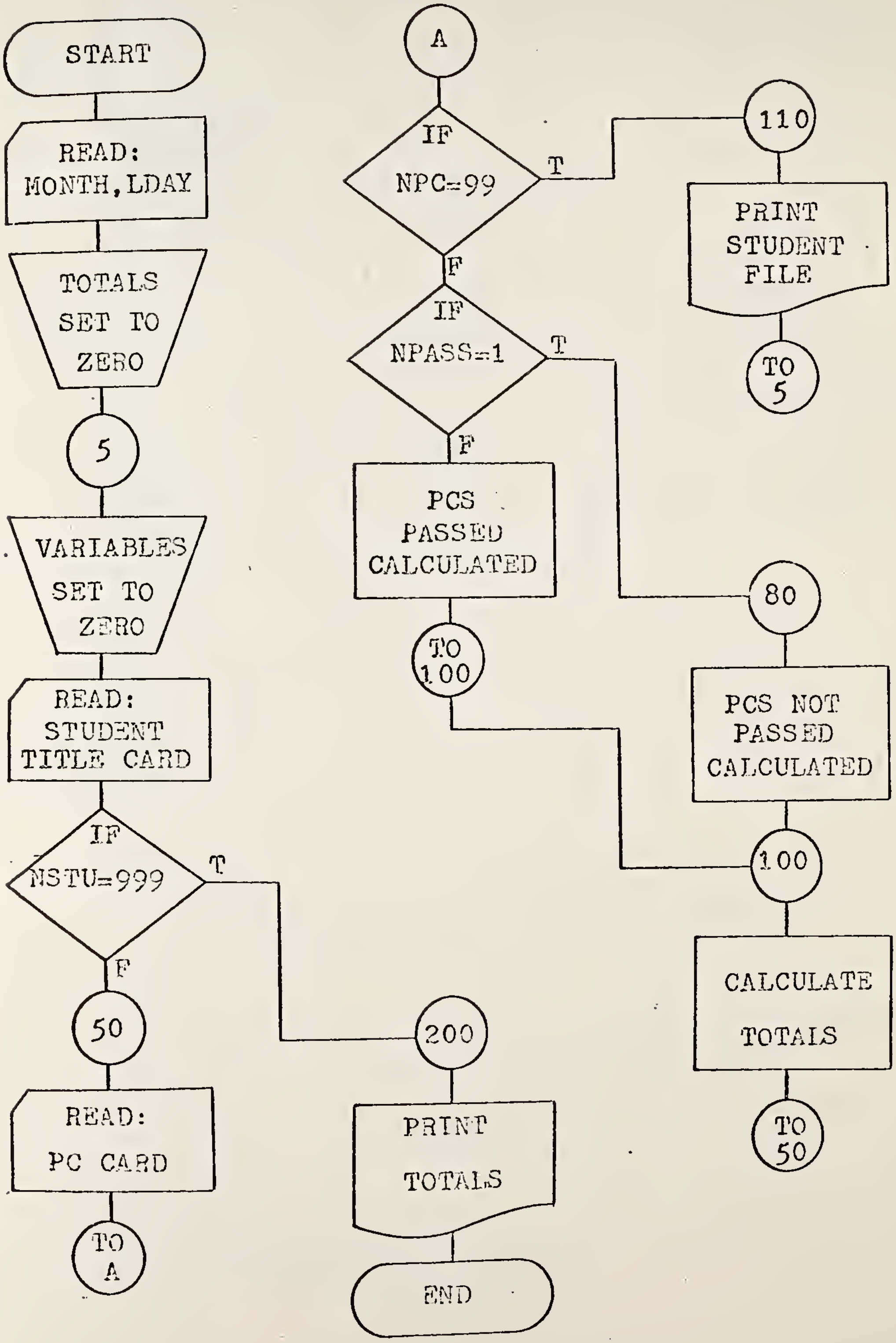
Program: STUDENT

The program was designed to provide a single page of printout on each generalist listing the dates of PCs passed, the number of unsuccessfully attempted PCs and the performance level for the successful PCs. Printout was to be used by the staff for counseling purposes. A summary sheet also provided the staff with an overview of the PCs in terms of student performance.

Information was collected on the PC questionnaire completed by the generalist and his rater whenever a PC was attempted.

A flow chart explaining the logic of the program, a listing of the program, and a sample page of printout are included.

STUDENT


START
READ: MONTH, LDAY
TOTALS SET TO ZERO
5
VARIABLES SET TO ZERO
READ: STUDENT TITLE CARD
IF NSTU=999
T
F
50
READ: PC CARD
TO A
A
IF NPC=99
T
F
IF NPASS=1
T
F
PCS PASSED CALCULATED
TO 100
200
PRINT TOTALS
END
110
PRINT STUDENT FILE
TO 5
80
PCS NOT PASSED CALCULATED
100
CALCULATE TOTALS
TO 50

```
      PROGRAM STUDENT
C     PROGRAM DESIGNED TO PROVIDE SINGLE PAGE OF INF/STUDENT
C     ALSO NUMBER PASSING,FAILING.AND LEVELS OF PERFORMANCE/PC
C     PROGRAM WRITTEN FOR 27 PCS.UNLIMITED STUDENTS
C     ADDITIONAL PCS ONLY FORMAT PROBLEM
C     DATA FOR TOTAL PROGRAM  INCLUDES DATE PROGRAM RUN (MONTH,IA5,DAY,1I2
C     DATA FOR STUDENT,S FILE INCLUDES-
C     STUDENT NUMBER(NSTU,1I3)
C     STUDENT NAME (NAME,3A8)
C     PCS NOT PASSED,NPASS=1 (JPC,27I3)
C     TOTAL PCS NOT PASSED (TOTNP,1F3.0)
C     PCS PASSED ,NPASS=2,(KPC,27I3)
C     TOTAL PCS PASSED (TOTP,1F3.0)
C     TOTAL PCS ATTEMPTED (TOTAT,1F3.0)
C     LEVEL OF PERFORMANCE OF EACH PC PASSED (NPERF,27I1)
C     TOTAL NO. OF EACH PERFORMANCE LEVEL (KFREQ,3I2)
C    ALSO TOTALS CALCULATED AND PRINTED OUT ON SEPARATE PAGE-
C     TOTAL NOT PASSED/PC,TTOTNP,1F4.0).AND GRAND TOTAL(SUMTNP,1F4.0)
C     TOTAL PASSED /PC(TTOTP,1F4.0)AND GRAND TOTAL(SUMTP,1F4.0)
C     TOTAL ATTEMPTED/PC(TTOTAT,IF4.0)AND GRAND TOTAL(SUMAT,1F4.0)
C     TOTAL OF EACH PERF. LEVEL/PC(LFREQ,81I4)+GRAND TOTAL(JFREQ,3I4)
C     NUMBER OF STUDENTS REPORTING (SN,1F4.0)
C     AVERAGE NUMBER OF PCS PASSED PER STUDENT (AVG,IF5.2)
      DIMENSION KPC(27),JPC(27), NPERF(27),TTOTNP(27),TTOTP(27),TTOTAT(
     127),LFREQ(4,27),KFREQ(4),JFREQ(4),NAME(3)
C           DATE PROGRAM BEING RUN READ IN
      READ(60,20) MONTH,LDAY
   20 FORMAT(1A5,1X,1I2)
C           CALCULATED VARIABLES FOR LAST PAGE SET TO ZERO
      SN=0.
      DO 2 I=1,27
      TTOTNP(I)=0.0
      TTOTP(I)=0.0
      TTOTAT(I)=0.0
      DO 2 J=1,4
      LFREQ(I,J)=0
    2 CONTINUE
      DO 3 J=1,4
      JFREQ(J)=0
    3 CONTINUE
C          VARIABLES FOR EACH STUDENT PAGE SET TO ZERO
   05 SUMTNP=SUMTP=SUMTAT=0.0
      TOTNP=0.0
      TOTP=0.0
      TOTAT=0.0
      DO 10 I=1,27
      KPC(I)=0
      JPC(I)=0
      NPERF(I)=0
   10 CONTINUE
      DO 11 J=1,4
      KFREQ(J)=0
   11 CONTINUE
C     STUDENT TITLE CARD READ
   30 READ(60,43) NSTU,(NAME(II),II=1,3)
   43 FORMAT(1I3,1X,2A8,1A4)
```

```
C     IF STATEMENT TO READ DUMMY STUDENT NUMBER (999) AT END OF DATA DECK
      IF(NSTU.GT.998)GO TO 200
C     INDIVIDUAL CARD PER PC FILED BEHIND STUDENTS TITLE CARD
   50 READ(60,60) NPC,NDATE,NPASS,NPERF(NPC)
   60 FORMAT (9X,1I2,58X,1I3,2X,1I1,1I1)
C     IF STATEMENT TO FIND DUMMY PC CARD (99) AT END OF STUDENT,S FILE
      IF(NPC.GT.98) GO TO 110
C      IF STATEMENTS TO SEPARATE PASSES, NOT PASSES
      IF (NPASS.EQ.1) GO TO 80
      IF (NPASS.EQ.2) GO TO 90
C      NOT PASS CALCULATED AS FREQUENCY COUNT
   80 JPC(NPC)=JPC(NPC)+1
      TOTNP=TOTNP+1.
      TTOTNP(NPC)=TTOTNP(NPC)+1.
      GO TO 100
C      FOR PASSES, DATE PC RETURNED BECOMES VALUE IN ARRAY
   90 KPC(NPC)=NDATE
      TOTP=TOTP+1.
      TTOTP(NPC)=TTOTP(NPC)+1.
  100 TOTAT=TOTAT+1.
      TTOTAT(NPC)=TTOTAT(NPC)+1.
C     TOTALS OF EACH LEVEL OF PERFORMANCE CALCULATED/STUDENT + /PC
C           1 ADDED TO EACH LEVEL TO AVOID PROBLEM OF ZEROS
      J=NPERF(NPC)+1
      KFREQ(J)=KFREQ(J)+1
      LFREQ(J,NPC)=LFREQ(J,NPC)+1
      JFREQ(J)=JFREQ(J)+1
C      NEW PC CARD READ
      GO TO 50
C     TITLE WRITTEN FOR EACH STUDENT,S PAGE
  110 WRITE(61,120) NSTU,(NAME(II),II=1,3),MONTH,LDAY
  120 FORMAT(1H1,*STUDENT FILE FOR *,1I3,2X,3A8,5X,1A5,2X,1I2,///)
      WRITE(61,130)
  130 FORMAT(14X,*  1   2   3   4   5   6   7   8   9  10  11  12  13  1
     14  15  16  17  18  19  20  21  22  23  24  25  26  27 TOT.*,//)
C     ALL INFORMATION PER STUDENT PRINTED OUT
      WRITE(61,141) (JPC(I),I=1,27),TOTNP
  141 FORMAT(1X,*  NOT PASSED*,27I4,1F4.0,//)
      WRITE(61,142) (KPC(I),I=1,27),TOTP,TOTAT
  142 FORMAT(1X,*  PASSED*,4X,27I4,1F4.0,//,* TOTAL PCS ATTEMPTED *,1F4.
     10,//)
      WRITE(61,143) (NPERF(I),I=1,27)
  143 FORMAT(1X,*  PERF.LEVEL*,27I4,//)
      WRITE(61,145) (KFREQ(J),J=2,4)
  145 FORMAT(1X,*TOTAL NUMBER AT EACH PERFORMANCE LEVEL*,//,10X,*MINIMAL
     1=*,1I4,*  ADEQUATE =*,1I4,*  OUTSTANDING =*,1I4,//)
C     NUMBER OF STUDENTS CALCULATED
      SN=SN+1.
C     VARIABLE TO BE RECALCULATED FOR NEXT STUDENT RESET TO ZERO
      GO TO 5
C     IF ALL STUDENT FILES COMPLETE,TOTALS CALCULATED
  200 DO 210 I=1,27
      SUMTNP=SUMTNP+TTOTNP(I)
      SUMTP=SUMTP+TTOTP(I)
      SUMTAT=SUMTAT+TTOTAT(I)
  210 CONTINUE
```

```
      AVG=SUMTP/SN
C     TOTALS PRINTED OUT
  220 WRITE(61,230) MONTH,LDAY,SN
  230 FORMAT(1H1,*TOTALS/PC FROM STUDENT FILE.PROGRAM FOR *,1A5,2X,1I2,
     1* TOTAL OF*,1F4.0,* STUDENTS REPORTING*,///,14X,*  1   2   3   4
     2 5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  2
     31  22  23  24  25  26  27 TOT.*,//)
      WRITE(61,241) (TTOTNP(I),I=1,27),SUMTNP
  241 FORMAT(5X,*NOT PASS*,27F4.0,1F4.0,//)
      WRITE(61,242) (TTOTP(I),I=1,27),SUMTP
  242 FORMAT(7X,*PASSED*,27F4.0,1F4.0,//)
      WRITE(61,243) (TTOTAT(I),I=1,27),SUMTAT
  243 FORMAT(6X,*ATTEMPT*,27F4.0.1F4.0,//)
      WRITE(61,250)
  250 FORMAT(1X,*LEVELS OF PERFORMANCE-  1=MINIMAL, 2=ADEQUATE, 3=OUTSTA
     1NDING*,//)
C           2,4 BEING WRITTEN OUT SINCE 1=ZEROS OR BLANKS
      DO 270 IQ=2,4
      J=IQ-1
      WRITE(61,260) J,(LFREQ(IQ,I),I=1,27)
  260 FORMAT(10X,1I1,2X,27I4,//)
  270 CONTINUE
      WRITE(61,280) (JFREQ(J),J=2,4),AVG
  280 FORMAT(1X,*NUMBER OF MINIMAL PERF.ON ALL PCS*,1I4,*  OF ADEQUATE*,
     11I4,*  OF OUTSTANDING*,1I4,//,* ON THE AVERAGE, STUDENTS HAVE PASS
     2ED*,1F6.2,* PCS*)
      STOP
C             DATA CARDS, FILED EXACTLY AS IN MASTER, ARE AS FOLLOWS-
C             A. DATE PROGRAM RUN
C             B. STUDENT TITLE CARD
C             C. PCS CARDS FOR THAT STUDENT
C             D. DUMMY PC CARD (NPC=99)
C             E. REPEAT OF THE STUDENT FILE (B,C,D) UNTIL NO MORE STUDENTS
C             F. DUMMY STUDENT TITLE CARD (NSTU=999)
      END
```

```
TOTALS/PC FROM STUDENT FILE PROGRAM FOR    MAY    1 TOTAL OF  13 STUDENTS REPORTING

             1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  2 1 22  23  24  25  26  27 TOT.

   NOT PASS  2   0   2   5   2   0   4   7   3   1   1   0   0   2   0   6   0   2   2   0   1   3   3   1   2   0   0  49

     PASSED 13  13  13  13  13  13  11  13  13  13  13  13  12  13  13  13  13  13  12  13  13  13  13  13  13  13  12 346

    ATTEMPT 15  13  15  18  15  13  15  20  16  14  14  13  12  15  13  19  13  -0  14  13  14  16  16  14  15  13  12 380

LEVELS OF PERFORMANCE-  1=MINIMAL, 2=ADEQUATE, 3=OUTSTANDING

        1    2   0   2   5   5   1   2   6   4   4   1   5   4   3   3   3   0   2   6   2   2   3   3   4   5   2   2

        2    7   0   6   5   6  12   8   7   8   8   6   6   8   4   7   7   0   9   4   8  10   6   9   9   8  10   8

        3    4   1   4   3   2   0   1   0   1   1   6   2   0   6   3   3   0   2   2   3   1   4   1   0   0   1   2

NUMBER OF MINIMAL PERF.ON ALL PCS  81  OF ADEQUATE 186  OF OUTSTANDING  53
ON THE AVERAGE, STUDENTS HAVE PASSED 26.62 PCS
```

```
STUDENT FILE FOR 180  HASS          HELENE            MAY  1

               1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27 TOT.

 NOT PASSED    0   0   1   0   1   0   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3

 PASSED      303 313 320 414 310 317 319 319 220 310 415 303 415 415 320 316 317 312 319 413 320 319 309 309 320 320 414  27
TOTAL PCS ATTEMPTED   30

 PERF.LEVEL    3  -0   2   1   2   1   2   1   1   2   2   1   1   3   1   2  -0   2   1   2   2   2   2   2   1   2   1

TOTAL NUMBER AT EACH PERFORMANCE LEVEL
        MINIMAL=  10  ADEQUATE =  13  OUTSTANDING =   2
```

Program: STUDENT$_1$

The program was designed to provide a single page of printout on each generalist with the date of PCs passed and the number of unsuccessful attempts per PC. The printout was designed for the students themselves in order that they might check their own records against the program records.

Information was collected on the PC questionnaire completed by the generalist and his rater whenever a PC was attempted.

A listing of the program and a sample page of printout are included. For a flow chart explaining the logic of the program please see the flow chart for STUDENT.

```
FTN5.4B                                                                    09/20/70
      PROGRAM STUDENT1
C        VARIATION OF PROGRAM TO GIVE PASS/NOT PASS DATA TO STUDENTS
C     PROGRAM DESIGNED TO PROVIDE SINGLE PAGE OF INF/STUDENT
C     ALSO NUMBER PASSING,FAILING.AND LEVELS OF PERFORMANCE/PC
C     PROGRAM WRITTEN FOR 27 PCS,UNLIMITED STUDENTS
C     ADDITIONAL PCS ONLY FORMAT PROBLEM
C     DATA FOR TOTAL PROGRAM  INCLUDES DATE PROGRAM RUN (MONTH,1A5,DAY,1I2)
C     DATA FOR STUDENT,S FILE INCLUDES-
C     STUDENT NUMBER(NSTU,1I3)
C     STUDENT NAME  (NAME,3A8)
C     PCS NOT PASSED,NPASS=1 (JPC,27I3)
C     TOTAL PCS NOT PASSED (TOTNP,1F3.0)
C     PCS PASSED ,NPASS=2,(KPC,27I3)
C     TOTAL PCS PASSED (TOTP,1F3.0)
C     TOTAL PCS ATTEMPTED (TO AT,1F3.0)
C     LEVEL OF PERFORMANCE OF EACH PC PASSED (NPERF,27I1)
C     TOTAL NO. OF EACH PERFORMANCE LEVEL (KFREQ,3I2)
C    ALSO TOTALS CALCULATED AND PRINTED OUT ON SEPARATE PAGE-
C     TOTAL NOT PASSED/PC,TTOTNP,1F4.0),AND GRAND TOTAL(SUMTNP,1F4.0)
C     TOTAL PASSED /PC(TTOTP,1F4.0)AND GRAND TOTAL(SUMTP,1F4.0)
C     TOTAL ATTEMPTED/PC(TTOTAT,1F4.0)AND GRAND TOTAL(SUMAT,1F4.0)
C     TOTAL OF EACH PERF. LEVEL/PC(LFREQ,81I4)+GRAND TOTAL(JFREQ,3I4)
C     NUMBER OF STUDENTS REPORTING (SN,1F4.0)
C     AVERAGE NUMBER OF PCS PASSED PER STUDENT (AVG,1F5.2)
      DIMENSION KPC(27),JPC(27), NPERF(27),TTOTNP(27),TTOTP(27),TTOTAT(
     127),LFREQ(4,27),KFREQ(4),JFREQ(4),NAME(3)
C     CALCULATED VARIABLES SET TO ZERO,BOTH ARRAYED AND UNARRAYED
C     DATE PROGRAM BEING RUN READ,DATE PRINTED ON EACH STUDENT,S PAGE
      READ(60,20) MONTH,LDAY
   20 FORMAT(1A5,1X,1I2)
      SN=0.
      DO 2 I=1,27
      TTOTNP(I)=0.0
      TTOTP(I)=0.0
      TTOTAT(I)=0.0
      DO 2 J=1,4
      LFREQ(I,J)=0
    2 CONTINUE
      DO 3 J=1,4
      JFREQ(J)=0
    3 CONTINUE
C           VARIABLES FOR EACH STUDENT PAGE SET TO ZERO
   05 SUMTNP=SUMTP=SUMTAT=0.0
      TOTNP=0.0
      TOTP=0.0
      TOTAT=0.0
      DO 10 I=1,27
      KPC(I)=0
      JPC(I)=0
      NPERF(I)=0
   10 CONTINUE
      DO 11 J=1,4
      KFREQ(J)=0
   11 CONTINUE
C     STUDENT TITLE CARD READ
   30 READ(60,43) NSTU,(NAME(II),II=1,3)
```

```
       43 FORMAT(1I3,1X,2A8,1A4)
C         IF STATEMENT TO READ DUMMY STUDENT NUMBER (999) AT END OF OATA DECK
          IF(NSTU.GT.998)GO TO 200
C         INDIVIDUAL CARD PER PC FILED BEHIND STUDENTS TITLE CARD
       50 READ(60,60) NPC,NDATE,NPASS,NPERF(NPC)
       60 FORMAT (9X,1I2,58X,1I3,2X,1I1,1I1)
C         IF STATEMENT TO FIND DUMMY PC CARD (99) AT END OF STUDENT,S FILE
          IF(NPC.GT.98) GO TO 110
C          IF STATEMENTS TO SEPARATE PASSES, NOT PASSES
          IF (NPASS.EQ.1) GO TO 80
          IF (NPASS.EQ.2) GO TO 90
C          NOT PASS CALCULATED AS FREQUENCY COUNT
       80 JPC(NPC)=JPC(NPC)+1
          TOTNP=TOTNP+1.
          TTOTNP(NPC)=TTOTNP(NPC)+1.
          GO TO 100
C          FOR PASSES, DATE PC RETURNED BECOMES VALUE IN ARRAY
       90 KPC(NPC)=NDATE
          TOTP=TOTP+1.
          TTOTP(NPC)=TTOTP(NPC)+1.
      100 TOTAT=TOTAT+1.
          TTOTAT(NPC)=TTOTAT(NPC)+1.
C         TOTALS OF EACH LEVEL OF PERFORMANCE CALCULATED/STUDENT + /PC
C              1 ADDED TO ARRAY TO AVOID PROBLEMS OF BLANKS OR ZEROS
          J=NPERF(NPC)+1
          KFREQ(J)=KFREQ(J)+1
          LFREQ(J,NPC)=LFREQ(J,NPC)+1
          JFREQ(J)=JFREQ(J)+1
C          NEW PC CARD READ
          GO TO 50
C         TITLE WRITTEN FOR EACH STUDENT,S PAGE
      110 WRITE(61,120) NSTU,(NAME(II),II=1,3),MONTH,LDAY
      120 FORMAT(1H1,*STUDENT FILE FOR *,1I3,2X,3A8,5X,1A5,2X,1I2,////)
          WRITE(61,130)
      130 FORMAT(14X,*  1   2   3   4   5   6   7   8   9  10  11  12  13  1
         14  15  16  17  18  19  20  21  22  23  24  25  26  27 TOT,*,//)
C         ALL INFORMATION PER STUDENT PRINTED OUT
          WRITE(61,141) (JPC(I),I=1,27),TOTNP
      141 FORMAT(1X,*  NOT PASSED*,27I4,1F4.0,//)
          WRITE(61,142) (KPC(I),I=1,27),TOTP
      142 FORMAT(1X,*  PASSED*,4X,27I4,1F4.0,//)
C         NUMBER OF STUDENTS CALCULATED
          SN=SN+1.
C         VARIABLE TO BE RECALCULATED FOR NEXT STUDENT RESET TO ZERO
          GO TO 5
      200 STOP
C                DATA CARDS, FILED EXACTLY AS IN MASTER, ARE AS FOLLOWS-
C                A. DATE PROGRAM RUN
C                B. STUDENT TITLE CARD
C                C. PCS CARDS FOR THAT STUDENT
C                D. DUMMY PC CARD (NPC=99)
C                E. REPEAT OF THE STUDENT FILE (B.C.D) UNTIL NO MORE STUDENTS
C                F. DUMMY STUDENT TITLE CARD (NSTU=999)
          END
```

```
5.3DS  STUDENT1                                                                      09/20/70        ED

                                                        IDENT     STUDENT1
        PROGRAM LENGTH                        01077
        ENTRY POINTS     STUDENT1             00545
        EXTERNAL SYMBOLS
                         Q8QENTRY
                         THEND.
                         Q8QSTOPS
                         Q8QUICT.
                         TSH.
                         STH.
                         QNSINGL.
          00132 SYMBOLS
LOAD
RUN,1,1000
```

```
STUDENT FILE FOR 180  HASS          HELENE              MAY   1

                1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27 TOT.

 NOT PASSED     0   0   1   0   1   0   0   1   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3

 PASSED       303 313 320 414 310 317 319 319 220 310 415 303 415 415 320 316 317 312 319 413 320 319 309 309 320 320 414  27
```

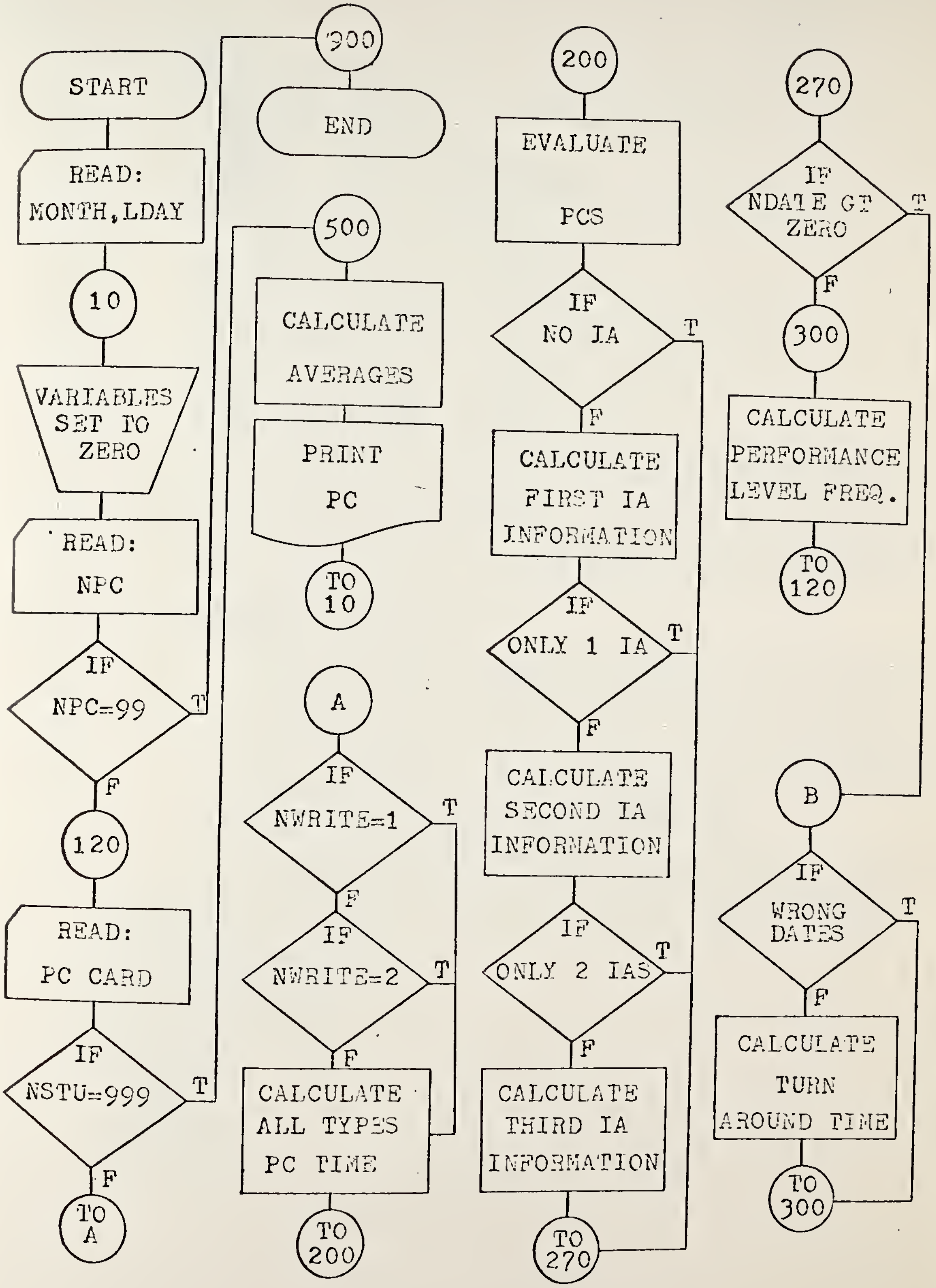
Program: PC

The program was designed to provide a two-page printout for each PC listing the time taken by students for the PC, their evaluation of it on the teaching hierarchy, information on each IA used including time, evaluation, whether it was used alone or with other IAs, number passing the PC using the IA and their performance level if they passed. The printout also included the average rating time, the turn around time in days, the frequency of each performance level and the number passing and not passing. The printout was to be used by the staff in monitoring program operation and in making curriculum changes.

Information was collected on the PC questionnaire completed by the generalist and rater whenever a PC was attempted.

A flow chart explaining the logic of the program, a listing of the program, and a sample of the printout are included.

PC


START
READ: MONTH,LDAY
10
VARIABLES SET TO ZERO
READ: NPC
IF NPC=99
T
F
120
READ: PC CARD
IF NSTU=999
T
F
TO A
900
END
500
CALCULATE AVERAGES
PRINT PC
TO 10
A
IF NWRITE=1
T
F
IF NWRITE=2
T
F
CALCULATE ALL TYPES PC TIME
TO 200
200
EVALUATE PCS
IF NO IA
T
F
CALCULATE FIRST IA INFORMATION
IF ONLY 1 IA
T
F
CALCULATE SECOND IA INFORMATION
IF ONLY 2 IAS
T
F
CALCULATE THIRD IA INFORMATION
TO 270
270
IF NDATE GT ZERO
T
F
300
CALCULATE PERFORMANCE LEVEL FREQ.
TO 120
B
IF WRONG DATES
T
F
CALCULATE TURN AROUND TIME
TO 300

```
FTN5.4B                                                                09/20/70
              PROGRAM PC
C                 PROGRAM DESIGNED TO PROVIDE 2 PAGES OF PRINTOUT PER PC
C                  INPUT DATA INCLUDES
C                    DATE PROGRAM BEING RUN, MONTH(1A5), LDAY(1I2)
C                    PC NUMBER, NPC(1I2)
C                    STUDENTS NUMBER, NSTU(1I3)
C                    DATE PC PASSED IN, KDATE (1I4)
C                    WHETHER PC WAS WRITTEN OUT OR TALKED OUT, NWRITE(1I1)
C                    TIME TAKE FOR PC, TIMPC(1F3.0)
C                    EVALUATION OF PC ON HIERARCHY, LEVPC(I)  (7I1)
C                    FIRST IA TYPE TAKE, IAA(1I3)
C                    TIME FOR FIRST IA, TIMIAA(1F3.0)
C                    EVALUATION OF FIRST IA,LEVIAA(1I1)
C                    SAME INFORMATION FOR SECOND IA,IAB,TIMIAB,LEVIAB
C                    SAME INFORMATION FOR THIRD IA,IAC,TIMIAC,LEVIAC
C                    DATE PC RETURNED TO STUDENT, NDATE(1I4)
C                    PC PASSED/NOT PASSED, NPASS(1I1)
C                    PERFORMANCE LEVEL OF PASSED PC,NPERF(1I1)
C                    TIME TAKEN TO RATE PC,RTIME(1F2.0)
C                  CALCULATED VARIABLES INCLUDE
C                    IF PC WRITTEN OUT,WTIME, TOTAL TIME TAKEN,SUMWT, NUMBER OF
C                       STUDENTS,WTN,LONGEST TIME REPORTED,BIGWT,SHORTEST TIME,
C                       SMLWT, AVERAGE TIME,AVGWT
C                    IF PC TALKED OUT,TTIME,TOTAL  TIME,SUMTT, NUMBER OF STUDENTS
C                      TTN,LONGEST TIME,BIGTT, SHORTEST TIME,SMLTT, AVERAGE,AVGTT
C                    IF PC NEITHER WRITTEN OR TALKED OUT, TIME, TOTAL TIME, SUMT,
C                       NUMBER OF STUDENTS,TN, LONGEST TIME,BIGT,SHORTEST,SMLT,
C                       AVERAGE TIME,AVGT
C                    FOR EACH OF 3 REPORTED IAS
C                       TOTAL TIME, SUMIAT(K)  WHEN K=IA TYPE
C                       NUMBER OF STUDENTS, TNIA(K), AVERAGE TIME,AVGIAT, EVALUATION
C                       OF IA,LFREQ(K,L),FREQUENCY OF PASS/NOT PASS,MFREQ(K,M),
C                       FREQUENCY OF EACH PERFORMANCE LEVEL,MMFREQ(K,MM), NUMBER USING I
C                       IA ALONE,ONEIA(K), USING IT WITH ONE OTHER IA,TWOIA(K), USING IT
C                     WITH 2 OTHER IAS,THRIA(K)
C                    FOR TURN AROUND TIME IN DAYS -  DIFFERENCE BETWEEN DATES,DATEDF,SUM
C                         OF DATES,SUMDTDF, AVERAGE,AVGDTDF. NUMBER OF CASES,TNDTDF,
C                      LONGEST TIME,BIGDD, SHORTEST TIME,SMLDD
C                    FOR FREQUENCIY OF PASS/NOT PASS,NFREQ(NPASS)
C                    FOR FREQUENCY OF PERFORMANCE LEVEL,NNFREQ(NPERF)
C                    FOR RATING TIME,RTIME, SUM  OF TIMES,SUMRT, NUMBER REPORTING,RATN,
C                         AVERAGE REATING TIME,AVGRT
              DIMENSION LEVPC(7),SUMEV(7,4),TIMIA(11),SUMIAT(11),TNIA(11),AVGIAT
             1(11),LFREQ(11,4),ONEIA(11),TWOIA(11),THRIA(11),MFREQ(11,3),MMFREQ
             2(11,4),NFREQ(3),NNFREQ(4)
C             READ DATE PROGRAM RUN
              READ (60,100) MONTH,LDAY
          100 FORMAT(1A5,1X,1I2)
C             SET ALL VARIABLES TO ZERO
           10 TIMPC=0.
              WTIME=0.
              SUMWT=0.0
              WTN=0,
              BIGWT=0.
              SMLWT=999,
              AVGWT=0.0
```

```
      TTIME=0.
      SUMTT=0.0
      TTN=0.
      BIGTT=0.
      SMLTT=999.
      AVGTT=0.0
      TIME=0.
      SUMT=0.0
      TN=0.
      BIGT=0.
      SMLT=999.
      AVGT=0.0
      KDATE=0
      NDATE=0
      DATEDF=0.
      SUMDTDF=0.
      TNDTDF=0.
      BIGDD=0.
      SMLDD=0.
      AVGDTDF=0.0
      NPASS=0
      NPERF=0
      RTIME=0.0
      SUMRT=0.0
      RATN=0.0
      AVGRT=0.0
      DO 20 I=1,7
      DO 20 J=1,4
      SUMEV(I,J)=0.0
   20 CONTINUE
      DO 30 K=1,11
      TIMIA(K)=0.
      SUMIAT(K)=0.
      TNIA(K)=0.
      AVGIAT(K)=0.0
      ONEIA(K)=0.
      TWOIA(K)=0.
      THRIA(K)=0.
      DO 30 L=1,4
      LFREQ(K,L)=0
   30 CONTINUE
      DO 35 K=1,11
      DO 35 M=1,3
      MFREQ(K,M)=0
   35 CONTINUE
      DO 40 K=1,11
      DO 40 MM=1,4
      MMFREQ(K,MM)=0
   40 CONTINUE
      DO 50 N=1,3
      NFREQ(N)=0
   50 CONTINUE
      DO 60 NN=1,4
      NNFREQ(NN)=0
   60 CONTINUE
C     READ PC TITLE CARD AT BEGINNING OF FILE
```

```
      READ(60,110) NPC
  110 FORMAT(9X,1I2)
C     IF STATEMENT USING DUMMY PC CARD (NPC=99) TO END PROGRAM
      IF (NPC.EQ.99) GO TO 900
  120 READ(60,130) NSTU,KDATE,NWRITE,TIMPC,(LEVPC(I),I=1,7),IAA,TIMIAA,
     1LEVIAA,IAB,TIMIAB,LEVIAB,IAC,TIMIAC,LEVIAC,NDATE,NPASS,NPERF,RTIME
  130 FORMAT(1I3,    1I4,5X,1I1,1X,1F3.0.2X,7I1,3X,1I2,3X,1F3.0,1I1,1X,1I
     12,3X,1F3.0,1I1,1X,1I2,3X,1F3.0,1I1,10X,1I4,2X,1I1,1I1,1F2.0)
C      IF STATEMENT TO END PC FILE WITH DUMMY STUDENT CARD (NSTU=999)
      IF (NSTU.EQ.999) GO TO 500
C     IF STATEMENTS TO SEPARATE TALKED OUT AND WRITTEN PC TIMES
      IF (NWRITE.EQ.1) GO TO 150
      IF (NWRITE.EQ.2) GO TO 160
      IF (NWRITE.EQ.3) GO TO 170
C     SUM AND NUMBER OF CASES CALCULATED FOR AVERAGING
  150 WTIME=TIMPC
      SUMWT=SUMWT+WTIME
      WTN=WTN+1.
      IF(WTIME.GT.BIGWT)BIGWT=WTIME
      IF(WTIME.LT.SMLWT.AND.WTIME.NE.0.0) SMLWT=WTIME
      GO TO 200
  160 TTIME=TIMPC
      SUMTT=SUMTT+TTIME
      TTN=TTN+1.
C     RANGE CALCULATED BY GETTING BIG AND SMALL
      IF(TTIME.GT.BIGTT) BIGTT=TTIME
      IF(TTIME.LT.SMLTT.AND.TTIME.NE.0.0) SMLTT=TTIME
      GO TO 200
  170 TIME=TIMPC
      SUMT=SUMT+TIME
      TN=TN+1.
      IF (TIME.GT.BIGT) BIGT=TIME
      IF (TIME.LT.SMLT.AND.TIME.NE.0.0) SMLT=TIME
C     DO LOOP TO SUM ANSWERS ON 7 EVALUATION QUESTIONS
      GO TO 200
  200 DO 210 I=1,7
C           1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
      J=LEVPC(I)+1
      SUMEV(I,J)=SUMEV(I,J)+1.
  210 CONTINUE
C     FIRST IA TYPE PUT INTO IA ARRAY
C      IF STATEMENT TO ELIMINATE ZERO IAS AND BLANKS
      IF (IAA.LT.1) GO TO 270
      K=IAA
C     FIRST IA TIME PUT INTO ARRAY
      TIMIA(K)=TIMIAA
C     TOTAL TIME FOR IA CALCULATED
      SUMIAT(K)=SUMIAT(K)+TIMIA(K)
C     NUMBER OF STUDENTS USING IA TYPE CALCULATED
      TNIA(K)=TNIA(K)+1.
C     FREQUENCY OF EACH EVLUATION RANKING CALCULATED
C           1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
      L=LEVIAA+1
      LFREQ(K,L)=LFREQ(K,L)+1
C      FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
C           1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
```

```
      M=NPASS+1
      MFREQ(K,M)=MFREQ(K,M)+1
C      FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
C          1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
      MM=NPERF+1
      MMFREQ(K,MM)=MMFREQ(K,MM)+1
C       IF STATEMENTS TO SEPARATE NUMBER OF IAS USED
      IF (IAB.EQ.0) GO TO 220
      IF (IAB.GT.0.AND.IAC.EQ.0) GO TO 230
      IF (IAC.GT.0) GO TO 235
  220 ONEIA(K)=ONEIA(K)+1.
      GO TO 270
  230 TWOIA(K)=TWOIA(K)+1.
      GO TO 237
  235 THRIA(K)=THRIA(K)+1.
C     IA TYPE(K) RESET TO ZERO SO SECOND IA CAN BE ADDED TO ARRAY
C          SEE FIRST IA FOR EXPANATION
  237 K=0
      K=IAB
      TIMIA(K)=TIMIAB
      SUMIAT(K)=SUMIAT(K)+TIMIA(K)
      TNIA(K)=TNIA(K)+1.
      L=LEVIAB+1
      LFREQ(K,L)=LFREQ(K,L)+1
C      FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
      M=NPASS+1
      MFREQ(K,M)=MFREQ(K,M)+1
C      FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
      MM=NPERF+1
      MMFREQ(K,MM)=MMFREQ(K,MM)+1
C     IF STATEMENT TO CALCULATE NUMBER OF STUDENTS TAKING ONLY TWO IAS
      IF(IAC) 240,240,250
  240 TWOIA(K)=TWOIA(K)+1.
      GO TO 270
  250 THRIA(K)=THRIA(K)+1.
C     SAME INFORMATION CALCULATED FOR THIRD IA TYPE
      K=0
      K=IAC
      TIMIA(K)=TIMIAC
      SUMIAT(K)=SUMIAT(K)+TIMIA(K)
      TNIA(K)=TNIA(K)+1.
      L=LEVIAC+1
      LFREQ(K,L)=LFREQ(K,L)+1
C      FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
      M=NPASS+1
      MFREQ(K,M)=MFREQ(K,M)+1
C      FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
      MM=NPERF+1
      MMFREQ(K,MM)=MMFREQ(K,MM)+1
      THRIA(K)=THRIA(K)+1.
C     IF STATEMENTS TO BYPASS DATA WITH MISSING DATES
  270 IF(NDATE)300,300,280
C          IF STATEMENT TO BYPASS DATES WHEN INDATE LATER THAN RETURN DAT
  280 IF(KDATE.GT.NDATE) GO TO 300
      IF(KDATE)300,300,290
C     IF STATEMENT TO  CONVERT FEB DATES TO JAN SCALE
```

```
  290 IF (KDATE.GT.200.AND.KDATE.LT.229) KDATE=KDATE-69
      IF (NDATE.GT.200.AND.NDATE.LT.229) NDATE=NDATE-69
C     IF STATEMENT TO CONVERT MARCH DATES TO JAN SCALE
      IF(KDATE.GT.300.AND.KDATE.LT.332) KDATE=KDATE-141
      IF(NDATE.GT.300.AND.NDATE.LT.332) NDATE=NDATE-141
C      IF STATEMENT TO CONVERT APRIL DATES TO JANUARY SCALE
      IF(KDATE.GT.400.AND.KDATE.LT.431) KDATE=KDATE-210
      IF (NDATE.GT.400.AND.NDATE.LT.431) NDATE=NDATE-210
C         IF STATEMENT TO CONVERT DATES IN MAY
      IF(KDATE.GT.500.AND.KDATE.LT.532) KDATE=KDATE-280
      IF(NDATE.GT.500.AND.NDATE.LT.532) NDATE=NDATE-280
C         IF STATEMENT TO CONVERT DATES IN JUNE
      IF(KDATE.GT.600.AND.KDATE.LT.631) KDATE=KDATE-349
      IF(NDATE.GT.600.AND.NDATE.LT.631) NDATE=NDATE-349
C         IF STATEMENT TO CONVERT DATES IN JULY
      IF(KDATE.GT.700.AND.KDATE.LT.732) KDATE=KDATE-419
      IF(NDATE.GT.700.AND.NDATE.LT.732) NDATE=NDATE-419
C         IF STATEMENT TO CONVERT DATES IN AUGUST
      IF(KDATE.GT.800.AND.KDATE.LT.832) KDATE=KDATE-488
      IF(NDATE.GT.800.AND.NDATE.LT.832) NDATE=NDATE-488
C         IF STATEMENT TO CONVERT DATES IN SEPTEMBER
      IF(KDATE.GT.900.AND.KDATE.LT.931) KDATE=KDATE-557
      IF(NDATE.GT.900.AND.NDATE.LT.931) NDATE=NDATE-557
C         IF STATEMENT TO CONVERT DATES IN OCTOBERER
      IF(KDATE.GT.1000.AND.KDATE.LT.1032) KDATE=KDATE-627
      IF(NDATE.GT.1000.AND.NDATE.LT.1032) NDATE=NDATE-627
C         IF STATEMENT TO CONVERT DATES IN NOVEMBER
      IF(NDATE.GT.1100.AND.NDATE.LT.1131) NDATE=NDATE-696
      IF(KDATE.GT.1100.AND.KDATE.LT.1131) KDATE=KDATE-696
C         IF STATEMENT TO CONVERT DATES IN DECEMBER
      IF(KDATE.GT.1200.AND.KDATE.LT.1232) KDATE=KDATE-766
      IF(NDATE.GT.1200.AND.NDATE.LT.1232) NDATE=NDATE-766
C         IF JAN DATES ARE TO FOLLOW DECEMBER, 1231=465, SO WOULD ADD 365
C            TO JAN DATE TO CONTINUE YEAR, MAY WANT TO KEEP
C            SEPARATE PROGRAM OF DATES FOR FALL OR SPRING SEMESTER SINCE
C            BOTH SHARE JANUARY
C     DIFFERENCES,TOTALS AND NUMBERS OF CASES CALCULATED FOR AVERAGING
      DATEDF=NDATE-KDATE
      SUMDTDF=SUMDTDF+DATEDF
      TNDTDF=TNDTDF+1.
      IF(DATEDF.GT.BIGDD) BIGDD=DATEDF
      IF(DATEDF.LT.SMLDD) SMLDD=DATEDF
C     FREQUENCY OF NOT PASS/ PASS CALCULATED
C        1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
  300 N=NPASS+1
      NFREQ(N)=NFREQ(N)+1
C     FREQUENCIES OF LEVELS OF PERFORMANCE CALCULATED
      NN=NPERF+1
      NNFREQ(NN)=NNFREQ(NN)+1
C     SUM AND NUMBER OF RATING TIME CALCULATED
      SUMRT=SUMRT+RTIME
      RATN=RATN+1
C     READ ANOTHER STUDENT,S CARD
      GO TO 120
C      IF ALL STUDENT CARDS IN PC FILE COMPLETED, TOTALS/PC CALCULATED
  500 AVGTT=SUMTT/TTN
```

```
          AVGWT=SUMWT/WTN
          AVGT=SUMT/TN
          AVGRT=SUMRT/RATN
          DO 510 K=1,11
          AVGIAT(K)=SUMIAT(K)/TNIA(K)
      510 CONTINUE
          AVGDTDF=SUMDTDF/TNDTDF
          IF(SMLWT.EQ.999.) SMLWT=0.0
          IF(SMLTT.EQ.999.) SMLTT=0.0
          IF(SMLT.EQ.999.) SMLT=0.0
    C     TITLE FOR PC PAGE WRITTEN
          WRITE(61,520) NPC,MONTH,LDAY
      520 FORMAT(1H1,*REPORT ON PC NUMBER *,1I2,* FOR *,1A5,1X,1I2,///)
    C     TIME FOR PC WRITTEN OUT
          WRITE(61,530) AVGWT,WTN,SMLWT,BIGWT,AVGTT,TTN,SMLTT,BIGTT,AVGT,TN,
         1SMLT,BIGT
      530 FORMAT(5X,*AVERAGE TIME TAKEN FOR THE PC IN MINUTES*,//,10X,1F10.2
         1,*MIN. WHEN PC WRITTEN         NUMBER=*,1F4.0,*  RANGE=*,1F4.0,* TO
         2*,1F4.0,//,10X,1F10.2,*MIN. WHEN PC TALKED OUT    NUMBER=*,1F4.0,
         3*  RANGE=*,1F4.0,* TO *,1F4.0,//,10X,1F10.2,*MIN. OTHER KINDS OF P
         4CS     NUMBER=*,1F4.0,*  RANGE=*,1F4.0,* TO *,1F4,0,///)
    C     WRITE OUT PC EVALUATION
          WRITE(61,540)
      540 FORMAT(1X,*EVALUATION OF PC*,/,5X,*1=PROFICIENCY*,/,5X,*2=KNOWLEDG
         1E OF THE PROCESS*,/,5X,*3=ABILITY TO DIAGNOSE*,/,5X,*4=KNOWLEDGE
         2OF DIFFERENT MATERIALS AND METHODS*,/,5X,*5=ABILITY TO CHOSE APPRO
         3PRIATE MATERIALS AND METHODS*,/,5X,*6=NO,PC INAPPROPRIATE*,/,5X,*7
         4=NO,IAS INAPPROPRIATE*,//,50X,*YES*,10X,*SOMEWHAT*5X,*NO*)
          DO 549 I=1,7
          WRITE(61,545) I,(SUMEV(I,J),J=2,4)
      545 FORMAT(1X,45X,1I1,3X,1F4.0,10X,1F4.0,10X,1F4.0)
      549 CONTINUE
    C     WRITE OUT INFORMATION ON EACH IA
          WRITE(61,550)
      550 FORMAT(1X,*INFORMATION ON EACH IA*,/,5X,* 1=LECTURE*,/,5X,* 2=LECT
         1URE ON TAPE*,/,5X,* 3=READING IN LIBRARY*,/,5X,* 4=BROWSING IN LIB
         2RARY*,/,5X,*  =DISCUSSION WITH STAFF*,/,5X,* 6=DISCUSSION WITH OTH
         3ERS*,/,5X,* 7=AUDIO-VISUAL*,/,5X,* 8=OBSERVATION*,/,5X,* 9=PRACTIC
         4E*,/,5X,*10=PRETEST (NO IA)*,/,5X,*11=OTHER*,//,* TYPE NUMBER OF
         5   AVG.TIME     NUMBER OF IAS USED     IA AS HELP IN PASSING PC
         6 PC NOT PASS  PC PASS      PERFORMANCE LEVEL*,/,6X,*STUDENTS*,21X,
         7*ONE  TWO   THREE          GOOD   SOME   NOT*,34X,*MIN. ADEQ. OUTST.
         8*,///)
          DO 559 K=1,11
          WRITE(61,555) K,TNIA(K),AVGIAT(K),ONEIA(K),TWOIA(K),THRIA(K),(LFRE
         1Q(K,L),L=2,4),(MFREQ(K,M),M=2,3),(MMFREQ(K,MM),MM=2,4)
      555 FORMAT(1X,1I2,5X,1F4.0,8X,1F6.2,7X,1F4.0,2X,1F4.0,2X,1F4.0,9X,1I3,
         14X,1I3,4X,1I3,15X,1I3,5X,1I3,7X,1I3,3X,1I3,3X,1I3,///)
      559 CONTINUE
    C     WRITE OUT AVERAGE RETURN TIME
          WRITE(61,560) TNDTDF,AVGDTDF,SMLDD,BIGDD
      560 FORMAT(1X,/,1X,*AVERAGE RETURN TIME IN DAYS, FOR*,1F4.0,* STUDENTS
         1 REPORTING WAS*,1F6.2,*  (WITH A RANGE OF *,1F4.0,* TO *,1F4.0,*)*
         2,///)
    C           WRITE OUT NUMBER OF STUDENTS PASSING/NOT PASSING
          WRITE(61,570) (NFREQ(N),N=2,3)
```

```
  570 FORMAT(1X,*NUMBER OF STUDENTS NOT PASSING=*,1I3,//,5X,*NUMBER OF S
     1TUDENTS PASSING=*,1I3,///)
C       WRITE OUT LEVELS OF PERFORMANCE
      WRITE(61,580) (NNFREQ(NN),NN=2,4)
  580 FORMAT(1X,*NUMBER OF STUDENTS WITH MINIMAL PERFORMANCES   *,1I3,/,
     123X,*ADEQUATE PERFORMANCES    *,1I3,/,23X,*OUTSTANDING PERFORMANCE
     2S *,1I3,///)
C             WRITE OUT AVERAGE RATING TIME
      WRITE(61,590) AVGRT,RATN
  590 FORMAT(1X,* AVERAGE RATING TIME IN MINUTES  *,1F6.2,*  AS REPORTED
     1 BY  *,1F4.0,* RATERS*)
C             VARIABLES RESET TO ZERO BEFORE NEW PC TITLE CARD READ
      GO TO 10
  900 STOP
C             DATE DECK AS FOLLOWS
C               A SINGLE CARD WITH MONTH AND DAY (FORMAT 100)
C               B PC TITLE CARD (FORMAT 110)
C               C PC QUESTIONNAIRE CARDS (FORMAT 120)
C               D DUMMY STUDENT CARD (NSTU=999) TO COMPLETE PC FILE
C               E OTHER PC FILES, SEQUENCE B,C,D
C               F DUMMY PC TITLE CARD (NPC=99) TO END PROGRAM
      END
```

```
REPORT ON PC NUMBER  1 FOR   MAY 19

    AVERAGE TIME TAKEN FOR THE PC IN MINUTES

           173.06MIN. WHEN PC WRITTEN          NUMBER=  31  RANGE=  20 TO  520

           111.67MIN. WHEN PC TALKED OUT       NUMBER=   3  RANGE=  15 TO  300

             0.00MIN. OTHER KINDS OF PCS       NUMBER=   0  RANGE=   0 TO    0


EVALUATION OF PC
    1=PROFICIENCY
    2=KNOWLEDGE OF THE PROCESS
    3=ABILITY TO DIAGNOSE
    4=KNOWLEDGE  OF DIFFERENT MATERIALS AND METHODS
    5=ABILITY TO CHOSE APPROPRIATE MATERIALS AND METHODS
    6=NO.PC INAPPROPRIATE
    7=NO.IAS INAPPROPRIATE

                                            YES          SOMEWHAT     NO
                                      1      18             6          9
                                      2      23             6          5
                                      3      22             9          3
                                      4      16             9          9
                                      5      17             9          8
                                      6       4             1         27
                                      7       2             2         27
INFORMATION ON EACH IA
     1=LECTURE
     2=LECTURE ON TAPE
     3=READING IN LIBRARY
     4=BROWSING IN LIBRARY
     5=DISCUSSION WITH STAFF
     6=DISCUSSION WITH OTHERS
     7=AUDIO-VISUAL
     8=OBSERVATION
     9=PRACTICE
    10=PRETEST (NO IA)
    11=OTHER
TYPE NUMBER OF     AVG.TIME     NUMBER OF IAS USED   IA AS HELP IN PASSING PC    PC NOT PASS  PC PASS    PERFORMANCE LEVEL
     STUDENTS                    ONE  TWO  THREE      GOOD   SOME   NOT                                  MIN. ADEQ. OUTST.


 1      22           60.00        16    4    2          5      9     7             5         17          2    11    4

 2       2          100.00         1    0    1          2      0     0             0          2          0     2    0

 3       8          112.75         2    2    4          5      3     0             2          6          0     5    1

 4       3          103.33         1    2    0          3      0     0             0          3          0     3    0
```

```
     2        23.00       1    0    1       1    1    0           0    2    1    1    0

     2        25.00       1    0    1       2    0    0           1    1    1    0    0

     1        60.00       0    0    1       0    1    0           0    1    0    1    0

     1       180.00       0    1    0       1    0    0           0    1    0    0    1

     2        75.00       0    1    1       2    0    0           0    2    0    2    0

     3         0.00       3    0    0       0    0    0           1    2    1    1    0

     1       180.00       0    0    1       1    0    0           0    1    0    1    0


VERAGE RETURN TIME IN DAYS, FOR  34 STUDENTS REPORTING WAS  2.50  (WITH A RANGE OF    0 TO   16)

UMBER OF STUDENTS NOT PASSING=  6

  NUMBER OF STUDENTS PASSING= 28


UMBER OF STUDENTS WITH MINIMAL PERFORMANCES      5
                       ADEQUATE PERFORMANCES    18
                       OUTSTANDING PERFORMANCES  5

AVERAGE RATING TIME IN MINUTES   14.26  AS REPORTED BY    34 RATERS
```

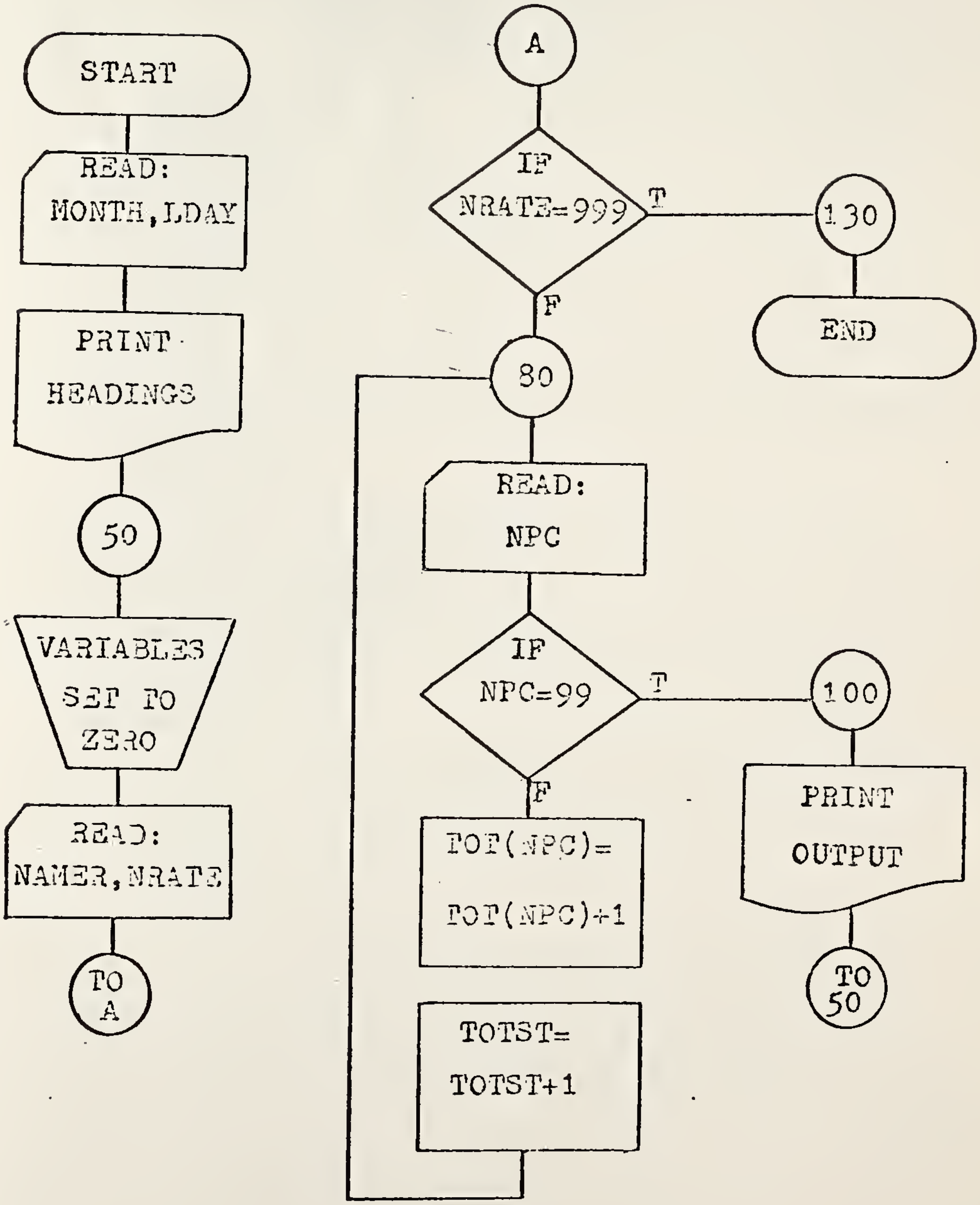
Program: RATER

The program was designed to provide a list with the raters' names down the side and the PC numbers across the top. The number of each PC rated and the total number per rater were listed. The program was designed to be used by the raters to check their records and compare themselves to other raters in the program and by the staff to monitor the activities of the raters.

Information was collected from the PC questionnaire completed by the generalist and his rater whenever a PC was attempted.

A flow chart explaining the logic of the program, a listing of the program, and a sample page of printout are included.

RATER


START
READ: MONTH,LDAY
PRINT HEADINGS
50
VARIABLES SET TO ZERO
READ: NAMER,NRATE
TO A
A
IF NRATE=999
T
F
130
END
80
READ: NPC
IF NPC=99
T
F
100
TOT(NPC)= TOT(NPC)+1
TOTST= TOTST+1
PRINT OUTPUT
TO 50

```
FTN5.4B                                                            09/20/70
          PROGRAM RATER
      C      PROGRAM DESIGNED TO LIST NUMBER OF PCS CORRECTED BY EACH RATER
      C      TOTALS BOTH /PC AND GRAND TOTAL FOR RATER CALCULATED AND PRINTE
      C      ON LIST
      C      INPUT VARIABLES INCLUDE-
      C           DATE PROGRAM BEING RUN, MONTH (1A5), LDAY (1I2)
      C           RATER,S NUMBER, NRATE (1I3)
      C           RATER,S NAME, NAMER (1A8)
      C           PC NUMBER, NPC (1I2)
      C      CALCULATED VARIABLES INCLUDE
      C             TOTAL PER PC FOR EACH RATER, TOT(NPC) (27F4.0)
      C           GRAND TOTAL FOR EACH RATER, TOTST ,1F4.0
          DIMENSION TOT(27)
      C      DATE PROGRAM BEING RUN READ AND PRINTED OUT
          READ(60,20) MONTH,LDAY
       20 FORMAT(1A5,1X,1I2)
          WRITE(61,30) MONTH,LDAY
       30 FORMAT(1X,*RATERS LIST FOR *,1A5,1X,1I2,//)
      C      COLUMN HEADINGS PRINTED OUT
          WRITE(61,40)
       40 FORMAT (1X,*NO. NAME       1   2   3   4   5   6   7   8   9  10
         111  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27
         2  TOT.*,//)
      C      CALCULATED VARIABLES SET TO ZERO BEFORE EACH RATERS DATA READ
       50 TOTST=0.0
          DO 60 I=1,27
          TOT(I)=0.0
       60 CONTINUE
      C      TITLE CARD WITH RATERS NUMBER AND NAME READ
          READ(60,70) NRATE,NAMER
       70 FORMAT(1I3,1X,1A8)
      C      IF STATEMENT TO END PROGRAM USING DUMMY RATER  NUMBER (NRATE=99
          IF(NRATE.EQ.999) GO TO 130
      C      PC NUMBER FROM PC QUESTIONNAIRE CARD READ
       80 READ(60,90) NPC
       90 FORMAT(9X,1I2)
      C      IF STATEMENT USING DUMMY PC NUMBER (NPC=99) TO END RATER,S FILE
          IF(NPC.EQ.99) GO TO 100
      C      TOTAL /PC FOR THE RATER CALCULATED
          TOT(NPC)=TOT(NPC)+1.
      C      GRAND TOTAL FOR THE RATER CALCULATED
          TOTST=TOTST+1.
      C      NEW PCQ CARD READ
          GO TO 80
      C      IF NO MORE PCQ CARDS (NPC=99),RATERS NUMBER,NAME, AND+BOTH TOTA
      C      PRINTED OUT
      100 WRITE(61,110)NRATE,NAMER,(TOT(I),I=1,27),TOTST
      110 FORMAT(1X,1I3,1X,1A8,27F4.0,1X,1F4.0,//)
      C      VARIABLES RESET TO ZERO AND NEW RATERS CARD READ
          GO TO 50
      C      IF NO MORE RATER TITLE CARDS (NRATE=99), PROGRAM COMPLETED
      130 STOP
      C      DATA DECK AS FOLLOWS-
      C     A.DATE PROGRAM BEING RUN (20 FORMAT)
      C     B.RATERS TITLE CARD (70 FORMAT)
      C     C.PCQ CARD (80 FORMAT)
      C     D.ADDITIONAL PCQ FILED BEHIND RATER UNTIL DUMMY PC (99)
      C     E.ADDITIONAL RATERS FILES (B,C,D) UNTIL DUMMY RATER (99
          END
```

RATERS LIST FOR MAY 19

NO.	NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	TOT.
2	ARMSTRON	1	0	0	1	1	1	1	2	0	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	11
3	BAWIN	1	0	0	0	1	0	0	0	1	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6
4	BIZER	0	0	1	1	0	0	1	0	3	1	1	2	0	0	0	0	0	0	0	1	0	0	1	3	3	0	0	18
6	BLACK	1	0	3	2	1	2	0	2	0	0	0	4	0	0	1	4	0	1	1	1	0	1	1	0	0	0	0	25
8	BOFFEY	2	0	2	1	0	1	1	1	1	0	1	3	2	1	1	1	0	1	2	1	2	0	1	1	2	0	0	28
10	BUDDE	2	0	1	1	0	1	3	0	0	0	2	1	0	0	0	1	0	0	1	0	4	0	4	1	3	0	0	25
12	BURNS	0	0	1	2	1	1	1	2	1	1	0	0	1	1	2	2	0	1	0	4	4	1	1	2	2	1	2	34
14	CARMICHA	0	0	0	1	1	0	1	0	4	0	0	2	0	0	1	3	0	2	0	0	0	4	0	0	0	0	0	19
16	CHEVERET	1	0	1	1	0	1	1	1	2	1	1	0	0	1	0	1	0	2	1	0	1	2	1	1	1	1	1	23
17	CLARK	0	0	0	2	1	1	0	0	0	1	0	0	1	2	1	0	0	0	0	1	0	0	0	0	0	1	0	11
18	COLEMAN	0	0	0	3	0	1	0	1	0	2	0	0	0	1	0	1	0	0	0	2	0	0	1	0	0	0	2	14
20	CONANT	0	0	0	0	1	0	0	1	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0	3	0	10
24	EBACHER	3	0	1	1	0	2	1	0	0	1	2	1	0	1	1	1	0	1	0	0	1	1	1	1	1	1	0	22
28	FAUSTINE	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	1	0	0	2	1	1	1	0	0	0	0	0	10

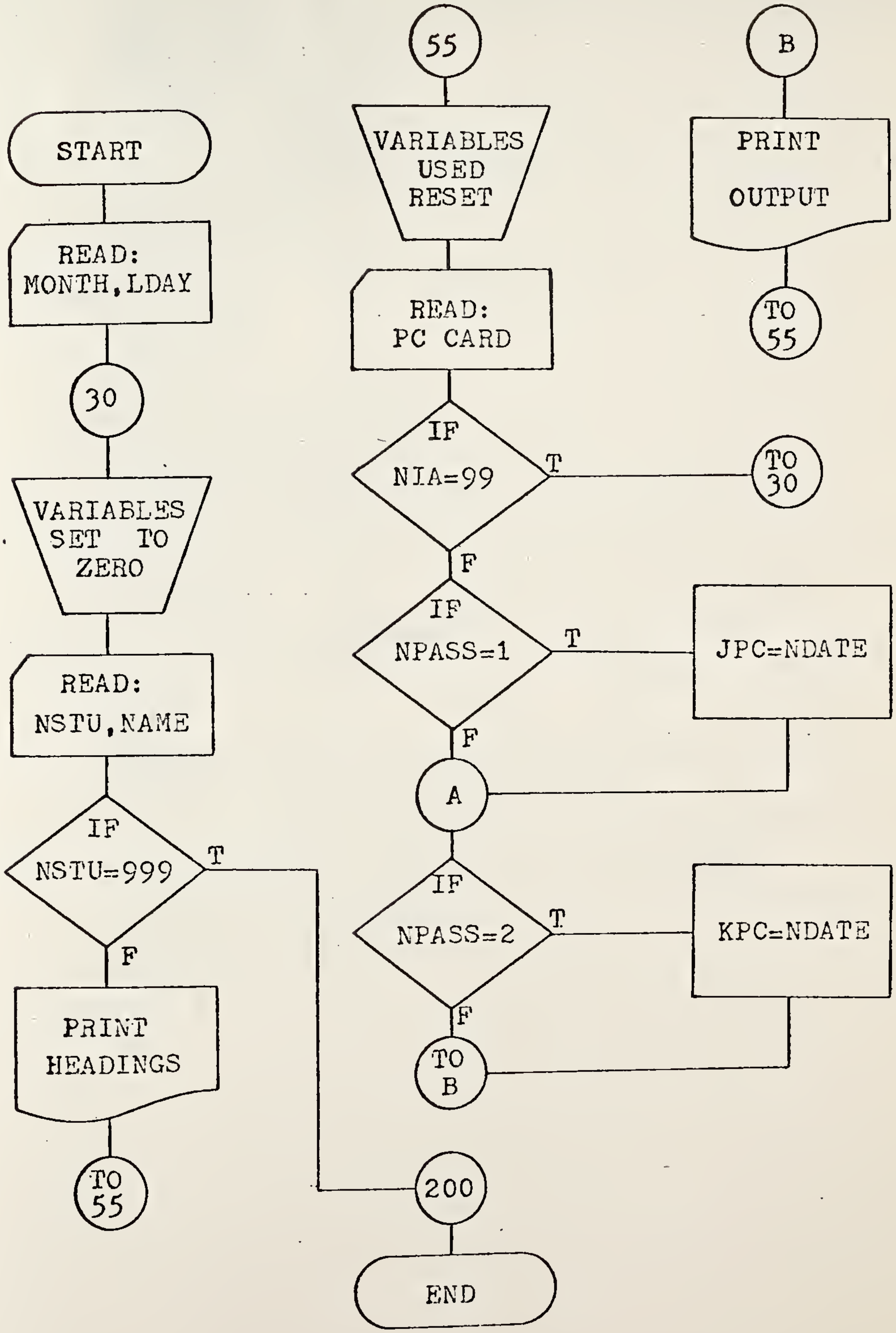
Program: SPECIAL

The program was designed to provide one page of printout per specialist listing each PC attempted, whether the PC was passed or not passed and the performance level. The printout was designed to be used by the specialist to check his records against those of the program and by the staff for counseling purposes.

Information was collected from the PC questionnaire completed by each specialist and his rater whenever a PC was attempted.

A flow chart explaining the logic of the program, a listing of the program, and a sample page of printout are included.

SPECIAL


55
B
START
VARIABLES USED RESET
PRINT OUTPUT
READ: MONTH, LDAY
TO 55
READ: PC CARD
30
IF NIA=99
T
TO 30
F
VARIABLES SET TO ZERO
IF NPASS=1
T
JPC=NDATE
READ: NSTU, NAME
F
A
IF NSTU=999
T
IF NPASS=2
T
KPC=NDATE
F
F
PRINT HEADINGS
TO B
TO 55
200
END

```
      PROGRAM SPECIAL
C      PROGRAM DESIGNED TO PROVIDE SINGLE PAGE OF INFO PER SPECIALIST
C     DATA FOR TOTAL PROGRAM  INCLUDES DATE PROGRAM RUN (MONTH,1A5,DAY,1I2)
C     DATA FOR STUDENT,S FILE INCLUDES-
C     STUDENT NUMBER(NSTU,1I3)
C     STUDENT NAME  (NAME,3A8)
C      PC NUMBER  (NPC,1I2)
C      IA NUMBER  (NIA,1I2)
C      PCS NOT PASSED, NPASS =1  (JPC,1I3)
C      PCS PASSED,NPASS=2,   (KPC,1I3)
C      LEVEL OF PERFORMANCE OF EACH PC PASSED  (NPERF,1I1)
      DIMENSION NAME(3)
      READ(60,20) MONTH,LDAY
   20 FORMAT(1A5,1X,1I2)
C      VARIABLES USED PER STUDENT SET TO ZERO
   30 NSTU=0
      DO 35 II=1,3
      NAME(II)=8H
   35 CONTINUE
C     STUDENT TITLE CARD READ
   40 READ(60,50) NSTU,(NAME(II),II=1,3)
   50 FORMAT(1I3,1X,2A8,1A4)
C     IF STATEMENT TO READ DUMMY STUDENT NUMBER (999) AT END OF DATA DECK
      IF (NSTU.EQ.999) GO TO 200
      WRITE(61,45)  NSTU,(NAME(II),II=1,3),MONTH,LDAY
   45 FORMAT(1H1,*STUDENT FILE FOR *,1I3,2X,3A8,5X,1A5,2X,1I2,///)
      WRITE(61,46)
   46 FORMAT(1X,*                   PC NUMBER            IA NUMBER            DATE
     1NOT PASSED        DATE PASSED        PERF LEVEL*,///)
C           VARIABLES USED PER PC CARD RESET TO ZERO
   55 NPC=0
      NIA=0      $      NDATE=0      $      NPASS=0
      NPERF=0         $          JPC=0          $          NPC=0
      KPC=0
C     INDIVIDUAL CARD PER PC FILED BEHIND STUDENTS TITLE CARD
      READ(60,60) NPC,NIA,NDATE,NPASS,NPERF
   60 FORMAT(9X,2I2,55X,1I4,2X,2I1)
C           IF STATEMENT TO FIND DUMMY IA CARD (99) AT END OF STUDENTS FILE
      IF (NIA.EQ.99) GO TO 30
C      IF STATEMENTS TO SEPARATE PASSES, NOT PASSES
      IF (NPASS.EQ.1) JPC=NDATE
      IF (NPASS.EQ.2) KPC=NDATE
      WRITE(61,70) NPC,NIA,JPC,KPC,NPERF
   70 FORMAT(1X,5(17X,1I3))
      GO TO 55
  200 STOP
      END
```

```
STUDENT FILE FOR  40  KERVIAN GEORGANN                  MAY  19

        PC NUMBER        IA NUMBER        DATE NOT PASSED      DATE PASSED      PERF LEVEL


               27                3                      0              406               2
               27                2                      0              504               2
               27                2                    406                0               0
                7                2                      0              320               2
```

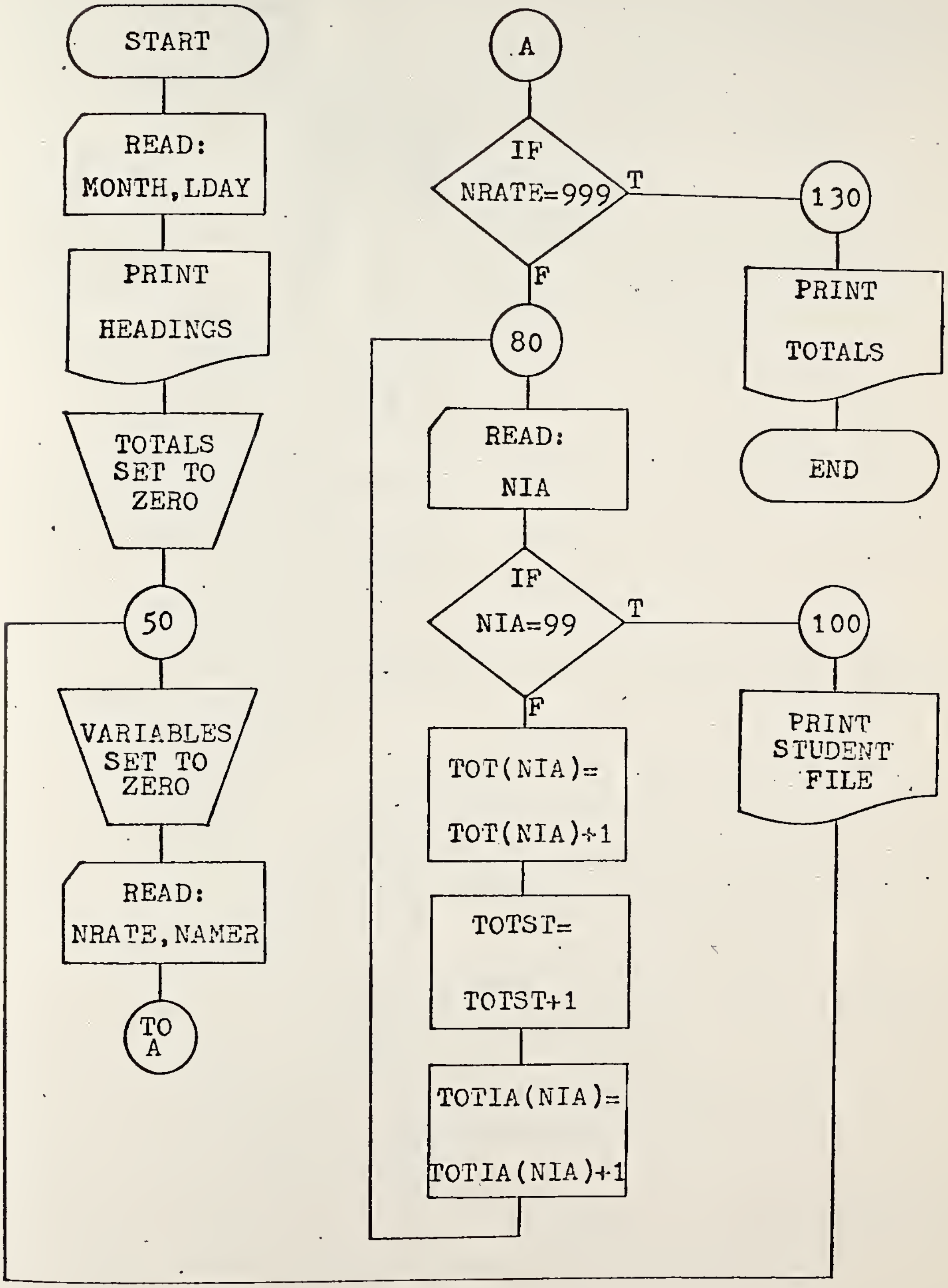
Program: SPECIA

The program was designed to provide a list with the specialists' names down the side and the instructional alternative types across the top. The number of each instructional alternative type plus the total per specialist and per IA type was included. The printout was to be used by specialists for checking their records and comparing themselves to other specialists in the program and by the staff for monitoring the specialists' activities and the preparation of instructional alternatives.

Information was collected from the PC questionnaire completed by the specialist and his rater whenever the PC of preparing an instructional alternative was attempted.

A flow chart explaining the logic of the program, a listing of the program and a sample page of printout are included.

SPECIA


START
READ:
MONTH,LDAY
PRINT
HEADINGS
TOTALS
SET TO
ZERO
50
VARIABLES
SET TO
ZERO
READ:
NRATE,NAMER
TO
A
A
IF
NRATE=999
T
F
130
PRINT
TOTALS
END
80
READ:
NIA
IF
NIA=99
T
F
100
PRINT
STUDENT
FILE
TOT(NIA)=
TOT(NIA)+1
TOTST=
TOTST+1
TOTIA(NIA)=
TOTIA(NIA)+1

```
FTN5,4B                                                              09/20/70
       PROGRAM SPECIA
C          PROGRAM DESIGNED TO LIST NUMBER OF IAS PREPARED BY EACH RATER
C          TOTALS BOTH /IA AND GRAND TOTAL FOR RATER CALCULATED AND PRINTED
C          ON LIST
C            PROGRAM DESIGNED FOR 11 IA TYPES,UNLIMITED RATERS. CHANGE IN
C            IA NUMBER ONLY FORMATING PROBLEM
C           .INPUT VARIABLES INCLUDE-
C                DATE PROGRAM RUN, MONTH(1A5),LDAY(1I2)
C                RATERS NUMBER, NRATE,1I3)
C                RATERS NAME,NAMER(1A8)
C              IA NUMBER,NIA(1I2)
C            CALCULATED VARIABLES INCLUDE
C                 TOTAL PER IA TYPE FOR EACH RATER, TOT(NIA)
C                GRAND TOTAL FOR EACH RATER, TOTST
C                TOTAL PER IA FOR ENTIRE GROUP, TOTIA(NIA)
      DIMENSION TOT(11),TOTIA(11)
C          DATE PROGRAM BEING RUN READ AND PRINTED OUT
      READ(60,20) MONTH,LDAY
   20 FORMAT(1A5,1X,1I2)
      WRITE(61,30) MONTH,LDAY
   30 FORMAT(1X,* LIST OF IAS PREPARED BY EACH RATER BY IA NUMBER FOR *,
     11A5,1X,1I2,//)
C          COLUMN HEADINGS PRINTED OUT
      WRITE(61,40)
   40 FORMAT (1X,*NO. NAME        1   2   3   4   5   6   7   8   9  10
     111   TOT.*,//)
C           TOTALS FOR ENTIRE GROUP SET TO ZERO
      DO 45 I=1,11
      TOTIA(I)=0.0
   45 CONTINUE
C          CALCULATED VARIABLES SET TO ZERO BEFORE EACH RATERS DATA READ
  50  TOTST=0.0
      DO 60 I=1,11
      TOT(I)=0.0
   60 CONTINUE
C          TITLE CARD WITH RATERS NUMBER AND NAME READ
      READ(60,70) NRATE,NAMER
   70 FORMAT(1I3,1X,1A8)
C          IF STATEMENT TO END PROGRAM USING DUMMY RATER  NUMBER (NRATE=999)
      IF(NRATE.EQ.999) GO TO 130
C          IA NUMBER FROM PC QUESTIONNAIRE CARD READ
   80 READ(60,90) NIA
   90 FORMAT(11X,1I2)
C          IF STATEMENT USING DUMMY IA NUMBER (NIA=99) TO END RATER,S FITE
      IF(NIA.EQ.99) GO TO 100
C          TOTAL /IA FOR THE RATER CALCULATED
      TOT(NIA)=TOT(NIA)+1.
C          GRAND TOTAL FOR THE RATER CALCULATED
      TOTST=TOTST+1.
C            TOTALS PER IA FOR ENTIRE GROUP CALCULATED
      TOTIA(NIA)=TOTIA(NIA)+1.
C          NEW PCQ CARD READ
      GO TO 80
C          IF NO MORE PCQ CARDS (NIA=99),RATERS NUMBER,NAME, AND+BOTH TOTALS
C          PRINTED OUT
  100 WRITE(61,110)NRATE,NAMER,(TOT(I),I=1,11),TOTST
  110 FORMAT(1X,1I3,1X,1A8,11F4.0,1X,1F4.0,//)
C         VARIABLES RESET TO ZERO AND NEW RATERS CARD READ
      GO TO 50
C         IF NO MORE RATER TITLE CARDS (NRATE=99), PROGRAM COMPLETED
  130 WRITE(61,140)(TOTIA(I),I=1,11)
  140 FORMAT(1X,*TOTAL PER IA*,11F4.0)
      STOP
C         DATA DECK AS FOLLOWS-
C        A DATE PROGRAM BEING RUN (20 FORMAT)
C        B RATERS TITLE CARD (70 FORMAT)
C        C PCQ CARD (80 FORMAT)
C        D ADDITIONAL PCQ FILED BEHIND RATER UNTIL DUMMY CARD (99) REACHED
C        E ADDITIONAL RATER SETS(B,C,D) UNTIL DUMMY RATER CARD (999) REACHED
      END
```

LIST OF IAS PREPARED BY EACH RATER BY IA NUMBER FOR MAY 19

NO. NAME	1	2	3	4	5	6	7	8	9	10	11	TOT.
2 ARMSTRON	0	0	2	0	0	1	0	0	0	0	0	3
3 BAWIN	0	0	1	0	0	0	0	0	0	0	0	1
4 BIZER	0	0	0	0	0	0	0	0	0	0	0	0
6 BLACK	0	0	2	0	0	0	0	0	0	0	0	2
8 BOFFEY	1	0	2	0	0	0	0	0	0	0	0	3
10 BUDDE	1	0	0	0	0	0	0	0	0	0	0	1
12 BURNS	0	0	0	0	0	0	0	0	0	0	0	0
14 CARMICHA	0	0	1	0	0	0	0	0	0	0	0	1
16 CHEVERET	0	4	1	0	0	0	0	0	0	0	0	5
17 CLARK	0	0	0	0	0	0	0	0	0	0	0	0
18 COLEMAN	0	1	0	0	0	0	0	0	0	0	0	1
20 CONANT	0	1	0	0	0	0	0	0	0	0	0	1
24 EBACHER	0	0	0	0	0	0	0	0	0	0	0	0
28 FAUSTINE	0	0	1	0	0	0	0	0	0	0	0	1
TOTAL PER IA	2	6	10	0	0	1	0	0	0	0	0	

Program: SPECPC

The program was designed to provide a list with the specialists' names down the side and the PC numbers across the top. The number of instructional alternatives for each PC, plus the total per specialist and per PC was included. The printout was to be used by specialists for checking their records and comparing themselves to other specialists in the program and by the staff for monitoring the specialists and the preparation of instructional alternatives. Programs SPECIA and SPECPC were designed to be used to provide two different views of the same information.

Information was collected from the PC questionnaire completed by the specialist and his rater whenever the PC of preparing an instructional alternative was attempted.

A listing of the program and a sample page of printout are included. For a flow chart explaining the logic of the program please see the flow chart for SPECIA.

```
FTN5.4B                                                                  09/20/70
      PROGRAM SPECPC
C      PROGRAM DESIGNED TO LIST NUMBER OF PCS PREPARED BY EACH RATER
C        TOTALS BOTH /PC AND GRAND TOTAL FOR RATER CALCULATED AND PRINTED
C        ON LIST
C          PROGRAM FOR 27 PCS, UNLIMITED RATERS. CHANGE IN PC NUMBER
C          ONLY FORMATING PROBLEM
C.         INPUT VARIABLES INCLUDE
C              DATE PROGRAM RUN, MONTH(1A5), LDAY(1I2)
C              RATERS NUMBER, NDATE(1I3)
C               RATERS NAME, NAMER (1A8)
C             PC NUMBER,NPC (1I2)
C               IA NUMBER,NIA (1I2)
C          CALCULATED VARIABLES INCLUDE
C              TOTAL PER PC FOR EACH RATER, TOT(NPC)
C            . GRAND TOTAL FOR EACH RATER, TOTST
C              TOTAL PER PC FOR ENTIRE GROUP, TOTPC(NPC)
      DIMENSION TOT(27),TOTPC(27)
C        DATE PROGRAM BEING RUN READ AND PRINTED OUT
      READ(60,20) MONTH,LDAY
   20 FORMAT(1A5,1X,1I2)
      WRITE(61,30) MONTH,LDAY
   30 FORMAT(1X,* LIST OF IAS PREPARED BY EACH RATER BY PC NUMBER FOR *,
     11A5,1X,1I2,//)
C        COLUMN HEADINGS PRINTED OUT
      WRITE(61,40)
   40 FORMAT (1X,*NO. NAME       1   2   3   4   5   6   7   8   9  10
     111  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27
     2  TOT,*,//)
C          TOTALS FOR ENTIRE GROUP SET TO ZERO
      DO 45 I=1,27
      TOTPC(I)=0.0
   45 CONTINUE
C        CALCULATED VARIABLES SET TO ZERO BEFORE EACH RATERS DATA READ
   50 TOTST=0.0
      DO 60 I=1,27
      TOT(I)=0.0
   60 CONTINUE
C        TITLE CARD WITH RATERS NUMBER AND NAME READ
      READ(60,70) NRATE,NAMER
   70 FORMAT(1I3,1X,1A8)
C        IF STATEMENT TO END PROGRAM USING DUMMY RATER  NUMBER (NRATE=999)
      IF(NRATE.EQ.999) GO TO 130
C        PC NUMBER FROM PC QUESTIONNAIRE CARD READ
   80 READ(60,90) NPC,NIA
   90 FORMAT(9X,2I2)
C          IF STATEMENT USING DUMMY IA NUMBER (NIA=99) TO END RATERS FILE
      IF(NIA.EQ.99) GO TO 100
C        TOTAL /PC FOR THE RATER CALCULATED
      TOT(NPC)=TOT(NPC)+1.
C        GRAND TOTAL FOR THE RATER CALCULATED
      TOTST=TOTST+1.
C          TOTAL PER PC FOR ENTIRE GROUP CALCULATED
      TOTPC(NPC)=TOTPC(NPC)+1
C        NEW PCQ CARD READ
      GO TO 80
C        IF NO MORE PCQ CARDS (NPC=99),RATERS NUMBER,NAME, AND+BOTH TOTALS
```

```
C          PRINTED OUT
  100 WRITE(61,110)NRATE,NAMER,(TOT(I),I=1,27),TOTST
  110 FORMAT(1X,1I3,1X,1A8,27F4.0,1X,1F4.0,//)
C          VARIABLES RESET TO ZERO AND NEW RATERS CARD READ
      GO TO 50
C            IF NO MORE RATER TITLE CARDS (NRATE=999) TOTALS WRITTEN OUT
  130 WRITE(61,140) (TOTPC(I),I=1,27)
  140 FORMAT(1X,*TOTAL PER PC*,27F4.0)
      STOP
C          DATA DECK AS FOLLOWS-
C        A DATE PROGRAM BEING RUN (20 FORMAT)
C        B RATERS TITLE CARD (70 FORMAT)
C        C PCQ CARD (80 FORMAT)
C        D ADDITIONAL PCQ FILED BEHIND RATER UNTIL DUMMY CARD (99) REACHED
C        E ADDITIONAL RATERS SETS (B,C,D) UNTIL DUMMY RATER (999) REACHED
      END
```

LIST OF IAS PREPARED BY EACH RATER BY PC NUMBER FOR MAY 19

NO. NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	TOT.
2 ARMSTRON	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
3 BAWIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
4 BIZER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 BLACK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
8 BOFFEY	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10 BUDDE	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12 BURNS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 CARMICHA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
16 CHEVERET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	2	0	0	5
17 CLARK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 COLEMAN	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
20 CONANT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
24 EBACHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 FAUSTINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL PER PC	1	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	4	1	2	0	3	1	0	

Program: IASPEC

The program was designed to print out the same information available for the generalists PCs in the program PC for the specialist PC of preparing instructional alternatives. For each instructional alternative type prepared, the two-page printout included: time taken for the PC, rating on the teaching hierarchy, information on the IAs used including time, evaluation, whether used alone or with others, passed or not passed, and performance level. Printout also included rating time, and turn around time, number of pass and not pass, and frequency of each performance level. The printout was to be used by the staff to help in monitoring program operation and in making curriculum changes.

The information was collected from the PC questionnaire completed by the specialist and his rater each time the PC of preparing an instructional alternative was attempted.

A listing of the program and a sample printout are included. For a flow chart explaining the logic of the program please see the flow chart for PC.

```
FTN5.4B                                                              09/20/70

          PROGRAM IASPEC
C              PROGRAM DESIGNED TO PROVIDE 2 PAGES OF PRINTOUT PER IA TYPE
C              INPUT DATA INCLUDES
C                DATE PROGRAM BEING RUN, MONTH(1A5), LDAY(1I2)
C              IA NUMBER, NIA(1I2)
C                STUDENTS NUMBER, NSTU(1I3)
C                DATE PC PASSED IN, KDATE (1I4)
C                TIME TAKE FOR PC, TIMPC(1F3.0)
C                EVALUATION OF PC ON HIERARCHY, LEVPC(I)  (7I1)
C                FIRST IA TYPE TAKE, IAA(1I3)
C                TIME FOR FIRST IA, TIMIAA(1F3.0)
C                EVALUATION OF FIRST IA,LEVIAA(1I1)
C                SAME INFORMATION FOR SECOND IA,IAB,TIMIAB,LEVIAB
C                SAME INFORMATION FOR THIRD IA,IAC,TIMIAC,LEVIAC
C                DATE PC RETURNED TO STUDENT, NDATE(1I4)
C                PC PASSED/NOT PASSED, NPASS(1I1)
C                PERFORMANCE LEVEL OF PASSED PC,NPERF(1I1)
C                TIME TAKEN TO RATE PC,RTIME(IF2.0)
C              CALCULATED VARIABLES INCLUDE
C              TOTAL TIME TAKEN,SUMT,NUMBER OF STUDENTS REPORTING,TN,LONGEST
C                 TIME REPORTED,BIGT,SHORTEST TIME,SMLT,AVERAGE TIME,AVGT
C                FOR EACH OF 3 REPORTED IAS
C                   TOTAL TIME, SUMIAT(K)  WHEN K=IA TYPE
C                   NUMBER OF STUDENTS, TNIA(K), AVERAGE TIME,AVGIAT, EVALUATION
C                   OF IA,LFREQ(K,L),FREQUENCY OF PASS/NOT PASS,MFREQ(K,M),
C                   FREQUENCY OF EACH PERFORMANCE LEVEL,MMFREQ(K,MM), NUMBER USING I
C                   IA ALONE,ONEIA(K), USING IT WITH ONE OTHER IA,TWOIA(K), USING IT
C                  WITH 2 OTHER IAS,THRIA(K)
C                FOR TURN AROUND TIME IN DAYS -  DIFFERENCE BETWEEN DATES,DATEDF,SUM
C                    OF DATES,SUMDTDF, AVERAGE,AVGDTDF, NUMBER OF CASES,TNDTDF,
C                   LONGEST TIME,BIGDD, SHORTEST TIME,SMLDD
C                FOR FREQUENCIY OF PASS/NOT PASS,NFREQ(NPASS)
C                FOR FREQUENCY OF PERFORMANCE LEVEL,NNFREQ(NPERF)
C                FOR RATING TIME,RTIME, SUM  OF TIMES,SUMRT, NUMBER REPORTING,RATN,
C                    AVERAGE REATING TIME,AVGRT
          DIMENSION LEVPC(7),SUMEV(7,4),TIMIA(11),SUMIAT(II),TNIA(II),AVGIAT
         1(II),LFREQ(II,4),ONEIA(11),TWOIA(11),THRIA(11),MFREQ(II,3),MMFREQ
         2(11,4),NFREQ(3),NNFREQ(4)
C         READ DATE PROGRAM RUN
          READ (60,100) MONTH,LDAY
      100 FORMAT(1A5,1X,1I2)
C         SET ALL VARIABLES TO ZERO
       10 TIMPC=0.
          TIME=0.
          SUMT=0.0
          TN=0.
          BIGT=0.
          SMLT=999.
          AVGT=0.0
          KDATE=0
          NDATE=0
          DATEDF=0.
          SUMDTDF=0.
          TNDTDF=0.
          BIGDD=0.
          SMLDD=0.
      AVGDTDF=0.0
      NPASS=0
      NPERF=0
      RTIME=0.0
      SUMRT=0.0
      RATN=0.0
      AVGRT=0.0
      DO 20 I=1,7
      DO 20 J=1,4
      SUMEV(I,J)=0.0
   20 CONTINUE
      DO 30 K=1,11
      TIMIA(K)=0.
      SUMIAT(K)=0.
      TNIA(K)=0.
      AVGIAT(K)=0.0
      ONEIA(K)=0.
      TWOIA(K)=0.
      THRIA(K)=0.
      DO 30 L=1,4
      LFREQ(K,L)=0
   30 CONTINUE
      DO 35 K=1,11
      DO 35 M=1,3
      MFREQ(K,M)=0
   35 CONTINUE
      DO 40 K=1,11
      DO 40 MM=1,4
      MMFREQ(K,MM)=0
   40 CONTINUE
      DO 50 N=1,3
      NFREQ(N)=0
   50 CONTINUE
      DO 60 NN=1,4
      NNFREQ(NN)=0
   60 CONTINUE
C     READ IA TITLE CARD AT BEGINNING OF FILE
      READ(60,110) NIA
  110 FORMAT(11X,1I2)
C     IF STATEMENT USING DUMMY IA CARD (NIA=99) TO END PROGRAM
      IF (NIA.EQ,99) GO TO 900
  120 READ(60,130) NSTU,KDATE,TIMPC,(LEVPC(I),I=1,7),IAA,TIMIAA,LEVIAA,
     1IAB,TIMIAB,LEVIAB,IAC,TIMIAC,LEVIAC,NDATE,NPASS,NPERF,RTIME
  130 FORMAT(1I3,1X,1I3,7X,1F3.0,2X,7I1,3X,1I2,3X,1F3.0,1I1,1X,1I2,3X,1F
     13.0,1I1,1X,1I2,3X,1F3.0,1I1,11X,1I3,2X,1I1,1I1,1F2.0)
C      IF STATEMENT TO END PC FILE WITH DUMMY STUDENT CARD (NSTU=999)
      IF (NSTU.EQ.999) GO TO 500
C     SUM AND NUMBER OF CASES CALCULATED FOR AVERAGING IA TIME
      TIME=TIMPC
      SUMT=SUMT+TIME
      TN=TN+1.
C     RANGE CALCULATED BY GETTING BIG AND SMALL
      IF (TIME.GT.BIGT) BIGT=TIME
      IF (TIME.LT.SMLT.AND.TIME.NE.0.0) SMLT=TIME
      GO TO 200
C     DO LOOP TO SUM ANSWERS ON 7 EVALUATION QUESTIONS
```

```
    200 DO 210 I=1,7
C             1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
        J=LEVPC(I)+1
        SUMEV(I,J)=SUMEV(I,J)+1.
    210 CONTINUE
C       FIRST IA TYPE PUT INTO IA ARRAY
C             IF STATEMENT TO ELIMINATE ZERO AND BLANK IAS
        IF(IAA.LT.1) GO TO 270
        K=IAA
C       FIRST IA TIME PUT INTO ARRAY
        TIMIA(K)=TIMIAA
C       TOTAL TIME FOR IA CALCULATED
        SUMIAT(K)=SUMIAT(K)+TIMIA(K)
C       NUMBER OF STUDENTS USING IA TYPE CALCULATED
        TNIA(K)=TNIA(K)+1.
C       FREQUENCY OF EACH EVLUATION RANKING CALCULATED
C             1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
        L=LEVIAA+1
        LFREQ(K,L)=LFREQ(K,L)+1
C        FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
C             1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
        M=NPASS+1
        MFREQ(K,M)=MFREQ(K,M)+1
C        FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
C             1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
        MM=NPERF+1
        MMFREQ(K,MM)=MMFREQ(K,MM)+1
C        IF STATEMENTS TO SEPARATE NUMBER OF IAS USED
        IF (IAB.EQ.0) GO TO 220
        IF (IAB.GT.0.AND.IAC.EQ.0) GO TO 230
        IF (IAC.GT.0) GO TO 235
    220 ONEIA(K)=ONEIA(K)+1.
        GO TO 270
    230 TWOIA(K)=TWOIA(K)+1.
        GO TO 237
    235 THRIA(K)=THRIA(K)+1.
C       IA TYPE(K) RESET TO ZERO SO SECOND IA CAN BE ADDED TO ARRAY
C             SEE FIRST IA FOR EXPANATION
    237 K=0
        K=IAB
        TIMIA(K)=TIMIAB
        SUMIAT(K)=SUMIAT(K)+TIMIA(K)
        TNIA(K)=TNIA(K)+1.
        L=LEVIAB+1
        LFREQ(K,L)=LFREQ(K,L)+1
C        FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
        M=NPASS+1
        MFREQ(K,M)=MFREQ(K,M)+1
C        FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
        MM=NPERF+1
        MMFREQ(K,MM)=MMFREQ(K,MM)+1
C       IF STATEMENT TO CALCULATE NUMBER OF STUDENTS TAKING ONLY TWO IAS
        IF(IAC) 240,240,250
    240 TWOIA(K)=TWOIA(K)+1.
        GO TO 270
    250 THRIA(K)=THRIA(K)+1.
```

```
C     SAME INFORMATION CALCULATED FOR THIRD IA TYPE
      K=0
      K=IAC
      TIMIA(K)=TIMIAC
      SUMIAT(K)=SUMIAT(K)+TIMIA(K)
      TNIA(K)=TNIA(K)+1.
      L=LEVIAC+1
      LFREQ(K,L)=LFREQ(K,L)+1
C      FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
      M=NPASS+1
      MFREQ(K,M)=MFREQ(K,M)+1
C      FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
      MM=NPERF+1
      MMFREQ(K,MM)=MMFREQ(K,MM)+1
      THRIA(K)=THRIA(K)+1.
C     IF STATEMENTS TO BYPASS DATA WITH MISSING DATES
  270 IF(NDATE)300,300,280
C         IF STATEMENT TO BYPASS DATES WHEN INDATE LATER THAN RETURN DAT
  280 IF(KDATE.GT.NDATE) GO TO 300
      IF(KDATE)300,300,290
C     IF STATEMENT TO  CONVERT FEB DATES TO JAN SCALE
  290 IF (KDATE.GT.200.AND.KDATE.LT.229) KDATE=KDATE-69
      IF (NDATE.GT.200.AND.NDATE.LT.229) NDATE=NDATE-69
C     IF STATEMENT TO CONVERT MARCH DATES TO JAN SCALE
      IF(KDATE.GT.300.AND.KDATE.LT.332) KDATE=KDATE-141
      IF(NDATE.GT.300.AND.NDATE.LT.332) NDATE=NDATE-141
C      IF STATEMENT TO CONVERT APRIL DATES TO JANUARY SCALE
      IF(KDATE.GT.400.AND.KDATE.LT.431) KDATE=KDATE-210
      IF (NDATE.GT.400.AND.NDATE.LT.431) NDATE=NDATE-210
C         IF STATEMENT TO CONVERT DATES IN MAY
      IF(KDATE.GT.500.AND.KDATE.LT.532) KDATE=KDATE-280
      IF(NDATE.GT.500.AND.NDATE.LT.532) NDATE=NDATE-280
C         IF STATEMENT TO CONVERT DATES IN JUNE
      IF(KDATE.GT.600.AND.KDATE.LT.631) KDATE=KDATE-349
      IF(NDATE.GT.600.AND.NDATE.LT.631) NDATE=NDATE-349
C         IF STATEMENT TO CONVERT DATES IN JULY
      IF(KDATE.GT.700.AND.KDATE.LT.732) KDATE=KDATE-419
      IF(NDATE.GT.700.AND.NDATE.LT.732) NDATE=NDATE-419
C         IF STATEMENT TO CONVERT DATES IN AUGUST
      IF(KDATE.GT.800.AND.KDATE.LT.832) KDATE=KDATE-488
      IF(NDATE.GT.800.AND.NDATE.LT.832) NDATE=NDATE-488
C         IF STATEMENT TO CONVERT DATES IN SEPTEMBER
      IF(KDATE.GT.900.AND.KDATE.LT.931) KDATE=KDATE-557
      IF(NDATE.GT.900.AND.NDATE.LT.931) NDATE=NDATE-557
C         IF STATEMENT TO CONVERT DATES IN OCTOBERER
      IF(KDATE.GT.1000.AND.KDATE.LT.1032) KDATE=KDATE-627
      IF(NDATE.GT.1000.AND.NDATE.LT.1032) NDATE=NDATE-627
C         IF STATEMENT TO CONVERT DATES IN NOVEMBER
      IF(NDATE.GT.1100.AND.NDATE.LT.1131) NDATE=NDATE-696
      IF(KDATE.GT.1100.AND.KDATE.LT.1131) KDATE=KDATE-696
C         IF STATEMENT TO CONVERT DATES IN DECEMBER
      IF(KDATE.GT.1200.AND.KDATE.LT.1232) KDATE=KDATE-766
      IF(NDATE.GT.1200.AND.NDATE.LT.1232) NDATE=NDATE-766
C         IF JAN DATES ARE TO FOLLOW DECEMBER, 1231=465, SO WOULD ADD 365
C             TO JAN DATE TO CONTINUE YEAR, MAY WANT TO KEEP
C             SEPARATE PROGRAM OF DATES FOR FALL OR SPRING SEMESTER SINCE
```

```
C           BOTH SHARE JANUARY
C       DIFFERENCES,TOTALS AND NUMBERS OF CASES CALCULATED FOR AVERAGING
        DATEDF=NDATE-KDATE
        SUMDTDF=SUMDTDF+DATEDF
        TNDTDF=TNDTDF+I.
        IF(DATEDF.GT.BIGDD) BIGDD=DATEDF
        IF(DATEDF.LT.SMLDD) SMLDD=DATEDF
C       FREQUENCY OF NOT PASS/ PASS CALCULATED
C           1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
  300   N=NPASS+1
        NFREQ(N)=NFREQ(N)+1
C       FREQUENCIES OF LEVELS OF PERFORMANCE CALCULATED
        NN=NPERF+1
        NNFREQ(NN)=NNFREQ(NN)+1
C       SUM AND NUMBER OF RATING TIME CALCULATED
        SUMRT=SUMRT+RTIME
        RATN=RATN+1
C       READ ANOTHER STUDENT,S CARD
        GO TO 120
C        IF ALL STUDENT CARDS IN PC FILE COMPLETED, TOTALS/PC CALCULATED
  500   AVGT=SUMT/TN
        AVGRT=SUMRT/RATN
        DO 510 K=1,11
        AVGIAT(K)=SUMIAT(K)/TNIA(K)
  510   CONTINUE
        AVGDTDF=SUMDTDF/TNDTDF
        IF(SMLT.EQ.999.) SMLT=0.0
C       TITLE FOR IA PAGE WRITTEN OUT
        WRITE(61,520) NIA,MONTH,LDAY
  520   FORMAT(1H1,*REPORT ON THE PREPARATION OF IA NUMBER *,I12,* FOR *,
      11A5,1X,1I2,///)
C       TIME FOR PC WRITTEN OUT
        WRITE(61,530) TN,AVGT,SMLT,BIGT
  530   FORMAT(1X,1F4.0,* SPECIALISTS REPORTED TAKING AN AVERAGE OF *,1F10
      1.2,* MINUTES  (RANGE *,1F4.0,* TO *,1F4.0,*)*,///)
C       WRITE OUT PC EVALUATION
        WRITE(61,540)
  540   FORMAT(IX,*EVALUATION OF PC*,/,5X,*I=PROFICIENCY*,/,5X,*2=KNOWLEDG
      1E OF THE PROCESS*,/,5X,*3=ABILITY TO DIAGNOSE*,/,5X,*4=KNOWLEDGE
      2OF DIFFERENT MATERIALS AND METHODS*,/.5X,*5=ABILITY TO CHOSE APPRO
      3PRIATE MATERIALS AND METHODS*,/,5X,*6=NO,PC INAPPROPRIATE*,/,5X,*7
      4=NO,IAS INAPPROPRIATE*,//,50X,*YES*,10X,*SOMEWHAT*5X,*NO*)
        DO 549 I=1,7
        WRITE(61,545) I,(SUMEV(I,J),J=2,4)
  545   FORMAT(1X,45X,1I1,3X,IF4.0,10X,1F4.0,IOX,1F4.0)
  549   CONTINUE
C       WRITE OUT INFORMATION ON EACH IA
        WRITE(61,550)
  550   FORMAT(IX,*INFORMATION ON EACH IA*,/,5X,* I=LECTURE*,/,5X,* 2=LECT
      1URE ON TAPE*,/,5X,* 3=READING IN LIBRARY*,/,5X,* 4=BROWSING IN LIB
      2RARY*,/,5X,* 5=DISCUSSION WITH STAFF*,/,5X,* 6=DISCUSSION WITH OTH
      3ERS*,/,5X,* 7=AUDIO-VISUAL*,/,5X,* 8=OBSERVATION*,/,5X,* 9=PRACTIC
      4E*,/,5X,*IO=PRETEST (NO IA)*,/,5X,*1I=OTHER*,//,* TYPE NUMBER OF
      5    AVG.TIME       NUMBER OF IAS USED      IA AS HELP IN PASSING PC
      6 PC NOT PASS  PC PASS       PERFORMANCE LEVEL*,/,6X,*STUDENTS*,21X,
      7*ONE  TWO    THREE          GOOD    SOME    NOT*,34X,*MIN. ADEQ. OUTST.
```

```
       8*,///)
        DO 559 K=1,11
        WRITE(61,555) K,INIA(K),AVGIAT(K),ONEIA(K),TWOIA(K),THRIA(K),(LFRE
       1Q(K,L),L=2,4),(MFREQ(K,M),M=2,3),(MMFREQ(K,MM),MM=2,4)
   555 FORMAT(1X,1I2,5X,1F4.0,8X,1F6.2,7X,1F4.0,2X,1F4.0,2X,1F4.0,9X,1I3,
       14X,1I3,4X,1I3,15X,1I3,5X,1I3,7X,1I3,3X,1I3,3X,1I3,///)
   559 CONTINUE
C       WRITE OUT AVERAGE RETURN TIME
        WRITE(61,560) TNDTDF,AVGDTDF,SMLDD,BIGDD
   560 FORMAT(1X,/,1X,*AVERAGE RETURN TIME IN DAYS, FOR*,1F4.0,* STUDENTS
       1 REPORTING WAS*,1F6.2,*  (WITH A RANGE OF *,1F4.0,* TO *,1F4.0,*)*
       2,///)
C             WRITE OUT NUMBER OF STUDENTS PASSING/NOT PASSING
        WRITE(61,570) (NFREQ(N),N=2,3)
   570 FORMAT(1X,*NUMBER OF STUDENTS NOT PASSING=*,1I3,//,5X,*NUMBER OF S
       1TUDENTS PASSING=*,1I3,///)
C       WRITE OUT LEVELS OF PERFORMANCE
        WRITE(61,580) (NNFREQ(NN),NN=2,4)
   580 FORMAT(1X,*NUMBER OF STUDENTS WITH MINIMAL PERFORMANCES   *,1I3,/,
       123X,*ADEQUATE PERFORMANCES     *,1I3,/,23X,*OUTSTANDING PERFORMANCE
       2S *,1I3,///)
C             WRITE OUT AVERAGE RATING TIME
        WRITE(61,590) AVGRT,RATN
   590 FORMAT(1X,* AVERAGE RATING TIME IN MINUTES  *,1F6.2,*  AS REPORTED
       1 BY  *,1F4.0,* RATERS*)
C             VARIABLES RESET TO ZERO BEFORE NEW IA TITLE CARD READ
        GO TO 10
   900 STOP
C                A SINGLE CARD WITH MONTH AND DAY (FORMAT 100)
C                B IA TITLE CARD (FORMAT 110)
C                C PC QUESTIONNAIRE CARDS (FORMAT 120)
C                D DUMMY STUDENT CARD (NSTU=999) TO COMPLETE PC FILE
C                E OTHER PC FILES, SEQUENCE B,C,D
C                F DUMMY IA TITLE CARD (NIA=99) TO END PROGRAM
        END
```

```
REPORT ON THE PREPARATION OF IA NUMBER  2 FOR   MAY 19


 20 SPECIALISTS REPORTEO TAKING AN AVERAGE OF      359.50 MINUTES  (RANGE   45 TO  999)


EVALUATION OF PC
     1=PROFICIENCY
     2=KNOWLEDGE OF THE PROCESS
     3=ABILITY TO DIAGNOSE
     4=KNOWLEDGE  OF OIFFERENT MATERIALS ANO METHOOS
     5=ABILITY TO CHOSE APPROPRIATE MATERIALS ANO METHOOS
     6=NO.PC INAPPROPRIATE
     7=NO.IAS INAPPROPRIATE

                                                   YES          SOMEWHAT      NO
                                               1    13             3            2
                                               2    11             6            1
                                               3    14             2            2
                                               4    15             3            0
                                               5    10             6            2
                                               6     1             3           12
                                               7     0             1           14
 INFORMATION ON EACH IA
      1=LECTURE
      2=LECTURE ON TAPE
      3=READING IN LIBRARY
      4=BROWSING IN LIBRARY
      5=DISCUSSION WITH STAFF
      6=DISCUSSION WITH OTHERS
      7=AUDIO-VISUAL
      8=OBSERVATION
      9=PRACTICE
     10=PRETEST (NO IA)
     11=OTHER
 TYPE NUMBER OF      AVG.TIME     NUMBER OF IAS USEO    IA AS HELP IN PASSING PC     PC NOT PASS  PC PASS     PERFORMANCE LEVEL
        STUDENTS                   ONE  TWO   THREE        GOOO   SOME   NOT                                  MIN. ADEQ. OUTST.


  1       3          86.67          0    1     2            2      1      0              0          3          0    3    0

  2       3         103.33          1    1     1            1      2      0              0          3          0    3    0

  3       2          45.00          1    0     1            2      0      0              1          1          0    1    0

  4      13         268.38          5    3     5            9      2      2              3         10          1    7    1

  5       6          33.33          3    0     3            6      0      0              0          6          0    5    1
 6     2     30.00      0   0   2     1   1   0        0   2     0   0   2

 7     2    405.00      1   0   1     2   0   0        0   2     0   2   0

 8     0      0.00      0   0   0     0   0   0        0   0     0   0   0

 9     0      0.00      0   0   0     0   0   0        0   0     0   0   0

10     1      0.00      0   0   1     0   0   0        1   0     0   0   0

11     3    349.67      0   1   2     3   0   0        0   3     0   1   2


AVERAGE RETURN TIME IN DAYS, FOR  12 STUDENTS REPORTING WAS 21.00  (WITH A RANGE OF    0 TO   61)

NUMBER OF STUDENTS NOT PASSING=  3
    NUMBER OF STUDENTS PASSING= 17

NUMBER OF STUDENTS WITH MINIMAL PERFORMANCES      1
                        ADEQUATE PERFORMANCES    13
                        OUTSTANDING PERFORMANCES  2

 AVERAGE RATING TIME IN MINUTES   59.75  AS REPORTED BY    20 RATERS
```

Program: PCSPEC

The program was designed to provide a printout similar to the information available on the generalists from the program PC. A double page of printout was available for each specialist PC including the two expressive objectives: the rating of generalists PCs and the assisting in program management during office hours. The printout was to be used by the staff to help in monitoring program operation and in making curriculum changes.

Information was collected from the PC questionnaire completed by the specialist and his rater whenever a PC was attempted.

A listing of the program and a sample printout are included. For a flow chart explaining the logic of the program, please see the flow chart for PC.

```
FTN5.4B                                                                  09/20/70
          PROGRAM PCSPEC
C             PROGRAM DESIGNED TO PROVIDE 2 PAGES OF PRINTOUT PER PC
C               INPUT DATA INCLUDES
C                 DATE PROGRAM BEING RUN, MONTH(1A5), LDAY(1I2)
C                 PC NUMBER, NPC(1I2)
C                 STUDENTS NUMBER, NSTU(1I3)
C                 DATE PC PASSED IN, KDATE (1I4)
C                 TIME TAKE FOR PC, TIMPC(1F3.0)
C                 EVALUATION OF PC ON HIERARCHY, LEVPC(I)  (7I1)
C                 FIRST IA TYPE TAKE, IAA(1I3)
C                 TIME FOR FIRST IA, TIMIAA(1F3.0)
C                 EVALUATION OF FIRST IA,LEVIAA(1I1)
C                 SAME INFORMATION FOR SECOND IA,IAB,TIMIAB,LEVIAB
C                 SAME INFORMATION FOR THIRD IA,IAC,TIMIAC,LEVIAC
C                 DATE PC RETURNED TO STUDENT, NDATE(1I4)
C                 PC PASSED/NOT PASSED, NPASS(1I1)
C                 PERFORMANCE LEVEL OF PASSED PC,NPERF(1I1)
C                 TIME TAKEN TO RATE PC,RTIME(1F2.0)
C               CALCULATED VARIABLES INCLUDE
C               TOTAL TIME TAKEN,SUMT,NUMBER OF STUDENTS REPORTING,TN,LONGEST
C                  TIME REPORTED,BIGT,SHORTEST TIME,SMLT,AVERAGE TIME,AVGT
C                 FOR EACH OF 3 REPORTED IAS
C                    TOTAL TIME, SUMIAT(K)  WHEN K=IA TYPE
C                    NUMBER OF STUDENTS, TNIA(K), AVERAGE TIME,AVGIAT, EVALUATION
C                    OF IA,LFREQ(K,L),FREQUENCY OF PASS/NOT PASS,MFREQ(K,M),
C                    FREQUENCY OF EACH PERFORMANCE LEVEL,MMFREQ(K,MM), NUMBER USING I
C                    IA ALONE,ONEIA(K), USING IT WITH ONE OTHER IA,TWOIA(K), USING IT
C                   WITH 2 OTHER IAS,THRIA(K)
C                 FOR TURN AROUND TIME IN DAYS -  DIFFERENCE BETWEEN DATES,DATEDF,SUM
C                     OF DATES,SUMDTDF, AVERAGE,AVGDTDF, NUMBER OF CASES,TNDTDF,
C                    LONGEST TIME,BIGDD, SHORTEST TIME,SMLDD
C                 FOR FREQUENCIY OF PASS/NOT PASS,NFREQ(NPASS)
C                 FOR FREQUENCY OF PERFORMANCE LEVEL,NNFREQ(NPERF)
C                 FOR RATING TIME,RTIME, SUM  OF TIMES,SUMRT, NUMBER REPORTING,RATN,
C                     AVERAGE REATING TIME,AVGRT
          DIMENSION LEVPC(7),SUMEV(7,4),TIMIA(11),SUMIAT(11),TNIA(11),AVGIAT
         1(11),LFREQ(11,4),ONEIA(11),TWOIA(11),THRIA(11),MFREQ(11,3),MMFREQ
         2(11,4),NFREQ(3),NNFREQ(4)
C         READ DATE PROGRAM RUN
          READ (60,100) MONTH,LDAY
      100 FORMAT(1A5,1X,1I2)
C         SET ALL VARIABLES TO ZERO
       10 TIMPC=0.
          TIME=0.
          SUMT=0.0
          TN=0.
          BIGT=0.
          SMLT=999.
          AVGT=0.0
          KDATE=0
          NDATE=0
          DATEDF=0.
          SUMDTDF=0.
          TNDTDF=0.
          BIGDD=0.
          SMLDD=0.
      AVGDTDF=0,0
      NPASS=0
      NPERF=0
      RTIME=0.0
      SUMRT=0,0
      RATN=0.0
      AVGRT=0.0
      DO 20 I=1,7
      DO 20 J=1,4
      SUMEV(I,J)=0.0
   20 CONTINUE
      DO 30 K=1,11
      TIMIA(K)=0.
      SUMIAT(K)=0.
      TNIA(K)=0.
      AVGIAT(K)=0.0
      ONEIA(K)=0.
      TWOIA(K)=0.
      THRIA(K)=0.
      DO 30 L=1,4
      LFREQ(K,L)=0
   30 CONTINUE
      DO 35 K=1,11
      DO 35 M=1,3
      MFREQ(K,M)=0
   35 CONTINUE
      DO 40 K=1,11
      DO 40 MM=1,4
      MMFREQ(K,MM)=0
   40 CONTINUE
      DO 50 N=1,3
      NFREQ(N)=0
   50 CONTINUE
      DO 60 NN=1,4
      NNFREQ(NN)=0
   60 CONTINUE
C     READ PC TITLE CARD AT BEGINNING OF FILE
      READ(60,110) NPC
  110 FORMAT(9X,1I2)
C     IF STATEMENT USING DUMMY PC CARD (NPC=99) TO END PROGRAM
      IF (NPC.EQ.99) GO TO 900
  120 READ(60,130) NSTU,KDATE,TIMPC,(LEVPC(I),I=1,7),IAA,TIMIAA,LEVIAA,
     1IAB,TIMIAB,LEVIAB,IAC,TIMIAC,LEVIAC,NDATE,NPASS,NPERF,RTIME
  130 FORMAT(1I3,    1I4,7X,1F3.0,2X,7I1.3X,1I2,3X,1F3.0,1I1,1X,1I2,3X,1F
     13.0,1I1,1X,1I2,3X,1F3.0,1I1,10X,1I4,2X,1I1,1I1,1F2,0)
C      IF STATEMENT TO END PC FILE WITH DUMMY STUDENT CARD (NSTU=999)
      IF (NSTU.EQ.999) GO TO 500
C     SUM AND NUMBER OF CASES CALCULATED FOR AVERAGING PC TIME
      TIME=TIMPC
      SUMT=SUMT+TIME
      TN=TN+1.
C     RANGE CALCULATED BY GETTING BIG AND SMALL
      IF (TIME.GT.BIGT) BIGT=TIME
      IF (TIME.LT.SMLT.AND.TIME.NE.0.0) SMLT=TIME
C     DO LOOP TO SUM ANSWERS ON 7 EVALUATION QUESTIONS
      GO TO 200
  200 DO 210 I=1,7
C          1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
      J=LEVPC(I)+1
      SUMEV(I,J)=SUMEV(I,J)+1.
  210 CONTINUE
C     FIRST IA TYPE PUT INTO IA ARRAY
C          IF STATEMENT TO ELIMINATE ZERO AND BLANK IAS
      IF(IAA.LT.1) GO TO 270
      K=IAA
C     FIRST IA TIME PUT INTO ARRAY
      TIMIA(K)=TIMIAA
C     TOTAL TIME FOR IA CALCULATED
      SUMIAT(K)=SUMIAT(K)+TIMIA(K)
C     NUMBER OF STUDENTS USING IA TYPE CALCULATED
      TNIA(K)=TNIA(K)+1.
C     FREQUENCY OF EACH EVLUATION RANKING CALCULATED
C          1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
      L=LEVIAA+1
      LFREQ(K,L)=LFREQ(K,L)+1
C      FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
C          1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
      M=NPASS+1
      MFREQ(K,M)=MFREQ(K,M)+1
C      FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
C          1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
      MM=NPERF+1
      MMFREQ(K,MM)=MMFREQ(K,MM)+1
C      IF STATEMENTS TO SEPARATE NUMBER OF IAS USED
      IF (IAB.EQ.0) GO TO 220
      IF (IAB.GT.0.AND.IAC.EQ.0) GO TO 230
      IF (IAC.GT.0) GO TO 235
  220 ONEIA(K)=ONEIA(K)+1.
      GO TO 270
  230 TWOIA(K)=TWOIA(K)+1.
      GO TO 237
  235 THRIA(K)=THRIA(K)+1.
C     IA TYPE(K) RESET TO ZERO SO SECOND IA CAN BE ADDED TO ARRAY
C          SEE FIRST IA FOR EXPANATION
  237 K=0
      K=IAB
      TIMIA(K)=TIMIAB
      SUMIAT(K)=SUMIAT(K)+TIMIA(K)
      TNIA(K)=TNIA(K)+1.
      L=LEVIAB+1
      LFREQ(K,L)=LFREQ(K,L)+1
C      FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
      M=NPASS+1
      MFREQ(K,M)=MFREQ(K,M)+1
C      FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
      MM=NPERF+1
      MMFREQ(K,MM)=MMFREQ(K,MM)+1
C     IF STATEMENT TO CALCULATE NUMBER OF STUDENTS TAKING ONLY TWO IAS
      IF(IAC) 240,240,250
  240 TWOIA(K)=TWOIA(K)+1.
      GO TO 270
  250 THRIA(K)=THRIA(K)+1.
```

```
C      SAME INFORMATION CALCULATED FOR THIRD IA TYPE
       K=0
       K=IAC
       TIMIA(K)=TIMIAC
       SUMIAT(K)=SUMIAT(K)+TIMIA(K)
       TNIA(K)=TNIA(K)+1.
       L=LEVIAC+1
       LFREQ(K,L)=LFREQ(K,L)+1
C       FREQUENCY FOR EACH PASS/NOT PASS CALCULATED
       M=NPASS+1
       MFREQ(K,M)=MFREQ(K,M)+1
C       FREQUENCY OF EACH PERFORMANCE LEVEL CALCULATED
       MM=NPERF+1
       MMFREQ(K,MM)=MMFREQ(K,MM)+1
       THRIA(K)=THRIA(K)+1.
C      IF STATEMENTS TO BYPASS DATA WITH MISSING DATES
  270  IF(NDATE)300,300,280
C           IF STATEMENT TO BYPASS DATES WHEN INDATE LATER THAN RETURN DATE
  280  IF(KDATE.GT.NDATE) GO TO 300
       IF(KDATE)300,300,290
C      IF STATEMENT TO  CONVERT FEB DATES TO JAN SCALE
  290  IF (KDATE.GT.200.AND.KDATE.LT.229) KDATE=KDATE-69
       IF (NDATE.GT.200.AND.NDATE.LT.229) NDATE=NDATE-69
C      IF STATEMENT TO CONVERT MARCH DATES TO JAN SCALE
       IF(KDATE.GT.300.AND.KDATE.LT.332) KDATE=KDATE-141
       IF(NDATE.GT.300.AND.NDATE.LT.332) NDATE=NDATE-141
C       IF STATEMENT TO CONVERT APRIL DATES TO JANUARY SCALE
       IF(KDATE.GT.400.AND.KDATE.LT.431) KDATE=KDATE-210
       IF (NDATE.GT.400.AND.NDATE.LT.431) NDATE=NDATE-210
C           IF STATEMENT TO CONVERT DATES IN MAY
       IF(KDATE.GT.500.AND.KDATE.LT.532) KDATE=KDATE-280
       IF(NDATE.GT.500.AND.NDATE.LT.532) NDATE=NDATE-280
C           IF STATEMENT TO CONVERT DATES IN JUNE
       IF(KDATE.GT.600.AND.KDATE.LT.631) KDATE=KDATE-349
       IF(NDATE.GT.600.AND.NDATE.LT.631) NDATE=NDATE-349
C           IF STATEMENT TO CONVERT DATES IN JULY
       IF(KDATE.GT.700.AND.KDATE.LT.732) KDATE=KDATE-419
       IF(NDATE.GT.700.AND.NDATE.LT.732) NDATE=NDATE-419
C           IF STATEMENT TO CONVERT DATES IN AUGUST
       IF(KDATE.GT.800.AND.KDATE.LT.832) KDATE=KDATE-488
       IF(NDATE.GT.800.AND.NDATE.LT.832) NDATE=NDATE-488
C           IF STATEMENT TO CONVERT DATES IN SEPTEMBER
       IF(KDATE.GT.900.AND.KDATE.LT.931) KDATE=KDATE-557
       IF(NDATE.GT.900.AND.NDATE.LT.931) NDATE=NDATE-557
C           IF STATEMENT TO CONVERT DATES IN OCTOBERER
       IF(KDATE.GT.1000.AND.KDATE.LT.1032) KDATE=KDATE-627
       IF(NDATE.GT.1000.AND.NDATE.LT.1032) NDATE=NDATE-627
C           IF STATEMENT TO CONVERT DATES IN NOVEMBER
       IF(NDATE.GT.1100.AND.NDATE.LT.1131) NDATE=NDATE-696
       IF(KDATE.GT.1100.AND.KDATE.LT.1131) KDATE=KDATE-696
C           IF STATEMENT TO CONVERT DATES IN DECEMBER
       IF(KDATE.GT.1200.AND.KDATE.LT.1232) KDATE=KDATE-766
       IF(NDATE.GT.1200.AND.NDATE.LT.1232) NDATE=NDATE-766
C           IF JAN DATES ARE TO FOLLOW DECEMBER, 1231=465, SO WOULD ADD 365
C              TO JAN DATE TO CONTINUE YEAR, MAY WANT TO KEEP
C              SEPARATE PROGRAM OF DATES FOR FALL OR SPRING SEMESTER SINCE
```

```
C             BOTH SHARE JANUARY
C       DIFFERENCES,TOTALS AND NUMBERS OF CASES CALCULATED FOR AVERAGING
        DATEDF=NDATE-KDATE
        SUMDTDF=SUMDTDF+DATEDF
        TNDTDF=TNDTDF+1.
        IF(DATEDF.GT.BIGDD) BIGDD=DATEDF
        IF(DATEDF.LT.SMLDD) SMLDD=DATEDF
C       FREQUENCY OF NOT PASS/ PASS CALCULATED
C           1 ADDED TO AVOID PROBLEM WITH BLANKS OR ZEROES
  300   N=NPASS+1
        NFREQ(N)=NFREQ(N)+1
C       FREQUENCIES OF LEVELS OF PERFORMANCE CALCULATED
        NN=NPERF+1
        NNFREQ(NN)=NNFREQ(NN)+1
C       SUM AND NUMBER OF RATING TIME CALCULATED
        SUMRT=SUMRT+RTIME
        RATN=RATN+1
C       READ ANOTHER STUDENT,S CARD
        GO TO 120
C        IF ALL STUDENT CARDS IN PC FILE COMPLETED, TOTALS/PC CALCULATED
  500   AVGT=SUMT/TN
        AVGRT=SUMRT/RATN
        DO 510 K=1,11
        AVGIAT(K)=SUMIAT(K)/TNIA(K)
  510   CONTINUE
        AVGDTDF=SUMDTDF/TNDTDF
        IF(SMLT.EQ.999.) SMLT=0.0
C       TITLE FOR PC PAGE WRITTEN
        WRITE(61,520) NPC,MONTH,LDAY
  520   FORMAT(1H1,*REPORT ON THE PREPARATION OF PC NUMBER *,1I2,* FOR *,
       11A5,1X,1I2,///)
C       TIME FOR PC WRITTEN OUT
        WRITE(61,530) TN,AVGT,SMLT,BIGT
  530   FORMAT(1X,1F4.0,* SPECIALISTS REPORTED TAKING AN AVERAGE OF *,1F10
       1.2,* MINUTES  (RANGE *,1F4.0,* TO *,1F4.0,*)*,///)
C       WRITE OUT PC EVALUATION
        WRITE(61,540)
  540   FORMAT(1X,*EVALUATION OF PC*,/,5X,*1=PROFICIENCY*,/,5X,*2=KNOWLEDG
       1E OF THE PROCESS*,/,5X,*3=ABILITY TO DIAGNOSE*,/,5X,*4=KNOWLEDGE
       2OF DIFFERENT MATERIALS AND METHODS*,/,5X,*5=ABILITY TO CHOSE APPRO
       3PRIATE MATERIALS AND METHODS*,/,5X,*6=NO,PC INAPPROPRIATE*,/,5X,*7
       4=NO,IAS INAPPROPRIATE*,//,50X,*YES*,10X,*SOMEWHAT*5X,*NO*)
        DO 549 I=1,7
        WRITE(61,545) I,(SUMEV(I,J),J=2,4)
  545   FORMAT(1X,45X,1I1,3X,1F4.0,10X,1F4.0,10X,1F4.0)
  549   CONTINUE
C       WRITE OUT INFORMATION ON EACH IA
        WRITE(61,550)
  550   FORMAT(1X,*INFORMATION ON EACH IA*,/,5X,* 1=LECTURE*,/,5X,* 2=LECT
       1URE ON TAPE*,/,5X,* 3=READING IN LIBRARY*,/,5X,* 4=BROWSING IN LIB
       2RARY*,/,5X,*  =DISCUSSION WITH STAFF*,/,5X,* 6=DISCUSSION WITH OTH
       3ERS*,/,5X,* 7=AUDIO-VISUAL*,/,5X,* 8=OBSERVATION*,/,5X,* 9=PRACTIC
       4E*,/,5X,*10=PRETEST (NO IA)*,/,5X,*11=OTHER*,//,* TYPE NUMBER OF
       5   AVG.TIME      NUMBER OF IAS USED     IA AS HELP IN PASSING PC
       6 PC NOT PASS  PC PASS      PERFORMANCE LEVEL*,/,6X,*STUDENTS*,21X,
       7*ONE  TWO   THREE        GOOD   SOME   NOT*,34X,*MIN. ADEQ. OUTST.
```

```
     8*,///)
      DO 559 K=1,11
      WRITE(61,555) K,TNIA(K),AVGIAT(K),ONEIA(K).TWOIA(K),THRIA(K),(LFRE
     1Q(K,L),L=2,4),(MFREQ(K,M),M=2.3),(MMFREQ(K,MM),MM=2,4)
  555 FORMAT(1X,1I2,5X.1F4.0,8X,1F6.2,7X,1F4.0,2X,1F4.0,2X,1F4.0,9X,1I3,
     14X,1I3,4X,1I3,15X,1I3,5X,1I3.7X,1I3,3X,1I3,3X,1I3,///)
  559 CONTINUE
C     WRITE OUT AVERAGE RETURN TIME
      WRITE(61,560) TNDTDF,AVGDTDF,SMLDD,BIGDD
  560 FORMAT(1X,/,1X,*AVERAGE RETURN TIME IN DAYS, FOR*.1F4.0,* STUDENTS
     1 REPORTING WAS*,1F6.2,*  (WITH A RANGE OF *,1F4.0,* TO *,1F4.0,*)*
     2,///)
C           WRITE OUT NUMBER OF STUDENTS PASSING/NOT PASSING
      WRITE(61,570) (NFREQ(N),N=2,3)
  570 FORMAT(1X,*NUMBER OF STUDENTS NOT PASSING=*,1I3,//,5X,*NUMBER OF S
     1TUDENTS PASSING=*,1I3,///)
C     WRITE OUT LEVELS OF PERFORMANCE
      WRITE(61,580) (NNFREQ(NN),NN=2,4)
  580 FORMAT(1X,*NUMBER OF STUDENTS WITH MINIMAL PERFORMANCES   *,1I3,/,
     123X,*ADEQUATE PERFORMANCES     *,1I3,/,23X,*OUTSTANDING PERFORMANCE
     2S *,1I3,///)
C           WRITE OUT AVERAGE RATING TIME
      WRITE(61,590) AVGRT,RATN
  590 FORMAT(1X,* AVERAGE RATING TIME IN MINUTES  *,1F6.2,*  AS REPORTED
     1 BY  *,1F4.0,* RATERS*)
C     VARIABLES RESET TO ZERO BEFORE NEW PC TITLE CARD READ
      GO TO 10
  900 STOP
C           DATE DECK AS FOLLOWS
C             A SINGLE CARD WITH MONTH AND DAY (FORMAT 100)
C             B PC TITLE CARD (FORMAT 110)
C             C PC QUESTIONNAIRE CARDS (FORMAT 120)
C             D DUMMY STUDENT CARD (NSTU=999) TO COMPLETE PC FILE
C             E OTHER PC FILES, SEQUENCE B,C,D
C             F DUMMY PC TITLE CARD (NPC=99) TO END PROGRAM
      END
```

```
REPORT ON THE PREPARATION OF PC NUMBER 30 FOR   MAY 19


 30 SPECIALISTS REPORTED TAKING AN AVERAGE OF       0.00 MINUTES  (RANGE    0 TO    0)


EVALUATION OF PC
    1=PROFICIENCY
    2=KNOWLEDGE OF THE PROCESS
    3=ABILITY TO DIAGNOSE
    4=KNOWLEDGE  OF DIFFERENT MATERIALS AND METHODS
    5=ABILITY TO CHOSE APPROPRIATE MATERIALS AND METHODS
    6=NO,PC INAPPROPRIATE
    7=NO,IAS INAPPROPRIATE

                                        YES          SOMEWHAT     NO
                                    1    12            17          1
                                    2    12            16          2
                                    3     9            16          5
                                    4    11            18          1
                                    5     7            18          5
                                    6     0             2          2
                                    7     0             0          4
INFORMATION ON EACH IA
     1=LECTURE
     2=LECTURE ON TAPE
     3=READING IN LIBRARY
     4=BROWSING IN LIBRARY
     5=DISCUSSION WITH STAFF
     6=DISCUSSION WITH OTHERS
     7=AUDIO-VISUAL
     8=OBSERVATION
     9=PRACTICE
    10=PRETEST (NO IA)
    11=OTHER
TYPE NUMBER OF     AVG.TIME     NUMBER OF IAS USED    IA AS HELP IN PASSING PC    PC NOT PASS  PC PASS     PERFORMANCE LEVEL
     STUDENTS                    ONE  TWO   THREE      GOOD   SOME   NOT                                   MIN. ADEQ. OUTST.


 1      5           24.00         0    0     5          4      1      0              0         5           0     0     0


 2     11           47.27         0    2     9          7      4      0              0        11           0     0     0


 3     17           25.29         1    3    13         10      7      0              0        17           0     0     0
 6     6        0.00       0   1   5      3    3    0          0    6      0   0   0

 7     0        0.00       0   0   0      0    0    0          0    0      0   0   0

 8     0        0.00       0   0   0      0    0    0          0    0      0   0   0

 9     0        0.00       0   0   0      0    0    0          0    0      0   0   0

10     0        0.00       0   0   0      0    0    0          0    0      0   0   0

11     3        6.67       0   0   3      3    0    0          0    3      0   0   0

AVERAGE RETURN TIME IN DAYS, FOR    0 STUDENTS REPORTING WAS  0.00  (WITH A RANGE OF    0 TO    0)

NUMBER OF STUDENTS NOT PASSING=  0

    NUMBER OF STUDENTS PASSING= 30

NUMBER OF STUDENTS WITH MINIMAL PERFORMANCES     0
                        ADEQUATE PERFORMANCES    0
                        OUTSTANDING PERFORMANCES 0

 AVERAGE RATING TIME IN MINUTES    0.00  AS REPORTED BY    30 RATERS
```

APPENDIX C

OTHER EVALUATIONS

School of Education: data collection forms

example of printout available to instructor

Office of Teacher Preparation: data collection forms

TEACHER EVALUATION QUESTIONNAIRE

Written Response Sheet

INSTRUCTOR________________________________ DATE____________________

COURSE NO.________________ Check one:

Undergraduate_____

COURSE TITLE_______________________________ Graduate _____

Written responses by students are crucial to the improvement of teaching. Please describe frankly what were the major strengths and weaknesses of this course and its teacher. Please complete your comments BEFORE answering the multiple choice section of the questionnaire.

TEACHER EVALUATION QUESTIONNAIRE

Form A: To Be Completed by the Student

SCHOOL OF EDUCATION
Dwight W. Allen, Dean

UNIVERSITY OF MASSACHUSETTS
Earl Seidman, Assistant Dean

Because good teaching is important, we are asking for your cooperation in completing the following questionnaire. The information that you provide will be especially valuable in helping us assess your needs as learners in a university environment. Your teacher will read any comments you care to write on the separate page provided for that purpose and he will review the ratings he receivc from the multiple-choice questions. He will then pass these results along to me so that we can be aware of student ideas and use them to help raise the level of intruction in our school.

Do not write your name anywhere on either of the two parts of this questionnaire. We want all answers to remain anonymous so that you will feel free to give your teacher your honest opinions.

Instructions for multiple choice questions: indicate your responses by filling in the appropriate numbered space on the Standard Answer Sheet. Use a soft lead pencil only, otherwise the optical scanning equipment will not be able to read your replies. Do not use ink or ball point pen.

1. What is your student status? Mark the appropriate space.
   1. graduate student, 2. undergraduate student. Do not mark 3, 4, or 5.

2. What is your major field of study?
   1. education, 2. some other major (or undecided). Do not mark 3, 4, or 5.

3. Are you a full time student or a part time student?
   1. full time, 2. part time. Do not mark 3, 4, or 5.

Questions 4 and 5 are parts of the same inquiry. If the answer to question 4 is contained in sub-number 1, 2, 3, 4 then ignore the next question. If the same answer is not listed in question 4 then mark response 5 and go on to question 5.

4. I enrolled in this class because: (if more than one reason is applicable to you, select the reason which was most important)

   1. It is a requirement in my major field or a university requirement
   2. I am interested in the subject matter
   3. The reputation of the teacher was known to me beforehand
   4. It fit into my schedule better than other available courses
   5. Another reason not listed above. See question 5.

5. Same as question 4 above.

   1. One or more of my friends are enrolled and we wanted to be together
   2. I need this course for credits toward graduation or certification
   3. I wanted to be exposed to something new
   4. The course would probably be of great benefit for my career
   5. Another reason not listed in either question 4 or 5.

There are not questions numbered from 6 to 40. The next question is number 41. Please go to number 41 on the Standard Answer Sheet when responding to the next question.

When answering the following questions use this rating scale:

1. highest possible evaluation, or an absolute yes for yes-no type inquiries
2. very good evaluation, or a qualified yes
3. satisfactory evaluation, or sometimes yes, or maybe
4. unsatisfactory evaluation, or definitely no
5. the question DOES NOT APPLY to this class

41. Were the objectives of the course developed in an understandable manner?

42. Was course content consistent with the objectives?

43. Were student responsibilities made clear?

44. Were the methods used in evaluating your work fair?

45. Has there been adequate provision for pursuing individual interests within the structure of this course?

46. Did the teacher take an interest in you as an individual?

47. Was the teacher effective in facilitating class discussion?

48. Have written comments on returned papers or spoken comments in response to your presentations in class been helpful?

49. Did the teacher listen to and respect ideas different from his own?

50. Was the teacher clear in explanation of abstract ideas and theories?

51. Did the teacher seem to be enthusiastic about teaching this course?

52. Did the teacher inspire your confidence by his knowledge of the subject?

53. How suitable were the teaching methods used?

54. How suitable were the readings used in this class?

55. How would you rate your involvement and motivation in this class?

56. How much did this course contribute to your professional growth?

57. How much did this course contribute to your personal growth?

58. What is your overall evaluation of the course?

59. What is your overall evaluation of the teacher?

60. Your teacher will be asked to estimate the overall rating your class gives him. What rating do you think he will estimate?

```
ED. 272 572  FALL        BUDMAN      M         INSTRUCTOR           5 + YEARS EXP          RUN NUMBER  1     02/12/70

     CLASS SIZE    TAUGHT BEFORE    SUBJECT MATTER             METHODS          MEDIA

        35              3           PROF EDUCATION         LECTURE + DISCUS      NONE


   COMPOSITION AND RATING CON.
 TOTAL RESPONSES FOR ALL QUESTIONS BY TYPE OF STUDENT

     TYPE                            1           2           3            4          MEAN       MEDIAN      STD DEV

 UNDERGRADUATE STUDENTS          240.0000     85.0000     31.0000      2.0000      1.4274      1.0000      0.6728
 GRADUATE STUDENTS               183.0000     75.0000     36.0000      7.0000      1.5581      1.0000      0.7921
 EDUCATION MAJORS                345.0000    135.0000     56.0000      9.0000      1.5028      1.0000      0.7454
 NON-EDUCATION MAJORS             78.0000     25.0000     11.0000      0.0000      1.4123      1.0000      0.6627
 FULL-TIME STUDENTS              423.0000    160.0000     67.0000      9.0000      1.4871      1.0000      0.7321
 PART-TIME STUDENTS                0.0000      0.0000      0.0000      0.0000      0.0000      0.0000      0.0000
 ALL STUDENTS                    423.0000    160.0000     67.0000      9.0000      1.4871      1.0000      0.7321

      QUESTIONS    1           2           3            4          MEAN        MEDIAN       STD DEV

        41      19.0000     13.0000      3.0000       0.0000      1.5429      1.0000      0.6572
        42      20.0000     12.0000      1.0000       2.0000      1.5714      1.0000      0.8148
        43      27.0000      4.0000      3.0000       1.0000      1.3714      1.0000      0.7702
        44      19.0000     11.0000      3.0000       0.0000      1.5152      1.0000      0.6671
        45      27.0000      6.0000      2.0000       0.0000      1.2857      1.0000      0.5725
        46      19.0000      9.0000      6.0000       1.0000      1.6857      1.0000      0.8668
        47      22.0000      8.0000      4.0000       0.0000      1.4706      1.0000      0.7065
        48      21.0000      7.0000      5.0000       1.0000      1.5882      1.0000      0.8570
        49      28.0000      3.0000      4.0000       0.0000      1.3143      1.0000      0.6761
        50      23.0000      9.0000      2.0000       0.0000      1.3824      1.0000      0.6038
        51      33.0000      2.0000      0.0000       0.0000      1.0571      1.0000      0.2355
        52      31.0000      1.0000      3.0000       0.0000      1.2000      1.0000      0.5841
        53      20.0000     10.0000      5.0000       0.0000      1.5714      1.0000      0.7391
        54      14.0000     14.0000      6.0000       0.0000      1.7647      2.0000      0.7410
        55      11.0000     16.0000      6.0000       2.0000      1.9714      2.0000      0.8570
        56      22.0000      9.0000      4.0000       0.0000      1.4857      1.0000      0.7017
        57      16.0000     12.0000      6.0000       1.0000      1.7714      2.0000      0.8432
        58      24.0000      8.0000      2.0000       1.0000      1.4286      1.0000      0.7391
        59      27.0000      6.0000      2.0000       0.0000      1.2857      1.0000      0.5725
        60       0.0000      0.0000      0.0000       0.0000      0.0000      0.0000      0.0000
        SU     423.0000    160.0000     67.0000       9.0000      1.4871      1.0000      0.7321


 QUESTIONS SHOWING THE HIGHEST MEAN RATING (UPPER QUARTILE)      QUESTIONS SHOWING THE LOWEST MEAN RATING (LOWER QUARTILE)

     51.000     52.000     59.000     45.000     49.000            55.000     57.000     54.000     46.000     48.000


    STUDENT MOTIVATION

  INTERESTED                        24
  TEACHER REPUTATION                 5
  CONVENIENT TO SCHEDULE             3
  BENEFIT MY CAREER                  1
  FRIENDS IN COURSE                  0
  NEEDED CREDITS                     0
  WANTED SOMETHING [illegible]       0
  OF DIFFERENT                       0
```

YOUR LAST NAME

YOUR FIRST NAME INI

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

TEACHER ONLY:
STUDENT ABSENT
FOR PART:
I II III IV

SEMESTER
FALL
SPRING

A
B

FORM OF
THIS TEST
IS: A 1
B 2
C 3
D 4

STUDENT NUMBER

1	2	3	4	5	6	GRADE	BIRTH DATE MO	BIRTH DATE YEAR	SEX	STUDENT NUMBER									
0	0	0	0	0	0	3	JAN	0	M	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	4	FEB	1	F	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	5	MAR	2		2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	6	APR	3		3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	7	MAY	4		4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	8	JUN	5		5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	9	JUL	6		6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	10	AUG	7		7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	11	SEPT	8		8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	12	OCT	9		9	9	9	9	9	9	9	9	9	9
						13	NOV												
							DEC												

INSTRUCTOR ________ GRADE ________ TEST ________

I

1 — 1 2 3 4 5	6 — 1 2 3 4 5	11 — 1 2 3 4 5	16 — 1 2 3 4 5	21 — 1 2 3 4 5	26 — 1 2 3 4 5	31 — 1 2 3 4 5	36 — 1 2 3 4 5
2 — 1 2 3 4 5	7 — 1 2 3 4 5	12 — 1 2 3 4 5	17 — 1 2 3 4 5	22 — 1 2 3 4 5	27 — 1 2 3 4 5	32 — 1 2 3 4 5	37 — 1 2 3 4 5
3 — 1 2 3 4 5	8 — 1 2 3 4 5	13 — 1 2 3 4 5	18 — 1 2 3 4 5	23 — 1 2 3 4 5	28 — 1 2 3 4 5	33 — 1 2 3 4 5	38 — 1 2 3 4 5
4 — 1 2 3 4 5	9 — 1 2 3 4 5	14 — 1 2 3 4 5	19 — 1 2 3 4 5	24 — 1 2 3 4 5	29 — 1 2 3 4 5	34 — 1 2 3 4 5	39 — 1 2 3 4 5
5 — 1 2 3 4 5	10 — 1 2 3 4 5	15 — 1 2 3 4 5	20 — 1 2 3 4 5	25 — 1 2 3 4 5	30 — 1 2 3 4 5	35 — 1 2 3 4 5	40 — 1 2 3 4 5

II

41 — 1 2 3 4 5	46 — 1 2 3 4 5	51 — 1 2 3 4 5	56 — 1 2 3 4 5	61 — 1 2 3 4 5	66 — 1 2 3 4 5	71 — 1 2 3 4 5	76 — 1 2 3 4 5
42 — 1 2 3 4 5	47 — 1 2 3 4 5	52 — 1 2 3 4 5	57 — 1 2 3 4 5	62 — 1 2 3 4 5	67 — 1 2 3 4 5	72 — 1 2 3 4 5	77 — 1 2 3 4 5
43 — 1 2 3 4 5	48 — 1 2 3 4 5	53 — 1 2 3 4 5	58 — 1 2 3 4 5	63 — 1 2 3 4 5	68 — 1 2 3 4 5	73 — 1 2 3 4 5	78 — 1 2 3 4 5
44 — 1 2 3 4 5	49 — 1 2 3 4 5	54 — 1 2 3 4 5	59 — 1 2 3 4 5	64 — 1 2 3 4 5	69 — 1 2 3 4 5	74 — 1 2 3 4 5	79 — 1 2 3 4 5
45 — 1 2 3 4 5	50 — 1 2 3 4 5	55 — 1 2 3 4 5	60 — 1 2 3 4 5	65 — 1 2 3 4 5	70 — 1 2 3 4 5	75 — 1 2 3 4 5	80 — 1 2 3 4 5

III

81 — 1 2 3 4 5	86 — 1 2 3 4 5	91 — 1 2 3 4 5	96 — 1 2 3 4 5	101 — 1 2 3 4 5	106 — 1 2 3 4 5	111 — 1 2 3 4 5	116 — 1 2 3 4 5
82 — 1 2 3 4 5	87 — 1 2 3 4 5	92 — 1 2 3 4 5	97 — 1 2 3 4 5	102 — 1 2 3 4 5	107 — 1 2 3 4 5	112 — 1 2 3 4 5	117 — 1 2 3 4 5
83 — 1 2 3 4 5	88 — 1 2 3 4 5	93 — 1 2 3 4 5	98 — 1 2 3 4 5	103 — 1 2 3 4 5	108 — 1 2 3 4 5	113 — 1 2 3 4 5	118 — 1 2 3 4 5
84 — 1 2 3 4 5	89 — 1 2 3 4 5	94 — 1 2 3 4 5	99 — 1 2 3 4 5	104 — 1 2 3 4 5	109 — 1 2 3 4 5	114 — 1 2 3 4 5	119 — 1 2 3 4 5
85 — 1 2 3 4 5	90 — 1 2 3 4 5	95 — 1 2 3 4 5	100 — 1 2 3 4 5	105 — 1 2 3 4 5	110 — 1 2 3 4 5	115 — 1 2 3 4 5	120 — 1 2 3 4 5

IV

121 — 1 2 3 4 5	126 — 1 2 3 4 5	131 — 1 2 3 4 5	136 — 1 2 3 4 5	141 — 1 2 3 4 5	146 — 1 2 3 4 5	151 — 1 2 3 4 5	156 — 1 2 3 4 5
122 — 1 2 3 4 5	127 — 1 2 3 4 5	132 — 1 2 3 4 5	137 — 1 2 3 4 5	142 — 1 2 3 4 5	147 — 1 2 3 4 5	152 — 1 2 3 4 5	157 — 1 2 3 4 5
123 — 1 2 3 4 5	128 — 1 2 3 4 5	133 — 1 2 3 4 5	138 — 1 2 3 4 5	143 — 1 2 3 4 5	148 — 1 2 3 4 5	153 — 1 2 3 4 5	158 — 1 2 3 4 5
124 — 1 2 3 4 5	129 — 1 2 3 4 5	134 — 1 2 3 4 5	139 — 1 2 3 4 5	144 — 1 2 3 4 5	149 — 1 2 3 4 5	154 — 1 2 3 4 5	159 — 1 2 3 4 5
125 — 1 2 3 4 5	130 — 1 2 3 4 5	135 — 1 2 3 4 5	140 — 1 2 3 4 5	145 — 1 2 3 4 5	150 — 1 2 3 4 5	155 — 1 2 3 4 5	160 — 1 2 3 4 5

Evaluation of Selected Aspects of the Elementary Teacher Preparation Program
Spring 1970

Language Arts (reading) Excerpts

For those subjects who actually chose a situation, whether or not they wrote answers, there was a statistically significant difference in math, situation 1, at the .05 level for times 1, 123, and 1236. Reading, situation 1, showed statistically significant differences at the .05 level for times 1 and 123 and at the .01 level for time 1236.

When the subjects who had chosen a situation but who did not respond in writing to it were removed from the data, statistically significant differences at the .05 level were still noted for reading, situation 1, for each time--1, 123, 1236.

READING

Choose one of the following two situations. Circle the number of the situation which you choose. Please think through your answer (making notes if you wish on this sheet) before writing it. Plan to spend between ten and fifteen minutes on this Reading situation.

Write your answer on the attached blank sheet if you choose situation #1.

Each set of parentheses offers you a choice; be sure that you circle your choice.

Situations

#1

Given a heterogeneously grouped (1, 2, 3, 4, 5, 6) grade, prepare a brief spelling lesson plan indicating the chief activity involving the teacher in a 15 to 20 minute period on each of five days. Your plan should incorporate attention paid to individual differences, small-group instruction, emphasis on success, methods recommended for studying words, and suggested report card marks.

#2

It is March in a heterogeneously grouped (1, 2, 3, 4, 5, 6) grade of 28 students. You have been using one of the most popular basic reading series, but you are considering introducing some changes into the program. Answer the questions on the following pages to indicate what you have been doing.

Situation #2 Questions

Answer the following questions on the answer sheet provided. Identify your answer sheet by placing your code number in the place at the lower right marked "student number."

If you choose "other," please give explicit answer in space provided.

1. How many groups would be recommended in this heterogeneously grouped class of 28?
   1/ one
   2/ two
   3/ three
   4/ four
   5/ other ______________________________

   ____

2. In this self-contained class what is the usual length of one group's single period with the teacher?
   1/ 0-10 minutes
   2/ 10-20 minutes
   3/ 20-30 minutes
   4/ 30-40 minutes
   5/ other ______________________________

   ____

3. What has been the major emphasis in the word analysis program for the grade you have selected?
   1/ vowels
   2/ consonants
   3/ syllabication
   4/ emphasis on dictionary
   5/ other ______________________________

   ____

4. Which group in a self-contained classroom should have the fewest number of students?
   1/ high
   2/ average
   3/ accelerated
   4/ very slow
   5/ other ______________________________

   ____

Situation #2 Questions continued

5. In a basic reading program in a self-contained classroom at least how many levels of reading difficulty might be in use?
   1/ two
   2/ three
   3/ four
   4/ five
   5/ other ______________________________

   ____

6. In using the workbook which accompanies the basic reader, which of the following procedures would you most strongly recommend: choose only one
   1/ The children should work out the exercises independently with no or very little help from the teacher.
   2/ The teacher should go over the entire exercise with the children before assigning it to them.
   3/ The teacher should carefully correct the workbook before handing it back to the student.
   4/ A child should correct his own workbook in the regular period with the leadership of the teacher.
   5/ The teacher should expect each page to be finally marked one hundred percent after the student has made necessary corrections.
   6/ other (if you choose #5, do not mark the answer sheet; but do write your response here)

   ____

   ____

7. In introducing an individualized reading program, the teacher usually finds success with which level of readers?
   1/ high
   2/ average
   3/ low
   4/ mentally retarded
   5/ other ______________________________

   ____

Mark each of the following statements either
1/ agree or 2/ disagree

8. Guided reading is the form silent reading takes at the early primary level.

9. Oral reading precedes silent reading at the primary level.

10. Oral reading of each story is important even at the intermediate level.

11. Phonetic analysis is stressed more at the primary level than at the intermediate level.

12. In a non-graded reading organization ten-year-olds might be reading with children who have been in school only two years.

13. If a child in an oral reading situation meets a word he doesn't know, the teacher should stop and teach the word immediately.

Criteria for Reading

The criteria below apply to situation 1. The correct responses for situation 2 are indicated on the sample instrument.

1 - Did the plan use small groups? (2)

2 - Did the plan include specially selected words for the lowest group? (2)

3 - Did the plan emphasize the importance of emphasizing word analysis in small group instruction? (1)

4 - Was the highest group excused from usual spelling study and involved in some type of word enrichment program? (2)

5 - Did the plan visualize success for all groups? (1)

6 - Did the plan suggest marks equivalent to A, B, and C for the high, average, and low groups respectively? (1)

7 - Was the teacher involved in each daily lesson? (1)

Total number of possible points - 10; points for individual criteria are as indicated in parentheses.

Language Arts Concepts

Seatwork

Teacher Demonstrations

Lesson Plans

Use of Pictures

Book Reports

Workbooks

GOOD	__:__:__:__:__	BAD
POTENT	__:__:__:__:__	IMPOTENT
PESSIMISTIC	__:__:__:__:__	OPTIMISTIC
DARK	__:__:__:__:__	LIGHT
COMMONPLACE	__:__:__:__:__	BIZARRE
INCOMPLETE	__:__:__:__:__	COMPLETE
CURRENT	__:__:__:__:__	UNTIMELY
DEEP	__:__:__:__:__	SHALLOW
SUCCESSFUL	__:__:__:__:__	UNSUCCESSFUL
SMALL	__:__:__:__:__	LARGE
FALLING	__:__:__:__:__	RISING
BOTTOM	__:__:__:__:__	TOP
MALE	__:__:__:__:__	FEMALE
MEANINGLESS	__:__:__:__:__	MEANINGFUL

PASSIVE	___:___:___:___:___	ACTIVE
USEFUL	___:___:___:___:___	USELESS
SLOW	___:___:___:___:___	FAST
FORWARD	___:___:___:___:___	BACKWARD
COMPLEX	___:___:___:___:___	SIMPLE
TRUE	___:___:___:___:___	FALSE
SHARP	___:___:___:___:___	DULL
NEGATIVE	___:___:___:___:___	POSITIVE
NEW	___:___:___:___:___	OLD
DISHONEST	___:___:___:___:___	HONEST
TOUGH	___:___:___:___:___	TENDER
OPEN	___:___:___:___:___	CLOSED
BLAND	___:___:___:___:___	SAVORY
RESPECTFUL	___:___:___:___:___	DISRESPECTFUL
THOUGHTFUL	___:___:___:___:___	THOUGHTLESS
INTERESTING	___:___:___:___:___	UNINTERESTING
RELIGIOUS	___:___:___:___:___	IRRELIGIOUS
SMOOTH	___:___:___:___:___	ROUGH
WET	___:___:___:___:___	DRY
SLOPPY	___:___:___:___:___	NEAT
COLD	___:___:___:___:___	HOT
FRIEND	___:___:___:___:___	ENEMY

You should have ended with number ________

Mark number 2 in answer blank ____

////////////////////////////////////

in blue and white striped area
identified by numbers 1,2,3,4,5,6-

in column 1
  mark 4 if you are a student teacher
  mark 5 if you are an intern

in column 2
  mark 3 if you were enrolled in
  Miss O'Leary's class
  mark 4 if you were enrolled in
  Mrs. Rudman's class
  mark 5 if you were enrolled in
  METS

APPENDIX D

PROGRAM GOALS

As presented in Phase I Report, 1968

As presented in Phase II Report, January 1970

As presented to student, February 1970

As presented by Program Director, May 1970

OE-58022

Final Report

Contract No. OEC-0-8-089023-3312(010)

MODEL ELEMENTARY TEACHER EDUCATION PROGRAM

Principal Investigator - Dwight W. Allen
Project Director - James M. Cooper

University of Massachusetts
Amherst, Massachusetts

October 31, 1968

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

LANGUAGE ARTS

Communication is the prime focus of the Reading and Language Arts area. The function of a teacher in this content field is to develop or improve the students' ability to communicate. This ability must include the communication of self and of emotion--areas in the repertoire of language as communicaton which up to now have been ignored in education. The Language Arts include listening, speaking, reading and writing. We believe that it is necessary that an individual be able to freely communicate information, ideas, attitudes and emotions effectively, commensurate with today's and tomorrow's needs and developments. It is important, therefore, that techniques of communication, such as non-verbal cues, use of new technological developments and simultaneous use of multiple media be incorporated into curricula for the education of children and of future teachers. This is not to dispute the effectiveness of books and other printed materials for use in reading; records, tapes, and traditional classroom verbal activities for speaking and listening; and typewriters, pencils, pens and paper in writing. Traditionally, successful media need not be ignored or discarded, but their use must be maintained only when they are the most relevant and applicable materials.

In order that the Language Arts teacher perform his function adequately, he must satisfy four aims:

1. He must demonstrate knowledge of the process of communication. That is, he must be able to analyze what acts are necessary for effective communicaton, whether or not the process depends upon a sequence of skills or any special combination of skills, and what the specific skills of listening, speaking, reading and writing entail. In addition, no knowledge of content process is possible without knowledge and understanding of the developmental and learning processes involved in the acquisition of the content knowledge.

2. He must demonstrate proficiency in the content areas. Proficiency or lack of it may be self-evident in the demonstration of the teaching of the content; nevertheless proficiency is of sufficient importance so as to require explicit demonstration.

3. He must demonstrate the ability to assess the child's level of deveopment and to diagnose his skills needs formally and informally. He must recognize strengths as well as weaknesses, and must help the child to do the same.

4. He must demonstrate the ability to select an appropriate approach from many known approaches based on the individual child's diagnosed strengths, weaknesses, developmental stage, and observed learning patterns. Part of the ability to select an approach is the ability to help a child acquire a given skill by dividing the skill into a number of levels ranging from the simple to the complex, the familiar to the unfamiliar, and the concrete to the abstract. The teacher must also be able to interrelate the skills as well as the areas of communication and to integrate them into the child's domain.

Flexibility and individualization are prime emphases in the Language Arts. Approaches and evaluative criteria will be used only as long as they demonstrate their usefulness. No specific item or suggested procedure is so crucial to the program that it cannot be amended or eradicated, should the need for so doing become evident.

A high and low level of competence for each performance is suggested. Alternate routes by which candidates may prepare themselves for satisfying the criteria are listed. These alternate routes do not include all the available options, and are structure so that a high degree of flexibility is maintained. One route, for example, is "appropriate practical experiences," which could include any or all, or other than the suggested practical experiences listed in the appendix. "Appropriate activities in the curriculum and learning center," and "appropriate field trips" carry the same kinds of alternatives.

As innovations and new techniques arise they will be incorporated into the program. If certain techniques or practices prove ineffective, they will be changed or discontinued.

Candidates' suggestions will be welcomed. Individual research studies will be encouraged. Especially here in the content area of the Language Arts, communication will be open and continuous.

Final Report

Contract No. OEC-0-9-310417-4040(010)

A FEASIBILITY STUDY ON THE MODEL ELEMENTARY TEACHER EDUCATION PROGRAM

(PHASE II)

Director - James M. Cooper
Assistant Director - Milton H. Ojala

University of Massachusetts
Amherst, Massachusetts

January 1, 1970

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
National Center for Educational Research and Development

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LANGUAGE ARTS

Introduction

Goals. Communication is the prime focus of the Reading and Language Arts area. The function of a teacher in this content field is to develop or improve the students' ability to communicate. This ability must include the communication of self and of emotion - areas in the repertoire of language as communication which up to now have been ignored in education. The Language Arts include listening, speaking, reading and writing. We believe that is is necessary that an individual be able to freely communicate information, ideas, attitudes and emotions effectively, commensurate with today's and tomorrow's needs and developments. It is important, therefore, that techniques of communication, such as non- verbal cues, use of new technological developments and simultaneous use of multiple media be incorporated into curricula for the education of children and of future teachers. This is not to dispute the effectiveness of books and other printed materials for use in reading; records, tapes, and traditional classroom verbal activities for speaking and listening; and typewriters, pencils, pens and paper in writing. Traditional successful media need not be ignored or discarded, but their use must be maintained only when they are the most relevant and applicable materials.

Our goals in terms of teacher characteristics emphasize an openness to all approaches, new and old, and a constantly expanding repertoire for presenting concepts and materials in the Language Arts (with, of course, the assumption that this openness and expansion will carry over to the other curricular areas, and to the teacher's entire performance). With the willingness to try new and different approaches, in other words, the willingness to take risks, we are hoping to develop and encourage the understanding that there is no one right way of doing anything, but rather that there are a number of viable alternative routes; an awareness of one's own learning style, and the concomitant awareness that one learning style is not superior to another. We would further encourage an awareness in the candidates of their own variety of learning preferences in terms of materials and approaches. Some students, for example, vastly prefer reading on their own to attending a lecture; others prefer the lecture; some enjoy and profit from a combination of the two; still others prefer some audio or visual media. The assortment and combinations are limitless. Nevertheless, some students come to us unaware that they have a particular learning preference, or are unaware that others do not share their particular preference. Our goals are to have the students use their awareness of the different learning preferences in their own teaching by learning to provide a variety of learning experiences for their students.

Our goals for this program include what we believe teachers should be able to do as well as what we believe they should be. We have, therefore, provided performance criteria which include demonstrating proficiency and knowledge in the specific content of the language arts. Certainly a knowledge of, and ability to use many approaches in the teaching of reading, or any of the areas within the Language Arts, is of outstanding importance. The ability to plan activities with a specific population in mind, rather than having some notion that a particular lesson can be good in the abstract or out of context is another ability we propose to develop in our students. These and other abilities are derived directly from a hierarchy of teaching abilities which we have postulated. This hierarchy specifically delineates our goals. We have formulated our performance criteria for the operational study based on the four elements in the hierarchy.

The Language Arts feasibility study samples the essential phases of the eventual operational program. Our intention when the program is operational is to develop in our teaching candidates the following hierarchy of abilities:

1. proficiency in the language arts content (i.e., the ability to communicate effectively, both verbally and non-verbally)

2. knowledge of the processes of each of the language arts areas (such as the physiological, emotional, intellectual and social aspects of speech development). In other words, the candidate must be able to analyze what acts are necessary for effective communication, whether or not the process depends on a sequence of skills or any special combination of skills, and what the specific skills of listening, speaking, reading, and writing entail. We will at the same time expect the candidate to understand the developmental and learning processes involved in the acquisition of content knowledge.

3. ability to assess the child's level of development and to diagnose his skill needs, using both formal and informal devices. The candidate must recognize strengths as well as weaknesses, and must help the child to do the same. Further, the candidate must be aware that the diagnostic process is a continuous one.

4a. knowledge of a variety of approaches and materials available in each area of the language arts (i.e., the linguistic, phonic, eclectic, experience, individualized, programmed, and i.t.a. materials for teaching reading)

4b. ability to select from the many available materials and approaches, or to generate new approaches and materials to satisfy the needs of the children based on the individual child's diagnosed strengths, weakensses, developmental stage, and observed learning patterns. Part of the ability to select an approach is the ability to help a child acquire a given skill by dividing the skill into a number of levels ranging from the simple to the complex, the familiar to the unfamiliar, and the concrete to the abstract. The teacher must also be able to interrelate the skills as well as the areas of communication and to integrate them into the child's domain.

We have presented these abilities in hierarchical order. These constitute a taxonomy of teaching abilities. We assume that, in order to be able to select an effective approach, (4b) the candidate must be able to draw from any known approaches (4a) after having assessed the student's abilities and needs (3) based on the candidate's knowledge of the process (2) which in turn comes at least partly from his ability to perform the act (1).

Table I on the following page illustrates the distribution of performance criteria (PC) in our feasibility study. A brief key to what the performance criteria contain follows below: a full description and rationale appear later in the report.

PC 1. comparing and evaluating 3 readers
2. discussing basals (in small groups)
3. administering Informal Reading Inventory
4. Dividing a class into reading groups
5. developing a quiz to test comprehension
6. devising 3 techniques for analyzing words
7. taking a phonics test
8. reviewing a linguistic reader
9. writing and evaluating i.t.a.
10. devising 5 different materials for the language experience approach to teaching reading
11. conducting an initial "interests survey" interview with a child
12. demonstrating the use of 3 reading machines and/or kits
13. devising one week's activities in language arts for a special population
14. selecting a personal professional library, given a hypothetical $100.00
15. selecting 3 methods of evaluating a reading objective
16. observing, taking and discussing the administration of I.Q. tests
17. selecting a class library
18. reading a portion of a story aloud
19. describing 3 ways of presenting a story

TABLE I

HIERARCHICAL DISTRIBUTION OF THE PERFORMANCE CRITERIA

(Feasibility Study)

	Levels of Hierarchy				
PC#	Level 1	Level 2	Level 3	Level 4a	Level 4b
1		X		X	X
2		X		X	X
3			X		
4			X		X
5		X	X		
6		X		X	X
7	X				
8		X		X	
9	X	X		X	
10		X		X	X
11		X	X		
12	X			X	
13			X	X	X
14				X	
15			X	X	X
16		X	X		
17			X	X	X
18	X				
19				X	X
20				X	X
21				X	X
22	X				
23		X		X	X
24		X	X	X	X
25		X	X	X	X
26				X	
27		X			
28		X		X	

Key:

Level 1 = Proficiency
Level 2 = Knowledge of process
Level 3 = Ability to diagnose
Level 4a = Knowledge of different materials and approaches
Level 4b = Ability to select appropriate approaches and/or materials

20. describing 3 activities for motivating creative writing
21. outlining a formal and informal method of teaching spelling
22. demonstrating writing on a chalkboard in manuscript and cursive forms
23. devising 3 dramatic activities for a specific class
24. describing 3 ways for achieving a speech objective
25. describing 3 ways for achieving a listening objective
26. constructing an annotated bibliography on one topic
27. writing a paper on readiness
28. writing a paper on the different approaches to word analysis

Outcome of the Feasibility Study. The findings in this report are based on a tentative summary of the data. A comprehensive data analysis is now being processed. This report contains descriptions of the instruments we used, and the kinds of data we received. It also contains suggestions for revisions based on the information we have thus far examined.

We can, however, with some assurance, report at this time that the study demonstrated both the managerial and pedagogic feasibility of the METEP Language Arts component.

THE LANGUAGE ARTS PROGRAM OF PREPARATION FOR ELEMENTARY SCHOOL TEACHERS

Spring 1970

Goals in terms of teacher characteristics appropriate for the elementary school emphasize an openness to all approaches, new and old, and an expansion of the teacher's repertoire of skills of presentation. With the willingness to try new and different approaches should come the understanding that there is no exclusive solution to any educational problem, but rather that there are a number of viable alternative routes. We should further encourage an awareness in teachers of their own variety of learning preferences in terms of materials and approaches. Some people, for example, know that they learn more easily from a book they have selected than from a lecture, while with others it is exactly the reverse. Some people perfer looking at a TV presentation; others perfer a live demonstration to any form of media. The assortment and combinations are limitless. Our goal is to have the teacher provide a variety of learning experiences for his or her students, accepting the view that the different preferences on the part of the students are valid.

In addition to a knowledge of and ability to use many approaches should come the ability to plan activities with a specific audience in mind, rather than having some notion that a particular lesson can be effective for all situations and all populations.

These and other abilities are derived directly from the following hierarchy of teaching abilities:

Level 1. Proficiency in the content of the language arts (i.e., the ability to read, write, listen, and speak well).

Level 2. Knowledge of the processes of each of the areas within the content of the Language Arts (i.e., the teacher must be able to analyze whether or not an act requires specific skills, whether or not these skills are sequential, and what the specific skills of reading, writing, speaking, and listening are).

Level 3. Ability to assess the student's level of development and to diagnose his skills needs, using both formal and informal procedures. The teacher must be able to recognize strengths as well as needs, and must help the child to do the same. Further, the teacher must understand that the diagnostic process is a continuous one.

Level 4a. Knowledge of a variety of approaches and materials available in each area of the Language Arts (such as the Linguistic, Phonic, Basal eclectic, Programmed, Experience, Individualized, and i/t/a materials for teaching reading).

Level 4b. Ability to select from the many available materials and approaches, or to generate new ones to satisfy the needs of the students (based on the individual child's diagnosed strengths, weaknesses, developmental stage, and observed learning patterns and preferences). Part of the ability to select an approach is the ability to help a child acquire a given skill by dividing the skill into a number of levels ranging from the simple to the complex, the familiar to the unfamiliar, and the concrete to the abstract.

The above abilities are arranged in hierarchical order. They constitute a taxonomy of teaching abilities. The performance criteria have been formulated using the levels of the hierarchy as a guide and base.

FEASIBILITY STUDY OF A PERFORMANCE-BASED TEACHER EDUCATION CURRICULUM IN LANGUAGE ARTS

A Dissertation Presented

By

Masha Kabakow Rudman

Submitted to the Graduate School of the
University of Massachusetts in
partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

May 1970
Major Subject Teacher Education

The goals are divided into categories for the student and the program itself and are outlined as follows:

I. Student

  A. Attitudes

    1. The student will demonstrate

      a. self-awareness of preferences in learning and teaching styles (including pacing, sequence, and approaches)

      b. acceptance of the validity of other learning and teaching styles

      c. willingness to attempt more than one learning and teaching style i.e. willingness to take risks

      d. commitment to seek and use a multiplicity of learning and teaching styles

  B. Abilities

    1. The student will demonstrate

      a. proficiency in the language arts: reading, writing, listening, speaking

      b. knowledge of the process of each area within the language arts (this entails the ability to decide which skills an act requires and whether or not these skills are sequential)

      c. ability to assess the student's level of development and to diagnose his skills needs, using both formal and informal procedures. The abilities to recognize strengths as well as needs, to communicate this information, and to keep this procedure continuous rather than sporadic are included in this goal

d. knowledge of a variety of approaches and materials available to each area of the language arts (such as linguistic, phonic, basal, programmed, experience, individualized, and i/t/a materials for teaching reading.)

e. ability to select from the many available materials and approaches, or to generate new ones to satisfy the needs of the students

II. Program

A. Provide an overview of the content of the elementary language arts curriculum

B. Provide a structure for constant reexamination of the theoretical bases, content, and approaches in the language arts

C. Provide a model for the learner's future behavior

D. Permit the participants to achieve a number of unspecified but probable behaviors such as:

1. Pace his own learning appropriately
2. Experiment with different learning environments and materials
3. generate new approaches for his own learning

4. Develop a particular interest in the language arts, leading to a specialization in the area

Chapter two includes a review of literature pertinent to curriculum development, instructional alternatives, and use of media in teacher education. The review of literature dealing with the content area of language arts is contained in chapter three. The curriculum for the feasibility study was included in this chapter as well as a summary of the participants' comments and suggestions. Chapter four represents the outcome of the suggestions offered in chapter three: it contains the follow-up curriculum.

Conclusions and suggestions for future research are presented in chapter five. The conclusions indicate that it is pedagogically feasible to design and offer a curriculum to future teachers based on performance and offering multiple instructional routes to the achievement of these performances.

APPENDIX E

APTITUDE TEST BATTERY

Fall semester: Surface Development Test
Oral Comprehension Test
Apparatus Test
Written Comprehension Test
Utility Test

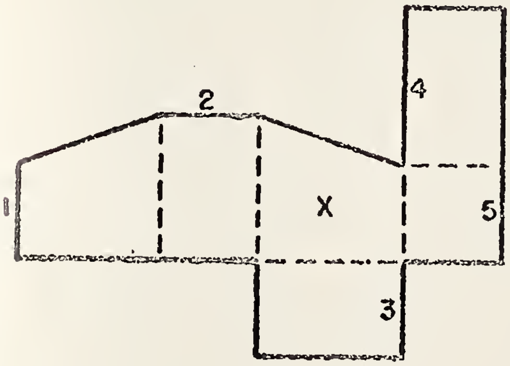
Spring semester: Surface Development Test
Auditory Letter Span
Utility Test
First and Last Names Test
Instructions for Grading Utility Test

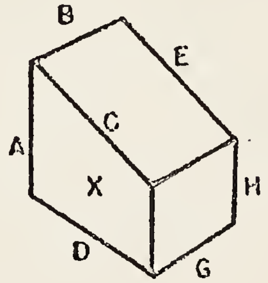
Name: ______________________________

SURFACE DEVELOPMENT TEST — Vz-3

In this test you are to try to imagine or visualize how a piece of paper can be folded to form some kind of object. Look at the two drawings below. The drawing on the left is of a piece of paper which can be folded on the dotted lines to form the object drawn at the right. You are to imagine the folding and are to figure out which of the lettered edges on the object are the same as the numbered edges on the piece of paper at the left. Write the letters of the answers in the numbered spaces at the far right.

Now try the practice problem below. Numbers 1 and 4 are already correctly marked for you.





1:	H
2:	
3:	
4:	C
5:	

NOTE: The side of the flat piece marked with the X will always be the same as the side of the object marked with the X. Therefore, the paper must always be folded so that the X will be on the outside of the object.

In the above problem, if the side with edge 1 is folded around to form the back of the object, then edge 1 will be the same as edge H. If the side with edge 5 is folded back, then the side with edge 4 may be folded down so that edge 4 is the same as edge C. The other answers are as follows: 2 is B; 3 is G; and 5 is H. Notice that two of the answers can be the same.

Your score on this test will be the number of correct letters minus a fraction of the number of incorrect letters. Therefore, it will not be to your advantage to guess unless you are able to eliminate one or more of the answer choices as wrong.

You will have 6 minutes for each of the two parts of this test. Each part has 2 pages. When you have finished Part 1 (pages 2 and 3), STOP. Please do not go on to Part 2 until you are asked to do so.

DO NOT TURN THIS PAGE UNTIL ASKED TO DO SO.

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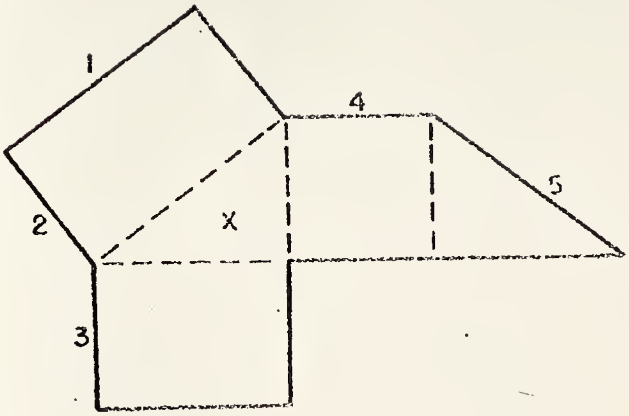
Adapted from Surface Development by L. L. Thurstone

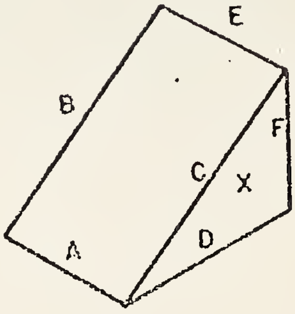
B2

Part 1 (6 minutes)

Vik.

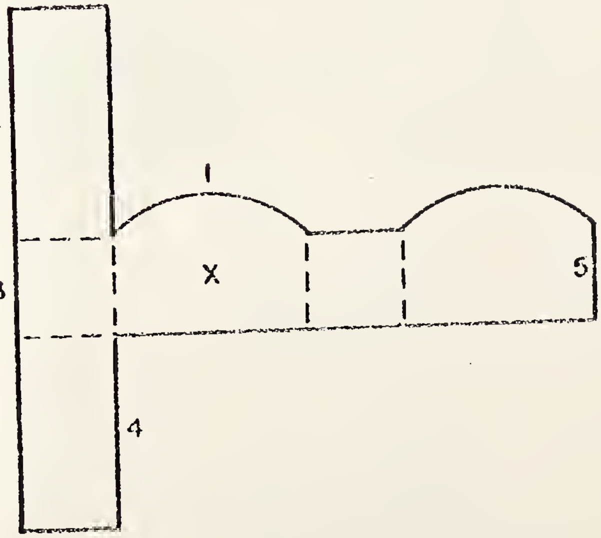
1

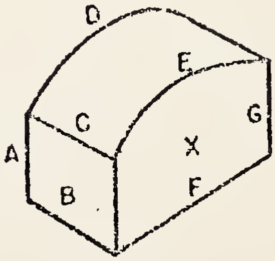




1:
2:
3:
4:
5:

2





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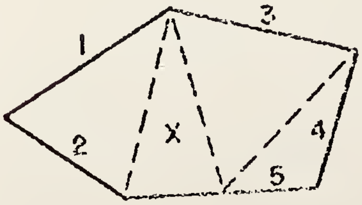
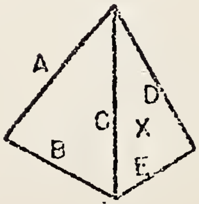
4:
5:

3



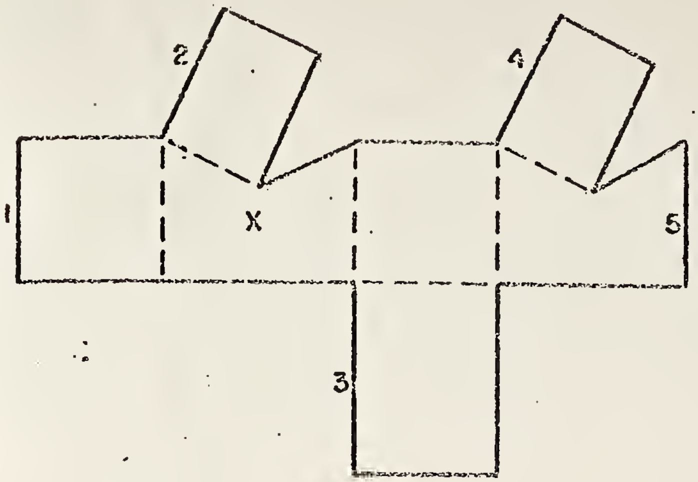


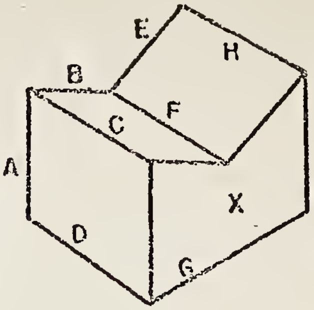
1:
2:
3:
4:
5:

B3

Part 1 (continued)

4





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2:
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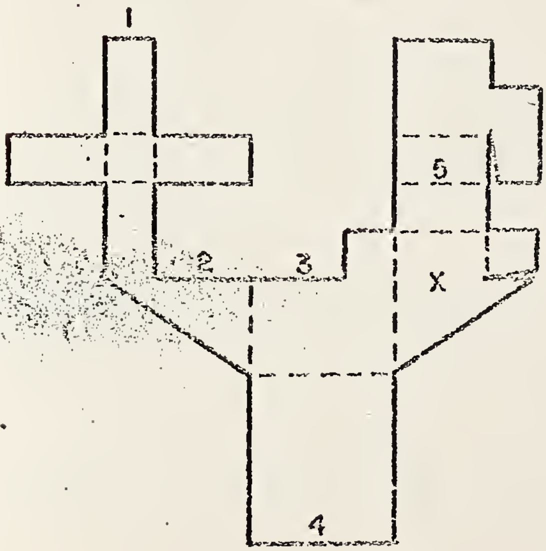
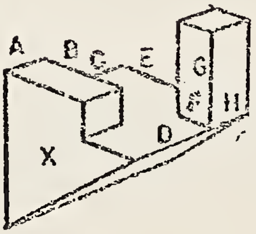
5





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2:
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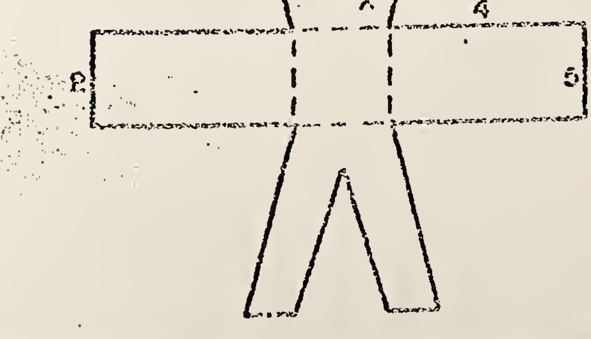
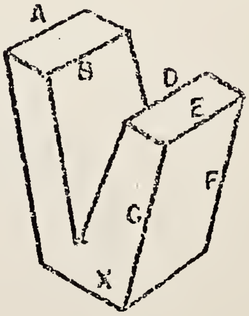
4:
5:

6





1:
2:
3:
4:
5:

DO NOT GO ON TO THE NEXT PAGE UNTIL ASKED TO DO SO.

A.

Name____

APPARATUS TEST--Sep-1

You will be given a list of twenty implements which are familiar to everyone. Your task is to suggest two improvements on each of them. Do not suggest as an improvement something that is now commonly part of the object. You do not need to worry about the technical possibility of your idea as long as it is a reasonable one. If, for example, you were asked to suggest improvements on the telephone, you might recommend:

1. A device that tells you who is calling before you pick up the receiver.

2. Luminous dials to operate the telephone in the dark.

It is not necessary to explain your reason for a suggested improvement. Your suggestion should be specific. A suggested improvement like "the implement should be made more efficient" is too general to be acceptable.

If you have difficulty with one item do not spend too much time on it but go on to the next item. Remember, you are to suggest two improvements for each implement. Do not suggest similar improvements for two or more implements, because duplications will not be counted.

This test has two parts. Each part has ten items. You will have 7 minutes for each part. When you have completed the first part, STOP. Do not go on to the second part until asked to do so.

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This test was prepared under U. S. Government Contract N6Onr-23810.

A2
bk

Part 1 (7 minutes)

List two improvements for each item.

1. Toaster:

a.____

b.____

2. Refrigerator:

a.____

b.____

3. Vacuum cleaner:

a.____

b.____

4. Windshield wiper:

a.____

b.____

5. Doorbell:

a.____

b.____

6. Safety razor:

a.____

b.____

7. Automatic pencil:

a.____

b.____

GO ON TO THE NEXT PAGE.

Paragraph #1

Directions: You will have two minutes to read this paragraph. At the end of that time, you will be asked to turn to a new page and list all the main ideas you remember from the paragraph.

Excerpt from an article entitled "Polynesian Surfing":

Like just about everything else in ancient Hawaii, surfing also had its sacred aspect. There is even evidence that surfing had its own stone temples. Two of these were still standing in the early 1960's on the south coast of the island of Hawaii. Although how these temples were associated with surfing is not entirely clear, it is notable that both structures stand opposite well-known surfing breaks and were probably fine sites for observing the surf, for resting after surfing or even for invoking the waves. One consists mainly of an upper stone terrace on a larger foundation. A deep, stone-lined water pool is sunk into one side of the foundation terrace, ideal for bathing or for rinsing off salt water. The terraces themselves are so aligned that from the upper level, which is like a bleacher, spectators might easily watch surfers riding waves less than a hundred yards away.

NAME ______________________________

UTILITY TEST--Xs-1

In this test you are to list as many uses as you can think of for a common object.

Write as rapidly as you can. Give all the uses you can think of. Your answers do not have to be complete sentences. You may use short phrases.

There will be numbered lines on which to write. Use one line for each answer. When the signal is given (not yet) turn the page, read the name of the object and the example, then list all the uses of the object that you can think of.

There are two parts in this test. You will have 5 minutes for each part. No questions will be answered.

STOP HERE. WAIT FOR FURTHER INSTRUCTIONS.

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This test was prepared under U. S. Government Contract N6onr-23810.

Part I (5 minutes)

List as many uses as you can think of for a brick.
Write each use on a separate line.

Example: build a house.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________
11. ______________________________
12. ______________________________
13. ______________________________
14. ______________________________
15. ______________________________
16. ______________________________
17. ______________________________
18. ______________________________
19. ______________________________
20. ______________________________
21. ______________________________
22. ______________________________
23. ______________________________
24. ______________________________
25. ______________________________

STOP HERE. WAIT FOR FURTHER INSTRUCTIONS.

Name: ____

AUDITORY LETTER SPAN TEST — Ms-3

This is a test of your ability to remember series of letters. The examiner will call out the letters. After he finishes, you are to write down the letters in the exact order in which they were called out. Please do not write any letters until the examiner has finished the whole series.

Some of the series will be too long for you to remember all of the letters. If you do not remember some of them, leave a blank space for them and write down all the letters you do remember. Try to remember all the letters if possible, and be sure to write them down in the exact order in which they were called out.

For example, the examiner might call out, "Series One. H R L Begin."

When he says "Begin" (showing that the series is complete), write the letters on the answer page in this manner:

1. H R L

Only the following letters will be used: C, F, G, H, K, L, P, R, S, W, Y .

It is very important that you do not write letters while a series is being called out, because this is a test of your memory for letters.

Your score on this test will be the number of series you remember correctly.

DO NOT TURN THIS PAGE UNTIL ASKED TO DO SO.

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Letter Span-Auditory--Ms-3

(1) K, F, C
(2) H, S, L, Y, G
(3) P, F, R, C, W, S, G, K, Y
(4) P, L, S, C, W, K, R, F, H, G
(5) R, G, S
(6) L, W, C, Y, K, R, P
(7) F, S, Y, L, C, H
(8) S, C, F, K, W, L, P
(9) Y, C, G, P, W, L, S, K, H, R, F
(10) W, Y, S, C, L
(11) C, F, G, W, K, S, R, L, P

ANSWER PAGE

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
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22. ______________________________
23. ______________________________
24. ______________________________

DO NOT GO ON TO ANY OTHER TEST UNTIL ASKED TO DO SO.

STOP.

Name: ____

FIRST AND LAST NAMES TEST — Ma-3

This is a test of your ability to learn first and last names. In each part of the test you will study a page of 15 full names, first and last. After studying the page showing full names you will turn to a page showing a list of the last names in a different order. You will be asked to write the first names that go with each last name.

Here are some practice names. Study them until you are asked to turn to the next page (1 minute).

Janet Gregory

Thomas Adams

Roland Donaldson

Patricia Fletcher

Betty Bronson

DO NOT TURN THIS PAGE UNTIL ASKED TO DO SO.

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Adapted from *First Names* by L. L. Thurstone

PRACTICE TEST PAGE

The first name in the list below has been completed. Write all of the other first names that you can remember.

Patricia Fletcher

Bronson

Donaldson

Gregory

Adams

Your score will be the number marked correctly. Even if you are not sure of the correct answer to a question, it will be to your advantage to guess.

There are two parts in this test. Each part has two pages:

> The first of these is a memory page which you are to study for 3 minutes.
>
> The second is a test page on which you are to write the first names that go with the last names. You will have 2 minutes to write.

When you have finished Part 1, STOP. Please do not go on to Part 2 until you are asked to do so.

DO NOT TURN THIS PAGE UNTIL ASKED TO DO SO.

MEMORY PAGE FOR PART 1

Study this list. You will be allowed 3 minutes.

Claire Sullivan

Jack Thompson

Leon Chapin

John Reynolds

Joan White

Donald Lambert

Daniel Shaw

Kenneth Murray

Edward Nichols

Jean Wolfe

Carl Brown

Blanche Clark

Roger Lennon

Eloise Cooper

David Burgess

DO NOT TURN THIS PAGE UNTIL ASKED TO DO SO.

STOP.

TEST PAGE FOR PART 1

Complete the names below. You have 2 minutes.

________________ Nichols

______ ________ Cooper

________________ Murray

________________ Chapin

________________ Brown

________________ Reynolds

________________ Sullivan

________________ Lennon

________________ Lambert

________________ Wolfe

________________ Burgess

________________ Shaw

________________ Thompson

________________ Clark

________________ White

DO NOT TURN TO PART 2 UNTIL ASKED TO DO SO.

STOP.

The best way to explain the grading procedure, is to offer you three examples. After you have looked at the grading, go to the next page, read the exact instructions, then return to this page to make sure you understand them.

Uses for a brick:

1. build a wall
2. build a dormitory
✓3. paper weight
4. doorstop
✓5. build a bookcase
✓6. break a window
7. use under projector to raise it
8. stand on it to reach something
✓9. paint it and use for decoration

1. sit on
✓2. decorate a walk
✓3. build a fireplace
✓4. smash a window
5. hit a cop on the head
✓6. play catch
7. wear as a hat
✓8. smash a microteaching unit
✓9. tie the PC list to and throw in ocean

1. school
2. church
3. sidewalk
4. road
5. wall as fence
✓6. raise object from floor
7. separate shelves
✓8. bookends
9. steps

If this were a test of fluency, all three lists would have the same score, each has 9 items. If it were a test of creativity, the middle list would probably have the highest score. It is, however, a test of flexibility. Flexibility is here defined as the ability to change mental set. It is not the item (build a wall) that is scored, but the difference between that item and the next (build a dormitory). In this case the student has not changed the use to which the brick is being put. No point. Between (build a dormitory) and (paper weight) the student has changed use. One point. If the student went right back to building churches, post offices etc. he would not receive a point for going back. However, if he goes to a third use (smash a window), or another use like paperweight (doorstop), then going back to buildings would give him a point.

I have made a list of some of the uses I found when reading. They are not all listed. In setting up the categories of use, I have tried to focus on the quality of the brick which makes the use unique. You will surely find other categories as you score.

To summarize: 0 points if no shift in type of use
1 point whenever shift occurs. Only
1 point if one item interposed between
two of the same use (i.e. where two
shifts would normally be credited.)

Types of use:

1. construction: step ladder, wall, house, street, garden wall, all manner of permanent buildings
2. weight: block wheels of car, doorstop, bookend, lamp base, paperweight
3. tools: hammer,
4. toys or recreation: car, train, chip and use of blocks
5. decoration: statue, paint it, display for object
6. demonstration and examples: sets, density, like-unlike, color
7. brick products: clay, mosaic chips
8. support (focusing on small increment), bookcase, step stool, arch
9. business: put people to work
10. weapon: injure someone, throw in window,
11. cleaning: scouring surface
12. furniture (more than support), bench, table, bed, chair
13. occupy space: fill in hole
14. unit of linear measure: something is 3 bricks long, 5 wide
15. unit of weight: 3 bricks heavy
16. heat retention: foot warmer (or reverse, wet for cooling effect)
17. opaqueness: hiding place for worms
18. fireproof: chimney, fireplace, barbecue, kiln,
19. small value: give a present
20. absurdity: brick soup, wear as hat, kick, dance around

The papers really are fun to read. Have a good time. Please check wherever you are giving a point. Total at the bottom of the page. Return to my folder at your convenience, but by next Friday if at all possible (April 24th). Thank you.

253-5516

The Evaluation of a Performance Based Curriculum in the Language Arts. (October 1970)

Mary-Alice B. Wilson, A.B., Radcliffe College
M.A., University of California, Berkeley
Directed by Dr. David J. Yarington

An evaluation was designed for a performance based curriculum in the language arts as part of the Model Elementary Teacher Education Program. Both the curriculum, designed by Dr. Masha Rudman, and the evaluation were used during the 1970 academic year.

The evaluation, which was based on a unit size model, attempted to identify the different sized systems of which the language arts program was a part, and to collect information on those variables relevant to each system. Information was collected on four variables: population, program operation, curriculum, and program goals.

Population. No attempt was made to control the population on the program. Background information was collected on each student, processed and reported in frequency tables. Information on certain attitudes and aptitudes was collected as part of the information on another variable, program goals.

Program operation. An informal communication system for administrators included office hours, folders, and seminars. Each time a student attempted a performance criteria, he and his rater completed a questionnaire which was used to provide data for a number of computer programs. The printout provided for the staff information on program operation and counseling information on the progress of each student in the program. The students, in addition to an informal system of student folders and office hours, also had computer printouts which described their progress in the program.

Curriculum. Information on the generalists' performance criteria was processed from the questionnaire which accompanied each completed PC. Similar information was available on the specialists' PCs. The printout included average student time, their rating of the PC on the teaching hierarchy, information on the time, evaluation and success of each IA, rating time, and the number and degree of successful performances for each PC.

Goals. Goals were rewritten during the program. Since a number of the goals dealt with the interaction of the instructional alternative system and the student, a number of attempts were made to investigate this relationship. Information included students' reported preferences to instructional modes, their anticipated use of various instructional alternatives, their attitude toward instructional modes as measured on a semantic differential, their competence in certain instructional modes as measured by aptitude tests, and their use of the modes in their practice teaching classroom. Although some interesting information was collected, none of the correlations run on the generalists or the specialists demonstrated any significant correlation between variables or any significant differences between groups; neither was there any significant correlation between the students' total performance level and time in the program, the number of PCs attempted, or score on an aptitude test. The evaluation design attempted to collect information on four variables, process them using packaged and original computer programs and report them to specified audiences. Certain parts of the evaluation, specifically the program information system, were successful. The difficulties with other aspects of the evaluation appear to have been caused by limited scope of the information sources used and the weaknesses of the measuring instruments, rather than the methodology upon which the design was based. The design itself is one of the variables in the program. Like the curriculum or the population it can be varied. What has been described, and therefore what can be replicated or revised, are both the specific instruments and activities of this evaluation and the evaluation design.