NAVY INSTRUCTOR TRAINING IN TRANSITION

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With continuing advances in educational technology and increasing emphasis on the systems approach to training, the role of the Navy instructor is changing. No longer is the instructor's role limited to one of a purveyor of information and a teacher of skills. The job requirements of the instructor are becoming increasingly more complex as *training system analysis, design, implementation*, and evaluation become more sophisticated. The instructor is increasingly being required to manage complex instructional systems and to develop curricula which are based upon highly structured processes and which require advanced skills in the area of instructional technology.

The increasing emphasis on savings in training resources and the trend toward standardization in the processes of design, implementation and management of training also have broad implications for the training of Navy instructors. Currently, the Navy operates six instructor training schools, one on the west coast and five in the eastern United States. The adoption of standard procedures of curricula development and instructional system management portends the possibility of cost savings through instructor school consolidation.

To identify these new instructor job requirements and make recommendations for the design of future instructor training, the Training Analysis and Evaluation Group (TAEG) was tasked by the Chief of Naval Education and Training to conduct a study. The findings of this study in the area of changing instructor job requirements and their impact on instructor career structure, instructor selection and instructor assessment will be addressed in this paper. Also, results of the investigation of the cost feasibility of centralizing the six current instructor schools will be presented.

Information needed for the study was obtained through visits to various Navy technical training schools, interviews with individuals knowledgeable in the area of instructor training, and by three questionnaire studies. In addition, an interservice conference was held in January 1975 at Orlando on "Military Instructor Training in Transition." The study was limited to analyses of the six instructor training schools whose courses are under the direct curriculum jurisdiction of the Chief of Naval Technical Training. It did not include analyses of flight instructor training courses under the Chief of Naval Air Training.

FINDINGS

Instructor Requirements

The current instructor training system is training instructors according to the requirements for which the system was designed. Three courses of training are provided for instructors: Instructor Basic, Instructor Shipboard, and Programmed Instruction Techniques. The Instructor Basic Course prepares individuals to teach in technical school instructor assignments and has, until recently, only provided training for instructors to function primarily in a platform teaching role. However, in April 1974, the Chief of Naval Technical Training (CNTECHTRA) established an additional track within the Instructor Basic Course to provide training to instructors working as individualized instructional managers (referred to as "Individualized Learning Supervisors"). This two track (path) course of instruction is shown in Figure 1.

Individuals assigned to instructor billets in conventional lecture method training programs receive the common core of instruction and a series of practice teaching lessons. Those who are assigned to instructor billets which require individualized instructional management skills receive the common core of instruction, a special program of training in individualized instruction philosophy and techniques, and in-service training at their assigned command.

Although this system trains instructors and Individualized Learning Supervisors in a reasonably satisfactory manner, requirements are evolving in the Navy training community for instructional personnel with more specialized skills and knowledges than this general program of instructor training provides. Increasingly sophisticated instructional systems technology is not being utilized to its fullest potential by the lack of trained specialists at the operational level in areas such as training media, course design/development, computer managed instruction, instructional system evaluation, and team training. Greater role differentiation is needed than having only traditional instructors, Individualized Learning Supervisors, shipboard instructors and programmed instruction writers. For example, in many Navy technical schools, the requirements for specialized personnel in the areas of instructional

design/development/evaluation is being officially recognized through the establishment of curriculum evaluation and improvement divisions. However, due to the lack of trained specialists in these areas to fill these billets, they are generally staffed by platform instructors. It is questionable whether the general program of instructor training adequately prepares these individuals to conduct the required course design/development/evaluation.

It has been suggested that there is too much diversity among Navy technical schools to attempt to provide more specialized training to instructors at instructor training school. The conduct of this training is relegated to the technical schools to accomplish on a pre-service or in-service basis on the job. If there is sufficient diversity among technical schools to justify the necessity of pre- or in-service training at the technical schools, then increased emphasis must be placed on the development, validation and evaluation of this in-service training.

The key to this issue is the necessity for accurate and thorough identification of the need for increased role differentiation among instructional personnel. It will not, however, be sufficient to conduct only a standard job task analysis. In the same sense that it would be inefficient to build a complex simulator and wait until after it is delivered to the training community to determine the instructor requirements, the Navy cannot afford to wait until the requirements for trained instructional system specialists are being levied in the technical schools before the instructor training curriculum is redesigned. The development of new programs of instruction and the design of new instructor roles will create an inordinate lag time between when specialists are needed and when they can be provided. Thus, it is critical that those involved in the planning of changes in instructional systems consider the impact of these changes on instructor requirements and make this information available to personnel involved in instructor training. This is currently being done in some cases on a limited basis, for example, in the planning for conversion of some courses to CMI. But, there are many more cases in which increased input to the instructor training system regarding changing instructor requirements in the technical schools is critically needed on an on-going basis.

Instructor Career Structure

The increasing sophistication of instructional systems development and changing instructor requirements have implications for another issue related to instructor training: the lack of an education and training career field. The Navy has traditionally considered proficiency as an instructor secondary to proficiency in a technical rate. Most instructors serve only one tour in a technical school instructor billet. When the job of instructing consisted primarily of conventional platform teaching, the lack of an education and training career field was likely more justified than it is today. But, when training technology is increasing in complexity as quickly as many of the technical rates, it is doubtful that the needs of the Navy are being best served by not having an education and training career field. At a time when maximal utilization of manpower is at the forefront, it is necessary that serious consideration be given to the establishment of a Navy education and training career field.

Instructor Selection

All instructors, regardless of their technical area or prospective technical school assignment, are currently selected by the same set of Navy personnel prerequisites. These include, for example: showing evidence of "leadership ability," being able to "speak clearly," having ability to exercise "sound judgement," "having no mark below 3.4 (out of a possible 4.0) on the last three performance evaluations."

As there are a great variety of instructional strategies and instructor roles in the current Navy training system, it is unlikely that one set of instructor prerequisites as general as these could most adequately serve the needs of the many varied technical school training programs. While it may be desirable for traditional platform instructors to be volunteers for instructor duty, it may not be necessary for Individualized Learning Supervisors to be volunteers. TAEG recommends that identification be made of the type and degree of differentiation necessary in instructor prerequisites in order to increase the effectiveness of the instructor selection process.

Instructor Evaluation

The Instructor Training Program currently has two major instructor assessment programs, one of which is the instructor quarterly evaluation. The instructor quarterly evaluation (CNTECHTRA INSTR 1540.12) is designed to be conducted by supervisory personnel to evaluate instructors' performance. The form as it is presently configured does not allow an assessment of the new tasks which are evolving due to the changing role of the instructor. For example, an instructor whose primary responsibilities are

curriculum evaluation and improvement would find that the majority of evaluation items listed on the instructor quarterly evaluation are irrelevant to his actual job duties. It was also found that although the stated purpose of the instructor evaluation is to improve the quality of instruction, it is often conducted simply to fulfill an administrative requirement, not to improve instruction. Increased emphasis is needed on the product of evaluation as recommendations for improvement and on follow-up to insure the recommendations are implemented.

An evaluation instrument is only as effective as the degree to which the evaluator is skilled in using it. Formal training is needed for the supervisors who conduct the evaluations. Although the Instructor Quarterly Evaluation and the Procedures for the Planning, Design, Development, and Management of Navy Technical Training Courses (CNTT-A10) specify guidelines such as "what to look for, how to proceed, forms, timing, critique, and records," there is evidence that formal training in evaluation is likely to increase validity and reliability of evaluation decisions. Thus, the skills and knowledges in evaluation in which instructor evaluators need more formal or in-service training should be determined, and additional training in evaluation should be given.

Technical School Feedback of Instructor Performance

In order to insure that the current instructor training program is adequately preparing men to perform well in the variety of Navy technical school settings, it is necessary that accurate evaluative feedback be obtained from the technical schools regarding the job-relevance of the Instructor Basic Course learning objectives. The Instructor Training Survey (CNTECHTRA GEN 1500/8) is the instrument used to obtain feedback on the adequacy and helpfulness at instructor training from instructors after they have been on the job for 6 months. In order to insure a reasonable return rate, the Instructor Training Survey form was designed so that it could be completed simply and quickly by the instructors on the job. While this will preserve efficiency and expediency of return, current work in the area of feedback indicates that this may result in some degree of effectiveness being sacrificed. In order to determine the effectiveness of an instructional system and to provide a basis for improving and updating the system, a program of feedback should provide objective data regarding the on-the-job performance of the graduates of the particular instructional system. The current Instructor Training Survey, however, instructs respondents to evaluate the adequacy of course topic areas such as "factors affecting learning," "training task analysis," and "learning objectives." It does not elicit information regarding the job-task frequency or adequacy of training for the job-tasks. It would be preferable to obtain evaluative feedback by the use of performance-based job-tasks statements.

Not only are the use of job-task statements important for obtaining objective feedback data, but the dimensions along which the job-tasks are rated also influence the utility and objectivity of the feedback data collected. It is believed that the evaluative dimensions ("helped," "no help," "more emphasis," "less emphasis," and "not needed in present billet") of the current Instructor Survey form are somewhat redundant. The situations in which a topic area was "no help" would more than likely also be "less emphasis" and/or "not needed in present billet." In addition, although these dimensions may allow identification of general problem areas, a rating of "more emphasis" on instructor guides, for example, does not identify what it is about the instructor guide topic that needs "more emphasis" and/or how much more emphasis is needed.

Cost Feasibility of Instructor School Centralization

One objective of the TAEG instructor training study was to evaluate the economic feasibility of combining the six CNTECHTRA instructor training schools into fewer locations. Analyses were made to determine whether the average cost of instructor training could be reduced by more efficient utilization of resources (such as personnel services and instructional material) which are duplicated at each of the six schools. A comparison was made of the resources required to maintain the present six schools versus the resource requirements of only two locations, one east coast and one west coast. The sites chosen for the analyses of the proposed centralized system were those where instructor schools already exist, San Diego, California, and Memphis, Tennessee. Seven categories of resources were considered in the analysis of resource requirements: (1) instructional material development, (2) student supplies, (3) quality of students and time in training, (4) equipment, (5) personnel, (6) students' travel costs to and from assignment to instructor training school, and (7) facilities.

It was estimated that over a 5-year period over $300,000 could be saved by consolidating the instructor training schools (see Table 1). While these savings are not sufficient to warrant an unqualified recom-

TABLE 1. Summary of Cost Data for Instructor Training

	Projected Annual Costs						
	Implementation Costs	Year 1	Year 2	Year 3	Year 4	Year 5	Remaining Value of Assets
I. FACILITIES							
Classrooms							
Present	0	98,000	98,000	98,000	98,000	98,000	0
Proposed	2,732,000	49,400	49,400	49,400	49,400	49,400	2,049,000
Billeting							
Present	0	25,000	25,000	25,000	25,000	25,000	0
Proposed	2,800,000	(a)	(a)	(a)	(a)	(a)	2,100,000
II. EQUIPMENT							
Present	0	1,500	1,500	1,500	1,500	1,500	0
Proposed	64,000	1,000	1,000	1,000	1,000	1,000	32,000
III. PERSONNEL							
Present	0	1,784,300	1,784,300	1,784,300	1,784,300	1,784,300	-
Proposed	0	912,000	912,000	912,000	912,000	912,000	-
IV. TRAVEL							
Present	0	129,300	129,300	129,300	129,300	129,300	
Proposed	0	273,500	273,500	273,500	273,500	273,500	
TOTAL							
Present	-	2,038,100	2,038,100	2,038,100	2,038,100	2,038,100	0
Proposed	5,596,000	1,235,900	1,235,900	1,235,900	1,235,900	1,235,900	4,181,000

PRESENT COST:

Existing System	$8,107,400
Proposed System	7,786,300
	$ 321,100

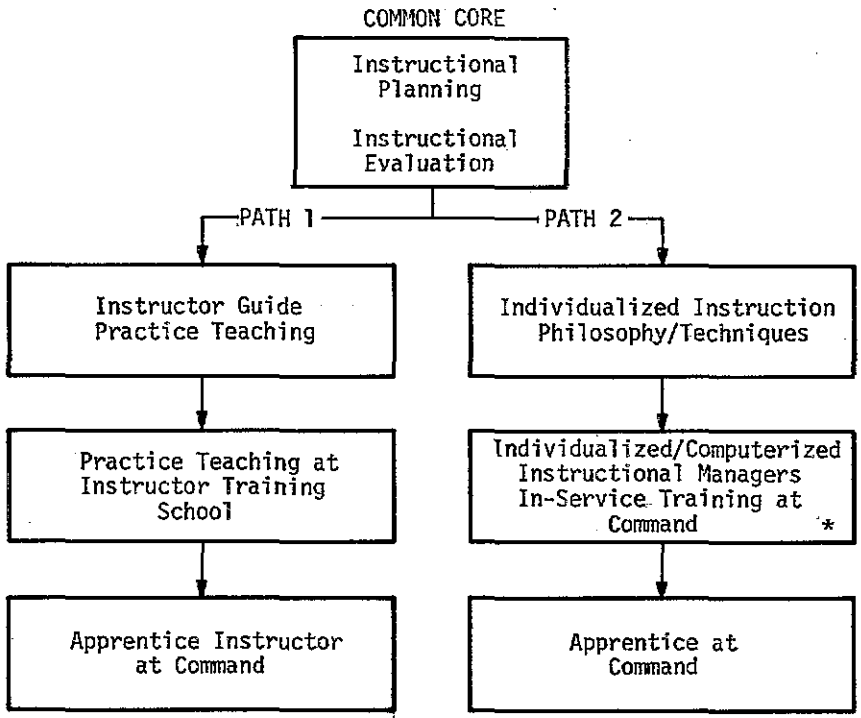
(a) Operational and Management Costs included in data for classrooms

mendation to centralize, two factors may increase the potential value of consolidation. The implementation of a computerized instructional system would significantly alter the cost relationships and may make centralization much more efficient than the present six schools. Also, savings would be greatly increased if the schools could be centralized at a site where surplus classroom and BEQ facilities were available. Estimated savings in centralization were found to be small in this study due to the necessity of calculating the costs for building new classrooms and BEQ's at the proposed Memphis site.

Although it appears as if a more centralized location of instructor training has potential for being more cost-effective than the present six schools, it is necessary to identify the qualitative advantages and disadvantages of centralization. Factors such as decreased liaison of the instructor training school with the user of their product (the various technical schools) may weigh heavily in consideration of the qualitative costs and benefits of centralization.

SUMMARY

The Navy's instructional delivery system has been changing a great deal in the past few years. These changes are impacting instructor job requirements and the role of the instructor. No longer can the instructor generalist adequately meet the needs of the many varied technical school instructional programs. New roles for the instructor are emerging. Trained instructional specialists are needed in areas such as selection and production of media, computer managed instruction, course design, academic diagnosis, academic counseling, team training, and instructional system evaluation.



*Individualized Instructional Managers complete their training at their assigned command.

Figure 1. Instructor Basic Course Paths

ABOUT THE AUTHOR

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