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OCCUPATIONAL ANALYSIS OF USAF ENLISTED
MANAGERIAL, LEADERSHIP, AND COMMUNICATIVE TASKS

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INTRODUCTION

Each year in an attempt to improve the professional military competence of its personnel, the Air Force enrolls a significant percentage of its force in Professional Military Education (PME) courses. For both enlisted and officer personnel, a series of schools exist which, at various points in a normal career pattern, can be completed either in residence, through homebase seminar programs or via correspondence courses. These common schools are designed to provide a current picture of both the military profession and the aerospace role in national defense, and to build skills and knowledge that will help Air Force people become better leaders and managers.

In an attempt to ensure that the curricula of these programs are pertinent to the needs of those enrolled, the USAF Occupational Measurement Center (OMC) was requested to do a special occupational survey that would identify the leadership, management, and communicative tasks performed by Air Force personnel at each phase of their career. It was hoped that the data from the survey would assist curriculum managers in validating those portions of their curricula.

PROCEDURE

Although the USAFOMC has a great deal of expertise in the analysis of technical jobs, the use of occupational survey methodology to focus on the "soft" skills of managers and supervisors is a relatively new experience. The USAF Human Resources Laboratory had done a similar survey of "officer management activities" in 1964, (Morsh, 1969) and that study served as a guideline for the current effort. Still, many questions existed about the ability to capture meaningful data that would be specific or unambiguous enough to assist curriculum decision makers.

In the overall project we began with the survey of enlisted personnel and used our normal methodology to develop and administer the survey instrument. In the development process this entailed first, fairly extensive research into other job analysis studies used for "professional" or executive-level education. This research was reassuring in that it revealed that many agencies, including the American Pharmaceutical Association, the Canadian Department of National Defense, and most of the US military branches, were currently involved in various similar efforts to identify, objectively, the curriculum needs of their professionals. (Barucky, 1979) Second, detailed interview sessions with groups of experienced personnel were conducted to build a common inventory of leadership, management, and communicative tasks. Third, the inventory was mailed to a fairly large number of personnel (150) at operational bases worldwide so that they could review the statements, critique them for accuracy and clarity, and add any tasks omitted. Finally, validation sessions were conducted with PME school representatives to insure that both the task

inventory and the background or demographic questions would provide useable data for curriculum developers. The entire development process took approximately five months and resulted in a list of 264 tasks.¹

One encouraging aspect of the development process was the surprising degree of consensus, among the enlisted personnel interviewed, about the behaviors to be included in the job inventory. Each interview session began with a lengthy brainstorming session in which the participants listed from 15 to 20 broad areas of responsibility (such as counseling, motivating, or managing resources) that were part of their role as leaders, managers, or supervisors. They then spent the next three days breaking down each of these areas into more specific behavioral statements that could be readily understood by enlisted personnel from all career fields. At the end of each session, the current list generated was compared to the lists generated previously so that omissions, differences, and disagreements in language could be worked out. By the end of the first three sessions it became apparent that 75 to 80 percent of the 200-plus behaviors generated by each group were very similar. Relatively few of the statements proved troublesome or were totally misunderstood by members of other groups.²

The survey was administered to a stratified random sample of 11,616 enlisted personnel in paygrades E-1 through E-9. Especially heavy sampling was done in paygrades E-5 and E-9 to allow career-field specific comparisons within those paygrades. Administration took approximately 16 weeks, and resulted in a return of 9,037 useable books. Checks across bases, major commands, and career fields indicated no significant pattern among survey books not returned.

APPLICATION

In using this survey data for curriculum validation, PME curriculum managers from all Air Force major commands gathered at a series of workshops to review the main goals and general objectives for all phases of NCO PME.³ At these workshops the data was applied in four basic ways:

¹ It is important to acknowledge the fact that some of the statements in the job inventory do not describe discrete, evaluatable, observable behaviors and are, therefore, not really "tasks." However, as these statements were deemed - by the subject matter experts - to be accurate, understandable, or useful from the standpoint of developing curricula, they were left in the inventory. Whatever their title, these tasks/behaviors have provided useful information that helped curriculum developers validate and revise the objectives for enlisted PME.

² This agreement among enlisted personnel is somewhat in contrast to the development of the officer job inventory; in the latter effort perceptual differences and extreme concern about the precision of certain statements have led to much more discussion and more interview sessions.

³ These goals and objectives and the recommended number of hours for each block of PME instruction are listed in an Air Force regulation (AFR 50-29); this document serves as a unifying guideline, which insures that graduates of schools from each major command will have achieved approximately the same skills at each phase of their careers.

(1) to evaluate the proper flow of skill/knowledge development across all five phases of enlisted PME, (2) to help determine, within each block of instruction, the specific objectives that should receive the most emphasis, (3) to identify, within certain phases, specific differences in needs based on career field job requirements, and (4) to determine if the various phases of PME come at the most appropriate times in an NCO's career.

Evaluating the Flow of Skill/Knowledge Development Across all Phases

The questions of when the PME system should first introduce the development of a certain skill or knowledge and the extent (level of learning) to which the skill or knowledge should be mastered were addressed using the percent members performing data. Table 1 illustrates how a comparison of task performance across paygrades assisted in planning the proper sequencing. The workshop representatives considered introducing a skill if at least 30 percent of the students were likely to perform the task employing that skill. Using this rough guideline, it was decided that the skill necessary to write military letters or memoranda should be introduced (to at least a basic level) to senior E-4s or E-5s. It is also evident that a large majority of E-6s and E-7s need to apply this skill, and that, dependent on the amount of instruction provided in the earlier phases of PME, the PME schools attended by E-6s should insure that their students have mastered this skill. On the other hand, Table 1 also indicates that other skills, such as the ability to design or modify organizational structure, need not be addressed until an NCO reaches the grade of E-8. Tasks of this nature would be more appropriate material for a later level of PME.

Determining, Within Each Block Which Objectives to Emphasize

In the second and simplest application of survey data, curriculum developers were able to determine, within various blocks of instruction, some of the specific skills or knowledges to emphasize. For example, from the figures in Table 2, one can see that among the examples of various types of writing skills or formats that one might deal with in teaching written communication to E-6s, it might be more important to insure that the students can write military letters or correspondence than to draft staff summary sheets. The data shows that 54 percent will perform the former task in their jobs, while only 16 percent are likely to perform the latter task.

Identifying Career Field Specific Needs

Another way in which the survey data assisted curriculum developers is through career field specific comparisons made among E-9 personnel. Although E-8 and E-9 personnel are selected to attend the final phase of NCO PME irrespective of career area, a career field comparison indicates that their individual needs for this material based on task performance may be vastly different. Identification of these differences in task performance can allow school personnel to determine both the differences in need and the differences in the experience of students as they enter the school. (For instance, NCOs in career areas such as food service or fuel management are much more likely to need skills in resource management

than are NCOs in more technical fields such as band or dental career areas.) With this information, the school personnel can develop elective blocks, modularized or self-paced instruction, or even handouts or reading lists designed to meet these differing needs.

Evaluation of PME Phase Points

The fourth application of the survey data to the overall curriculum validation process was the ability to evaluate the general placement of the five phases of PME within the career span of enlisted personnel. Table 3 illustrates the increasing involvement with leadership, management, and communicative tasks experienced by NCOs as they rise in paygrade. Comparing the differences in involvement at each paygrade with the differences in the amount of material offered in each of the phases of PME corresponding to those grades (Table 4), workshop representatives agreed that the present phasing seems to be logically planned.

SUMMARY

The entire process of validating curriculum objectives according to the actual requirements of the job has been readily accepted and supported by the representatives at each workshop. Although the data has validated a majority of the existing curriculum objectives, numerous revisions have also been suggested. In many cases, the representatives' reaction has been that the revisions recommended actually confirmed their own opinions and some of the opinions expressed on student critiques. They stated, however, that it often takes objective data such as that provided by the survey analysis to convince people that changes are needed.

In summary then, the experience with the enlisted PME project has proved to be quite beneficial. The survey data, while not providing "all the answers," has been helpful to PME managers and curriculum personnel in a variety of ways. In addition, the project itself has shown that an inventory of "soft skill" behaviors can be developed that will discriminate among members of a group based on leadership, management, and communicative task performance. Most important, it has allowed the USAF Occupational Measurement Center to expand its use of occupational survey methodology into a nontraditional area and to open up an avenue for the use of this methodology in an area with a current, crying need - the education and development of professional and executive level personnel.

References

- Barucky, J. M. "The Use of Behavior Analysis in the Development of Curriculum for Professional or Executive-Level Education." Unpublished paper, Air Force Occupational Measurement Center, 1979.
- Morsh, J. E. "Survey of Air Force Officer Management Activities and Education Requirements." AFHRL-TR-69-38, Lackland AFB TX, Personnel Research Division, December 1969.

TABLE 1

COMPARISON BY PAYGRADE OF PERCENT MEMBERS PERFORMING TWO SAMPLE TASKS

<u>TASKS</u>	<u>E-3</u>	<u>E-4</u>	<u>E-5</u>	<u>E-6</u>	<u>E-7</u>	<u>E-8</u>	<u>E-9</u>
* DESIGN OR MODIFY ORGANIZATIONAL STRUCTURE	8	9	9	14	19	36	41
* DRAFT OFFICIAL LETTERS OR MEMORANDA	15	20	39	54	68	84	89

TABLE 2

E-6's PERFORMANCE OF SAMPLE COMMUNICATIVE SKILLS TASKS

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
* DRAFT OFFICIAL LETTERS OR MEMORANDA	54
* DRAFT INPUTS OR SUPPLEMENTS TO DIRECTIVES	40
* DRAFT MESSAGES FOR ELECTRICAL TRANSMISSION	39
* DRAFT TALKING, BACKGROUND, OR POSITION PAPERS	19
* DRAFT STAFF SUMMARY SHEETS	16

TABLE 3

NUMBER OF LEADERSHIP, MANAGEMENT, OR COMMUNICATIVE TASKS PERFORMED BY
30% AND 50% OF PAYGRADES E-3 THROUGH E-9

<u>PAYGRADE</u>	<u>NO. PERFORMED BY 30% OR MORE</u>	<u>NO. PERFORMED BY 50% OR MORE</u>
E-3	6	4
E-4 (12-48 MOS)	11	4
E-4 (48+ MOS)	20	4
E-5	69	14
E-6	110	41
E-7	161	77
E-8	210	121
E-9	225	139

TABLE 4

HOURS OF INSTRUCTION AT VARIOUS ENLISTED PME PHASES

<u>PHASE</u>	<u>COURSE</u>	<u>HOURS</u>	<u>POPULATION</u>
I	NCO ORIENTATION COURSE	@ 20	E-4 (SR. AMN)
II	USAF SUPERVISOR'S COURSE	@ 52	E-4 (SGT)
III	NCO LEADERSHIP SCHOOL	@140	SR. E-4, E-5
IV	NCO ACADEMY	@230	E-6, E-7
V	SR. NCO ACADEMY	@360	E-8, E-9