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A Systems Analysis of a Self-Paced, Variable-Length Course of Instruction

Annex B

A Comparison of Graduates, Dropouts, and Instructors of the U.S. Army Clerk-Typist (MOS 71B10/20) Course

Basic AD77983
Annex A: AD77984

by

C. Dennis Fink, Harold Wagner,
Richard D. Behringer, and Morris Showel

(15) DAHC-19-73-C-0068

Prepared for

U.S. Army Research Institute
for the Behavioral and Social Sciences
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(6) # A Systems Analysis of a Self-Paced, Variable-Length Course of Instruction.

Annex B .

A Comparison of Graduates, Dropouts, and Instructors of the U.S. Army Clerk-Typist (MOS 71B10/20) Course ,

by

(10) C. Dennis Fink, Harold Wagner, Richard D. Behringer, and Morris Showel

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ABSTRACT

This study presents an analysis of selected features of the Basic Army Administration Course (BAAC), which trains enlisted personnel for MOS 71B10/20 (Clerk-Typist). The objectives of the study were: to obtain information that could be used to identify the strengths and weaknesses of the course; to develop suggestions for improving the course; and to develop a model describing the important features of a self-paced, variable-length course. Questionnaires and structured interviews were administered to a sample of course students, dropouts, and instructors, and to persons responsible for administering the courses at Fort Ord, California, and Fort Jackson, South Carolina. In addition, training records were analyzed and the training environment was inspected. The findings are reported in two subtask reports plus a final report. This, the second subtask report, (a) compares student and instructor opinions about the course; (b) relates pre-course academic potential and typing skill to course performance; (c) relates performance early in the course to overall course performance; and (d) develops an equation for predicting the time it will take a particular student to complete the course.

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

FOREWORD

This document is the second of three reports by the Human Resources Research Organization describing the results of a systems analysis of a self-paced, variable-length course of instruction, the Basic Army Administrative Course (BAAC). Graduates of this course are awarded MOS 71B10 or 71B20 (Clerk-Typist).

This Annex B report describes findings obtained from the administration of a questionnaire to students attending the MOS 71B10/20 course at Fort Ord and Fort Jackson. Also, the report presents findings based on the analysis of training records maintained for MOS 71B10/20 classes 74-08 conducted at Forts Ord and Jackson. In various parts of the report the opinions of course students and instructors are compared. Finally, the report describes the analysis of factors that seem related to student success and failure in the BAAC course. This is coupled with the presentation of an equation for predicting time-to-course-completion for students.

The Annex A report described findings obtained through the administration of a questionnaire to and/or the conduct of structured interviews with instructors, Training Company and Battalion/Brigade administrative personnel at Fort Ord and Fort Jackson during September 1973. Also, disciplinary problems associated with the MOS 71B10/20 and MOS 76A10 (Supplyman) courses at Forts Ord and Jackson were compared.

The main report integrates the findings of the two annexed reports, suggests improvements for the MOS 71B10/20 course, and describes aspects of a model for conducting a self-paced, variable-length course at an Army Training Center.

The Program Director for this project was Dr. C. Dennis Fink of HumRRO Division No. 1 (System Operations). The Director of Division No. 1 is Dr. J. Daniel Lyons. The data from Fort Jackson were collected by Dr. Richard D. Behringer and Dr. Harold Wagner of Division No. 1; the data from Fort Ord were collected by Dr. Morris Showel of the HumRRO Western Division, Presidio of Monterey, California.

HumRRO greatly appreciates the considerable amount of assistance provided by BAAC training personnel at Fort Ord and Fort Jackson.

The research is being sponsored by the U.S. Army Research Institute for the Behavioral and Social Sciences (Contract DAHC 19-73-C-0022). Dr. Milton Maier is the Contracting Office Technical Representative for the study.

SUMMARY

BACKGROUND

The Basic Army Administration Course (BAAC) trains enlisted personnel for MOS 71B10/20 (Clerk-Typist). The BAAC course is the largest self-paced, variable-length program conducted by the U.S. Army. The students are taught primarily by the use of programmed texts, and, within limits, can progress through the course at their own rate. The 71B10/20 course is scheduled to revert to a fixed-length course lasting seven weeks. Platform instruction will be introduced at certain points in the course. Before these changes become effective, it was deemed desirable to examine the course to identify its good and poor educational and administrative features.

OBJECTIVES

The objectives of this study are (a) to obtain information about cognitive and noncognitive variables as related to an operationally effective, self-paced, variable-length course; (b) to use this information to identify the strengths and weaknesses of the course; and (c) to develop a model to describe the important features of an effective self-paced, variable-length course of instruction.

PROCEDURES

An extensive questionnaire covering a variety of features of the MOS 71B10/20 course was administered to one class of students at Fort Ord and one class at Fort Jackson. A similar questionnaire plus a structured interview were administered to course instructors at these two Army Training Centers. In addition, structured interviews were conducted with course dropouts, and with Training Company and Battalion/Brigade personnel charged with administration of the 71B10/20 course.

The training records of the two classes were analyzed and related to pre-course and within-course academic and performance characteristics of the students. Also, disciplinary problems associated with 10 consecutive classes of 71B10/20 students were compared with those of similar classes of students attending the MOS 76A10 (Supplyman) course at Forts Ord and Jackson.

RESULTS

The findings of this study are reported in two subtask reports (Annexes A and B) plus a final main report. This Annex B report (a) compares student and instructor opinions about various features of the course; (b) relates pre-course academic potential and typing skill to course performance; (c) relates performance early in the course to overall course performance; and (d) develops an equation for predicting the time it will take a particular student to complete the course.

The salient findings discussed in this report are as follows:

(1) Both students and instructors expressed generally favorable opinions toward the course. Instructor opinions were slightly more favorable.

(2) Both students and instructors agreed that more platform instruction would be useful.

(3) Many students, especially those who became dropouts, indicated that course instructors did not provide as much individual assistance as desired by slow learners.

(4) Academic time to complete the course, and the probability of completing the course, are highly correlated with entry typing speed. There is a high probability that those students who cannot type at least 5 Net Words Per Minute (NWPM) when they enter the course will not be able to successfully complete the course.

(5) An equation composed of two factors—entry typing speed and the academic time required to study and be tested on four of the first five programmed instruction (PI) texts—correlated highly with the total academic time required to complete the course (.85 at Fort Ord; .77 at Fort Jackson).

(6) It appears that entry typing speed, typing progress during the first course week, and student attitudes/motivation at the end of the first week can be used collectively to identify those students who should be dropped from the course. It also would appear that, by the end of the first week, most students who become dropouts already have decided that they cannot and/or do not want to pass the course. Thereafter, their academic performance deteriorates until the School is forced to drop them from the course.

(7) Although the course is characterized as self-paced and variable-length, considerable pressure is placed on the student to complete the course PIs, and to be typing at a certain rate by a particular course week. Many students complained about this feature of the course.

Suggestions for improving the 71B10/20 course are presented in the main report for this study.

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A Systems Analysis of a Self-Paced, Variable-Length Course of Instruction

Annex B

A Comparison of Graduates, Dropouts, and Instructors of the U.S. Army Clerk-Typist (MOS 71B10/20) Course

BACKGROUND

This is the second of three reports containing findings and suggestions pertaining to the U.S. Army Basic Army Administration Course (BAAC). This course is part of the Advanced Individual Training (AIT) program conducted at Fort Jackson, South Carolina, and Fort Ord, California.

Graduates of the BAAC Course are awarded MOS 71B10. Course graduates may continue on in an advanced Clerk-Typist course (MOS 71B20) or may attend any general follow-on courses which prepare students for clerical positions. The BAAC course has been the largest self-paced, variable-length program conducted by the Army; about 8,000 students graduate from the course each year.

The first report in this series (Annex A) presented and summarized comments and suggestions obtained from BAAC course instructors and from officers, drill sergeants, and senior NCOs who administer the course. The incidence of disciplinary problems associated with the BAAC course was also discussed.

The present report is concerned with student reactions to the course and compares student and instructor opinions about various features of the course. It includes an equation developed to predict the time it will take a student to complete the course. Finally, the report describes the various comparisons made between fast learners, slow learners, and academic dropouts. These comparisons were performed in an attempt to identify those student characteristics that might be used to predict which students would become course dropouts.

METHODOLOGY AND DATA PRESENTATION

STUDENT QUESTIONNAIRE

Most of the data for this report was obtained through the administration of an extensive questionnaire to BAAC students. At Fort Ord, the questionnaire was administered to 197 students in class 74-08, during their third week of the course. The questionnaire was given also to 12 WAC students from other on-going classes. At Fort Jackson, the questionnaire was administered to class 74-08, which consisted of 171 students in their third week of training.

The Student Questionnaire contained a total of 70 questions, 55 of which required the use of a rating scale. For each such question, there was an associated nine-point rating scale. Definitions were provided to anchor the scale points. The respondents circled the scale point that most closely corresponded to their opinion or feeling concerning the topic addressed by the question. An illustration of a scale follows.

1	2	3	4	5	6	7	8	9
Completely too long		Much too long		Length is about right		Much too short		Completely too short

The Student Questionnaire was designed to cover 17 separate features of the BAAC course. These 17 areas are listed in Table 1. Appendix A presents a list of questions contained in the questionnaire, and a summary of the responses to each question. Data are presented separately for Fort Ord and Fort Jackson students. The average scaled

Table 1

Opinions of and Reactions to the MOS 71B10/20 Course

Opinion Area	Definition
1	Attitudes Toward Group Typing Portion of Course
2	Attitudes Toward Self-Paced Typing Portion of Course
3	Attitudes Toward Programmed Instruction Texts and Concepts of Self-Pacing
4	Attitudes Toward Criterion Tests
5	Provided Information About Their Progress in the Course
6	Attitudes Toward Overall Course
7	Attitudes Toward Practice of Being Given Non-Training Assignments
8	Attitudes Toward Course Incentives
9	Attitudes Toward Course Counter-Incentives
10	Use of Options for Obtaining Additional Academic Assistance
11	Pre-Course Interests in Typing and/or Clerical Duties
12	Mid-Course Interests in Typing and/or Clerical Duties
13	Opinion Regarding Completeness of Information Given Student About Features of Course
14	Opinions Regarding How Students are Assigned to the Course
15	Opinions Regarding Course Counseling Sessions
16	Opinions Regarding Reasons for Failing Course
17	Suggestions for How to Improve the Course

response values to each question are presented for the following groups and subgroups of respondents:

- All graduates
- Fast, medium, and slow learners
- Course dropouts
- Men and women graduates
- Course instructors

Most of the comparisons made between the subsets of data did not show significant differences. On some of the Student Questionnaire questions, the responses of men and women students were significantly different statistically. The data for this subset of questions are contained in Appendix A.

INTERVIEWS WITH COURSE DROPOUTS

The data for this study were collected over a two-week period, during which all students who were dropped from any on-going BAAC class for nondisciplinary reasons were interviewed. The purpose was to determine whether course dropouts had different attitudes and opinions about the course than students who eventually graduated. The dropouts were interviewed individually and were asked a subset of the questions contained in the Student Questionnaire (questions used are identified in Appendix A). At Forts Ord and Jackson, 16 and 18 course dropouts, respectively, were interviewed.

Dropouts from the course were asked a total of 29 questions. The answers to each of these questions have been summarized in paragraph form; a separate summary paragraph was developed for students from Fort Ord and Fort Jackson. These paragraphs are contained in Appendix B to this report. Persons closely involved with the conduct and administration of the BAAC course should find these paragraphs of particular interest.

COMPARISON OF INSTRUCTOR AND STUDENT OPINIONS

Certain questions on the Student Questionnaire were almost identical to some questions on the Instructor Questionnaire. Instructor responses to this questionnaire were discussed in the first report in this series. In this report, instructor and student perceptions of the course will be compared.

DISCUSSION OF FINDINGS

The discussion of the data obtained from the Student Questionnaire is organized around the 17 Opinion Areas listed in Table 1. A subsequent section describes the development of an equation for predicting course completion time and presents the various data used to identify differences existing between course graduates and course dropouts, and between fast and slow learners (defined in terms of course completion time).

It was found that the 71B10/20 course as conducted at Fort Ord differs in some respects from its counterpart at Fort Jackson:

(1) The typing requirements at Fort Ord and Fort Jackson are somewhat different during the first two weeks of Group Typing. At both installations persons who at course entry cannot type 11 Net Words Per Minute (NWPM) or more are assigned to Group Typing. At Fort Jackson a student advances to the self-paced typing portion of the course (a) as soon as he types 11 or more NWPM on three adjacent timed writings, or (b) at the end of the second week of Group Typing, provided that he can type at 11 or more NWPM. At Fort Ord a student advances to the self-paced portion of the course (a) as soon as he can type 15 or more NWPM on three adjacent timed writings, or (b) at the end of the second week of Group Typing, assuming that he can type at 11 or more NWPM. The effect of this difference is that students at Fort Ord remain for a longer period in the Group Typing portion of the course.

(2) At both installations the nontypist student receives up to two weeks of concentrated typing instruction. At Fort Ord the first week of Group Typing is conducted by video tapes; the second week is conducted as self-paced typing under the guidance of typing instructors. Programmed texts PI-32, PI-17, and possibly PI-6 may be studied during the second week of Group Typing. The instructors for the Group Typing portion of the course may or may not be experienced typists. Furthermore, the instructor turnover for this portion of the course is rather high. Group Typing at Fort Jackson is presented by civilian instructors; PI-32, PI-17, and sometimes PI-6 are studied during both the first and second week of Group Typing, and the instructor turnover is very low.

(3) At Fort Ord there seems to be a concentrated effort to identify, during the first weeks, those students who will probably not make it through the course. Many of these students are washed out at the end of the first or second week. At Fort Jackson, slow typists are more apt to be allowed to enter the third week of the course, thus having a longer opportunity to demonstrate their potential typing ability and also their ability to master the material in the programmed texts.

(4) During the period when this project was conducted, all students at Fort Ord took the programmed texts in the recommended sequence. At Fort Jackson, no particular sequence was followed (due to an inadequate supply of PIs). Therefore, for the classes under study, the course at Fort Ord was more stable than the course at Fort Jackson.

The daily training records maintained for the 71B10/20 course were not designed to provide a detailed record that could be used for the post hoc analysis of the progress of any particular class of students. Various gaps were found in the data used to develop the findings for this report. We have, therefore, decided to be somewhat cautious in interpreting the findings of this study.

As part of the data analysis of this project, hundreds of *t* tests were performed. Since one would expect a number of these comparisons to be significantly different by chance, those significant at only the .05 level of confidence will not be included in this report unless these particular comparisons contribute to an understanding of other comparisons that are significantly different. (Although we do not consider a single statistically significant finding to be important in and of itself, when a number of comparisons related to the same topics are significantly different, such findings are more likely to indicate a "real" difference.)

Opinion Area 1. ATTITUDES TOWARD GROUP TYPING PORTION OF THE COURSE

Course Graduates. In general, the graduates responded favorably to questions covering the Group Typing portion of the course. In particular, the Fort Ord respondents expressed satisfaction with the video tapes used to present the typing instructional material (Questions B-1, B-4, and B-5). The respondents thought Group Typing was of average interest (Question B-6). However, the fast learners (those who already knew something about typing) thought that this portion of the 71B10/20 course was quite boring. In general, the respondents were of the opinion that students should be given more time to acquire the required typing skills (Questions B-2 and B-7).

Course Graduates vs. Dropouts. On all questions related to this opinion area, the dropouts responded less favorably than the course graduates. Since most students who are dropped from the course are eliminated because of their inability to meet the course typing requirements, one would expect that dropouts would have a somewhat unfavorable opinion of Group Typing procedures.

Men vs. Women Respondents. The respondents answered six questions related to the Group Typing portion of the BAAC course. Of six possible men-women comparisons, only one was significant (Question B-7 for Fort Jackson). It can be concluded that men and women students do not have significantly different opinions regarding the Group Typing portion of the 71B10/20 course. However, very few women take this portion of the course. Most women know how to type at entry, so they were inclined to report that the time devoted to Group Typing was "about right" (Question B-7), whereas the men reported that they needed more time.

Instructor vs. Student Responses. As noted previously in this report, only certain questions on the Instructor Questionnaire (see Annex A) were identical to those on the Student Questionnaire. Appendix A of this report contains the findings for those questions that were identical on both questionnaires. None of the possible student-instructor comparisons was statistically significant. However, an inspection of the findings suggests that the students were slightly more favorable than the instructors to the Group Typing procedures followed in the course.

Fort Ord vs. Fort Jackson Graduates. This comparison was not applicable, as video tapes were not used at Fort Jackson.

Course Dropout Interview Responses. Appendix B contains a summary of the responses given by the dropouts who were interviewed as part of this study. With respect to Group Typing, these comments suggest that:

(1) At Fort Ord, the students have difficulty keeping up with the video tape presentations—the instructional material is clear enough but is presented at too rapid a rate.

(2) At both training sites, some students suggested that the Group Typing portion of the course should be lengthened, or at least the student should be given more time to meet the typing requirements of the course.

Opinion Area 2. ATTITUDES TOWARD SELF-PACED TYPING PORTION OF THE COURSE

Course Graduates. The students expressed slightly positive opinions toward the self-paced typing portion of the course (Appendix A). In particular, they indicated that they were able to understand the instructional material on how to type (Question C-4).

Course Graduates vs. Dropouts. On most questions, the dropouts gave a significantly less favorable response than did the course graduates (Appendix A), as would be expected. Reasons accounting for such findings appear in the comments provided by the course dropouts (Appendix B). An examination of these data reveal (Question C-4) that a number of the Fort Ord dropouts had never studied typing in the self-paced mode; they had been dropped after the first week of Group Typing. Therefore, the responses of these students vis-a-vis self-paced typing are suspect. However, slow learners were slightly more favorably disposed towards self-paced typing procedures than were the fast learners (Appendix A). This agrees with the overall finding that, with the exception of wanting more time to practice typing, both the graduates and the dropouts had few complaints about the Group Typing practices of the 71B10/20 course.

Men vs. Women Respondents. Slightly more women than men reported that the length of the typing sessions was "about right" (Question C-1, Appendix A). To anticipate a general finding of this report, differences according to sex in opinions about the course do not seem very important. Furthermore, the data seem related to the fact that most women at entry into the course have had previous experience with typing. Men have not.

Instructor vs. Student Responses. The students and instructors answered three identical questions related to Opinion Area 2. Out of six possible comparisons, only one was significant at the .01 level of confidence. There is a slight suggestion that the student responses were more favorable than those of the instructors.

Fort Ord vs. Fort Jackson Graduates. There was a slight tendency for the graduates at Fort Jackson to respond more favorably than their counterparts at Fort Ord. In particular, Fort Jackson graduates said they were better informed about typing procedures (Question C-2) and the typing portion of the course was more interesting (Question C-6). Probably this finding relates to the fact that civilian instructors are used at Fort Jackson to present much of the typing instruction of the course. Video tapes (first week of training) and Army instructors (second week of training) are used at Fort Ord.

Course Dropout Interview Responses. The comments of the dropouts (Appendix A) with respect to typing, suggested that:

(1) The typing instructions were clear enough (Question C-8).
(2) The slow students should be given more time to master the typing requirements of the course (Question C-25).

Opinion Area 3. ATTITUDES TOWARD PROGRAMMED INSTRUCTION TEXTS AND CONCEPT OF SELF-PACING

Course Graduates. The students as a group were slightly in favor of the use of programmed text material, but were not overly enthusiastic about PIs. They reported that, while they could understand much of the PI material (Question C-8, Appendix A), they thought the PIs were somewhat difficult (Question C-10). Interestingly enough, the respondents were quite favorably disposed toward the concept of self-paced instruction (Question E-6), but were not sure that they wanted to use programmed texts to continue their skill development once they had graduated from the course (Question E-8).

Course Graduates vs. Dropouts. On all five questions related to this Opinion Area, course dropouts responded less favorably than did course graduates. Often these differences were significantly different. However, the reader should be cautioned that many Fort Ord dropouts never had studied a PI, and therefore had no basis for responding to the questions related to this Opinion Area.

Men vs. Women Respondents. On Question E-8, women responded more favorably than men, indicating that women were more inclined toward the practice of using PIs after course graduation to increase their skills.

Instructor vs. Student Respondents. Both instructors and students responded to Questions C-8, C-9, and C-10. At both Fort Ord and Fort Jackson, the course instructors were much more favorably inclined toward the use of programmed instructional material (Question C-9) than the students. Even fast learners were much less favorably disposed toward the use of PIs than were instructors. One can only speculate regarding the reasons for this finding. Since 74% of the students reported that they were unfamiliar with PIs and the concept of self-pacing, they may have felt somewhat ill at ease when studying on their own.

Fort Ord vs. Fort Jackson Graduates. With respect to Question C-10, Fort Jackson students reported that the PIs were "about right" in learning difficulty; Fort Ord students reported that the PIs were somewhat difficult. In comparison with Fort Ord students, Fort Jackson students were more apt to report that they liked studying PIs by themselves.

Course Dropout Interview Responses. Some respondents complained that the PI vocabulary was difficult. However, most dropouts reported that the PIs were "difficult sometimes" but not overly difficult. There was a suggestion that those students who believed they would be dropped from the course preferred not to work hard on the programmed texts (Question C-8, Appendix B).

Opinion Area 4. ATTITUDES TOWARD CRITERION TESTS

Course Graduates. The respondents were favorably disposed toward the criterion tests. They reported that they were related to the course material (Question C-11, Appendix A), and were useful in pointing out one's strengths and weaknesses in the course (Question C-14). Their negative feelings with respect to the ease or difficulty of the criterion tests were quite mild (Question C-12).

Course Graduates vs. Dropouts. This comparison was not applicable, as dropouts usually occurred prior to criterion test administration.

Men vs. Women Respondents. Men and women responded similarly on the three questions related to this Opinion Area.

Instructor vs. Student Respondents. With respect to Question C-11, both instructors and students reported that in their judgment the criterion tests were related to the instructional material.

Fort Ord vs. Fort Jackson Graduates. There were no significant differences in the way these two groups of students responded to Questions C-11, C-12, and C-14.

Course Dropout Interview Responses. The structured interview administered to course dropouts did not address this Opinion Area.

Opinion Area 5. OPINIONS REGARDING DEGREE TO WHICH STUDENTS ARE PROVIDED INFORMATION ABOUT THEIR PROGRESS IN THE COURSE

Questions C-16 through C-20 of the Student Questionnaire (see Appendix A) were related to this Opinion Area. The instructors of the 71B10/20 course are supposed to closely monitor the progress of the students. In addition, they inform the students about course requirements, inform the students about their progress toward meeting these requirements, and assist the students whenever such assistance is requested or whenever the instructor perceives that the student needs help.

Course Graduates. The respondents reported that they were monitored fairly closely and that some instructors were willing to help students who were having difficulty. In addition, the respondents reported that they were adequately informed about the objectives of the course, whether or not they were progressing as rapidly as the typical course student, what would happen to them if they failed the course, and so on. In short, the students said they were given adequate information about the course objectives and about their progress in meeting those objectives. However, as discussed in the first report for this study, the students did not feel that the instructors were helpful enough, especially in providing assistance to slow learners.

Course Graduates vs. Dropouts. Compared with course graduates, the dropouts consistently reported that the course instructors were less helpful. However, on Question C-17, both graduates and dropouts agreed that their typing speed and accuracy had been checked quite often by the instructors. The findings related to this Opinion Area are consistent with those reported in Annex A; namely, it is fairly easy to identify those students who will have trouble meeting the course typing requirement, and, according to instructor comments, it is very difficult for the instructor to help such students.

Men vs. Women Respondents. The women students at Fort Ord responded more favorably than men students to the four questions related to Opinion Area 5. They were more apt to report that course instructors were willing to help them (Question C-16); that instructors were willing to tell them about course objectives (Question C-18); that instructors were willing to tell them about the consequences of not meeting course objectives (Question C-19); and that they were told what would happen to them if they finished the course early (Question C-20). At Fort Jackson there were no differences between the sexes in the way they responded to these questions.

Instructor vs. Student Respondents. Both students and instructors agreed that the typing progress of the student was checked quite often (Question C-17). The dropouts reported, however, that sometimes these checks were rather cursory (Question C-17, Appendix B). At both installations instructors apparently were willing to tell students what would happen to them if they did not meet the objectives of the BAAC course. In fact, the interview comments obtained from the course dropouts suggested that the possibility of being dropped from the course is the most common threat used to try to motivate slow learners (Questions D-4 and D-20, Appendix B).

Fort Ord vs. Fort Jackson Graduates. The responses to Questions C-17 and C-19 (Appendix A) suggest that the instructors are more strict (or perhaps more threatening) at Fort Jackson than at Fort Ord. The students at Fort Jackson reported that their typing progress was checked quite often (Question C-17) and that the instructors told them what would happen to them if they were dropped from the course (Question C-19). The students at Fort Ord had significantly less positive opinions with respect to the topics addressed by these two questions.

Course Dropout Interview Responses. In Appendix B, interview comments are summarized for Questions C-16, C-17, C-18, and C-19. According to these comments:

(1) Most instructors were willing to help the students (Question 16).

(2) Student typing progress was checked rather closely and quite often (Question 17).
(3) The students were informed about the requirements they had to meet in order to graduate from the course (Question C-18).
(4) The students were informed about what would happen to them if they were dropped from the course (Question C-19).

Opinion Area 6. ATTITUDES TOWARD OVERALL COURSE

Questions C-21 and C-22 of the Student Questionnaire (see Appendix A) solicited opinions on the overall course. In Question C-21 the respondents were asked whether they thought the course was interesting or dull and boring. In Question C-22 they were asked to judge how much of the course material they thought they would remember.

Course Graduates. In general, the course graduates reported that they would remember much of the course material, but that the course itself was not especially interesting.

Course Graduates vs. Dropouts. As expected, the dropouts were less favorably inclined toward the course. As compared with course graduates, the dropouts reported less interest in the course, and said they would not remember much of the course material. Of course, to begin with, the dropouts had not learned much of the course material.

Men vs. Women Respondents. For Questions C-21 and C-22, men and women responded similarly.

Instructor vs. Student Respondents. This comparison was not made because the questions on the Instructor and Student Questionnaires were not comparable.

Fort Ord vs. Fort Jackson Graduates. The respondents at Fort Jackson reported that the course was fairly interesting; the Fort Ord graduates said the course was "interesting sometimes." This difference was statistically significant (Appendix A). Possibly this response relates to the fact that at Fort Jackson slow typists receive individual attention from a civilian instructor during the first two weeks of the course.

Course Dropout Interview Responses. This topic was not addressed in the course dropout interview.

Opinion Area 7. ATTITUDES TOWARD PRACTICE OF BEING GIVEN NON-TRAINING ASSIGNMENTS

At both Fort Ord and Fort Jackson, students are listed on a number of duty rosters, and, in addition, may be assigned a variety of details. Questions C-23 and C-24 of the Student Questionnaire (see Appendix A) solicited student reactions to this practice.

Course Graduates. The graduates reported that they were assigned details and duties, but not very often (Question C-23). They were of the opinion that this practice had "somewhat of a bad effect" on their course performance (Question C-24).

Course Graduates vs. Dropouts. There were no significant differences in the way these two groups responded to Questions C-23 and C-24.

Men vs. Women Respondents. At Fort Jackson men respondents reported a significantly higher number of "assigned details" than did women respondents. In fact, at both locations men students are assigned more non-training duties and details than are women.

Instructor vs. Student Respondents. This comparison was not made.

Fort Ord vs. Fort Jackson Respondents. As compared with students at Fort Ord, Fort Jackson students reported a significantly higher number of "assigned details" (Question C-23), and expressed more strongly their opinion that this practice had a bad

effect on their course peformance (Question C-24). As reported in Annex A, students at both installations complained about the number of duties they had to perform while in a student status.

Course Dropout Interview Responses. With reference to Question C-24, Appendix B, those dropouts who had been assigned many duties did complain about them. However, many respondents said that they were not assigned many duties and details. Further, they reported that this practice had little, if any, effect on their course performance.

Opinion Area 8. ATTITUDES TOWARD COURSE INCENTIVES

Questions D-3 through D-8 of the Student Questionnaire (see Appendix A) covered various features of the incentive practices employed with the 71B10/20 course. Questions D-1 and D-2 were open-ended; they asked the respondents to report what types of rewards were given for good performance in the course (Question D-1), and what types of rewards could or should be given to students for superior performance (Question D-2). The responses to Questions D-1 and D-2 are summarized in Table 2.

Table 2

Percentage of Respondents Who Reported or Suggested Use of a Particular Type of Reward[a]

Types of Rewards and Incentives	Fort Jackson		Fort Ord	
	Question D-1	Question D-2	Question D-1	Question D-2
Promotion/Advancement	45.1	32.2	35.2	28.1
Special/Extra Privileges	18.0	25.3	40.1	44.6
Special Awards	10.4	13.9	4.2	5.4
Preferred or Better Duty Assignment	6.6	10.2	9.4	12.0
Personal Satisfaction or Recognition	4.3	4.1	5.2	3.1
Relief from Duties and Details	4.3	13.9	1.0	6.7
No Reward Required	11.4	0.4	4.8	0.0

[a]D-1: What, if any, types of rewards are given in this course for good performance?
D-2: What types of rewards do you think could be or should be given to students for superior performance?

An examination of Table 2 shows that most students reported that the promise of a promotion (grade advancement) upon graduation is the incentive most commonly used to motivate students. Special privileges, such as the promise of a three-day pass or permission to go on leave, were other incentives mentioned by many respondents. In general, students reported less interest in promotions and more interest in receiving special privileges for exceptional course performance. Receipt of a three-day pass for good performance was the most frequently suggested reward (Question D-2).

Course Graduates. As a group, the respondents were neutral with respect to course incentives. Replies to Question D-3 seemed to suggest slightly that rewards for good course performance were somewhat inadequate.

Course Graduates vs. Dropouts. Course dropouts usually had a more negative opinion of the course incentive system than did course graduates. In particular, dropouts

felt that instructors were against the use of rewards (Question D-7). This opinion is partially supported by the fact that when a student has difficulty in the course there is not much the instructor can do by way of administering rewards. However, the instructors can and do: (a) inform the student of the consequences of failing the course, (b) tell the student to attend study hall, (c) assign extra details to the student, and (d) "chew out" the student. This is all part of standard incentive and counter-incentive practices followed in the course.

Men vs. Women Respondents. These two groups of respondents did not differ significantly with respect to their responses to Questions D-3 through D-7.

Instructor vs. Student Respondents. In general, instructors gave more favorable responses than did students to questions on course incentives. As compared with students, instructors reported that they were in favor of using rewards and promises to motivate students (Question D-7). The findings suggest that, with respect to the use of incentives, student and instructor opinions are quite different at Fort Ord, but are not too discrepant at Fort Jackson (Questions D-3, D-4, D-7, and D-8).

Fort Ord vs. Fort Jackson Graduates. None of the five comparisons made was statistically significant.

Course Dropout Interview Responses. The dropouts were queried with respect to Questions D-4 and D-7. Their comments indicated that:

(1) Instructors tend to use punishments and threats to motivate students, especially slow learners (Question D-4).

(2) Most students do not know how instructors feel about using rewards and/or punishments (Question D-7).

With reference to the interview comments obtained from course dropouts (Questions D-1 and D-2, Appendix B):

(1) Most of the interviewees were aware of the rewards that could be obtained for good course performance.

(2) Many respondents reported that students were not rewarded for good performance in the course.

(3) The most frequently suggested rewards for good course performance were promotions and three-day passes.

Opinion Area 9. ATTITUDES TOWARD COURSE COUNTER-INCENTIVES

Questions D-11 through D-15 of the Student Questionnaire (see Appendix A) were used to gather information relative to this Opinion Area.

Course Graduates. For the questions under present analysis, an examination of Column 1 in Appendix A reveals that the student responses were rather neutral with respect to counter-incentives used in the 71B10/20 course. The general results for Question D-12 suggest that the students did not feel that those who finished the course early would be penalized. Also, the respondents reported that the instructors were fair when meting out punishment. According to the response to Question D-15, the students believed that course instructors were somewhat inconsistent in their use of threats and punishments.

Course Graduates vs. Dropouts. One might expect course dropouts to have rather negative opinions about counter-incentives. However, this did not seem to be the case. The students expressed no strong feelings one way or the other about course objectives. However, course dropouts were more positive in their belief that good students are penalized for finishing the 71B10/20 course early (Question D-11).

Men vs. Women Respondents. At both Fort Ord and Fort Jackson, the men respondents reported that those who finish the course early are sometimes penalized

(Question D-12). Women respondents reported that this seldom happens. The facts seem to support both groups of respondents. While examining the training records for individual students, the Contractor found instances where men were assigned details or a duty such as CQ immediately after completing the course. At this time, the recent graduate was still under the jurisdiction of a Training Company and was still listed on all duty rosters. Undoubtedly, the Training Company does, on occasion, succumb to the temptation to give the recent graduate such duties. From the Army's standpoint, this is an appropriate assignment; from the standpoint of the recent graduate, he has been penalized for finishing the course early. This practice could be changed without too much effort if it is judged desirable to do so. Women students receive a lesser number of duty assignments and therefore recent women graduates are not apt to encounter this situation.

Instructor vs. Student Respondents. When student responses are compared with the responses of their instructors, it was found that (a) students at both Fort Ord and Fort Jackson reported that instructors sometimes favor the use of threats and punishments (Question D-13); and (b) the students at Fort Jackson were less positive in their opinion that those who finish the course early will be penalized (by being given a duty assignment or detail). This latter finding is difficult to interpret. However, at both installations there is a difference of opinion between the instructors and the Training Company as to who should have control over the students. The Fort Jackson responses to Question D-12 suggest that, in the opinion of the instructors, the Training Company uses recent graduates to perform a disproportionate number of duty assignments and details. This whole problem of who should control the student is discussed more fully in the final report and also in Annex A.

Fort Ord vs. Fort Jackson Graduates. These two groups responded similarly on all questions subsumed under Opinion Area 9.

Course Dropout Interview Responses. *According to the comments provided to* Question D-13, most dropouts did not know how the instructors felt about the use of punishments and threats, or they reported that the instructors did not care "one way or the other" about using punishments and threats.

Types of Punishments and Threats Used During the Course. Question D-10 of the Student Questionnaire asked the respondents to list the "types of punishments or threats of punishments" used in the 71B10/20 course. A summary of their responses is shown in Table 3. At both installations, particularly at Fort Jackson, the standard procedure is to tell slow learners that they will be "sent to Cook's school", "sent to the Infantry", and/or "sent before the Evaluation Board" if they do not perform well in the course. On occasion they are told that they will be discharged from the Army if they do not do well. Unfortunately, this last threat is perceived as a potential reward by a small number of students. It was reported to the Contractor that some students purposely do whatever they can to get dropped from the course and either discharged or reassigned.

Opinion Area 10. USE OF OPTIONS FOR OBTAINING ADDITIONAL ACADEMIC ASSISTANCE

Questions E-1 through E-5 of the Student Questionnaire (see Appendix A) are related to this Opinion Area. In practice, there are three courses of action a student can take in an effort to improve his chances of completing the 71B10/20 course. He can attend study hall, he can seek assistance from the instructors, and he can seek assistance from his fellow students or from recent course graduates who function as assistant instructors.

Course Graduates. According to the responses to Questions E-1 through E-5, the students (a) seldom attended study hall to practice typing; (b) seldom attended study hall

Table 3

Percentage of Respondents Who Reported That a Particular Type of Punishment or Threat Was Used by MOS 71B10/20 Course Instructors

Type of Punishment or Threat	Question D-10	
	Fort Jackson	Fort Ord
No Promotion/Grade Advancement	1.1	1.0
Removal of Special Privileges	3.4	1.5
Public Reprimand or Criticism	4.1	1.0
Official Note Made of Poor Academic Progress	9.0	1.5
Reassignment to a Nonpreferred MOS	34.1	32.8
Assignment of Extra Duties or Details	26.2	41.8
Punishment: Fines, Stand at Attention, etc.	9.0	2.0
Discharged From Service	7.1	0.0
Other: Assignment to Study Hall, etc.	6.0	18.4

to study the PIs; (c) knew that they could attend study hall if they wished; (d) sometimes asked their fellow students for assistance, but apparently not very often; and (e) sometimes asked the instructors for assistance. There is nothing remarkable about these findings.

Course Graduates vs. Dropouts. In comparison with course graduates, course dropouts (a) attended study hall more frequently (they were told to do so by their instructors); (b) were less strong in their belief that the study hall was available to them; and (c) were less apt to seek assistance from their fellow students (Question D-4). This last finding might suggest that most students who are dropped from the 71B10/20 course decide early in the course that they probably will be dropped and/or that they want to be dropped, and thereafter do as little as possible until they actually are dropped.

Men vs. Women Respondents. At both Fort Ord and Fort Jackson, men students were more apt to attend study hall (Questions E-1 and E-2). Since men tended to be slower learners in this course, they were more often assigned to study hall.

Instructor vs. Student Respondents. Instructor and Student Questionnaires did not contain comparable questions related to Opinion Area 10.

Fort Ord vs. Fort Jackson Graduates. As compared with students at Fort Jackson, Fort Ord students attended study hall more often (Questions E-1 and E-2) and were more positive in their judgment that study hall was available to those students in need of it (Question E-3). In addition, Fort Ord students reported a greater tendency to seek help from their fellow students (Question E-4).

At Fort Ord the study hall is available four days per week; at Fort Jackson it is available on Tuesday and Thursday evenings only. With respect to the responses to Question E-4, the Fort Ord instructors may be more permissive than those at Fort Jackson—more apt to allow students to talk to one another while in class. No information was collected on this specific topic.

Course Dropout Interview Responses. Most respondents knew that study hall was available to course students and many reported that they had voluntarily attended study hall. However, the respondents complained (especially at Fort Jackson) that the study hall was too noisy and smoky (Question E-3, Appendix B).

At least half of the dropouts interviewed at each installation reported that they had sought assistance from their instructor. A number of interviewees reported that the instructors were not very helpful. As reported in Annex A, many students felt that the instructors either were not willing or did not know how to help slow learners.

Opinion Areas 11 and 12. PRE-COURSE AND MID-COURSE INTEREST IN TYPING AND/OR CLERICAL DUTIES

Course Graduates. The average student at entry into the course was neither interested nor disinterested in the acquisition of clerical and typing skills (Question F-1, Appendix A). After three weeks in the course, student interest in these skills had undergone little, if any, change (Question F-3).

Course Graduates vs. Dropouts. As might be expected, the opinions of graduates and dropouts were similar at entry into the 71B10/20 course. However, some three weeks later (when most dropouts have already been dropped from the course), the interest of course dropouts in clerical and typing skills had suffered a marked decline.

There is a possibility that most students, after two or three days' exposure to the 71B10/20 course, have tentatively decided whether or not they are willing to work hard to complete the course. This conjecture is supported by the opinion of many instructors who contended that those students who become a motivational problem early in the course are the ones most apt to be dropped from the course. This point will be further developed later in this report.

Men vs. Women Respondents. Of eight possible comparisons, only one was statistically significant: The men students at Fort Ord were more positive that their interest in doing clerical work for the Army had been increased as the result of attending the 71B10/20 course (Question F-2).

Instructor vs. Student Responses. Instructor-student comparisons relative to Opinion Areas 11 and 12 were not made.

Fort Ord vs. Fort Jackson Respondents. On a number of comparisons, Fort Ord graduates and dropouts expressed less interest in clerical work and/or in becoming skilled typists. A possible explanation is that the Group Typing period at Fort Ord is more concentrated and probably more grueling than its counterpart at Fort Jackson. This is because the student must type at a rate of 15 NWPM on three adjacent timed writings to "graduate" early from the Group Typing portion of the course. At Fort Jackson students who can type at the rate of 11 NWPM are "graduated" from Group Typing. The typing practices and requirements at Fort Ord may have caused many of the respondents to "downrate" their interest in typing and clerical skills.

Course Dropout Interview Responses. A number of dropouts reported that they never had been interested in becoming a skilled typist. Some of these persons also reported that they had wanted to be assigned to another course but had been assigned to the 71B10/20 course instead. Apparently, some of the dropouts had not realized that learning to type was a 71B10/20 course requirement. The comments contained in Section F, Appendix B, shed considerable light on the reasons why students become course dropouts.

Opinion Area 13. OPINIONS REGARDING COMPLETENESS OF INFORMATION GIVEN STUDENTS ABOUT FEATURES OF THE COURSE

The issue here is whether the students were fully informed regarding the course, including their progress in the course, what would happen to them if they were dropped from the course, and so on.

Course Graduates. The findings displayed in Appendix A indicate that: (a) the respondents believed that they were given some information about how to type but probably could have been better informed (Question C-2); (b) when a student failed a criterion test he was usually told in general terms why he failed and what he should do to pass the test (Question C-13); (c) the students were given some information about the rewards (Question D-9) and negative incentives (Question D-11) which would be employed in the course. These findings, plus comments obtained from course dropouts, suggest that the instructors should provide more feedback information to the students. In particular, many students felt that the instructors could be more detailed and patient when explaining to the students why they had failed a criterion test.

Course Graduates vs. Dropouts. As compared with graduates, course dropouts (a) felt that they had not been given detailed information about why they failed a criterion test (Question C-13); (b) did not feel that they had been especially well informed about the rewards one could receive for good performance (Question D-9); and (c) reported that they had not been well informed about the negative incentives and punishments which would be given for poor course performance (Question D-11).

Men vs. Women Respondents. These two groups responded similarly to questions related to this Opinion Area.

Instructor vs. Student Respondents. At both Forts Ord and Jackson, the instructors reported that they clearly informed students about the rewards they could receive for good academic performance in the course. The BAAC course students at both installations were more apt to report that they were "not sure" that they had been clearly informed about course rewards (Question D-9).

Fort Ord vs. Fort Jackson Graduates. When compared with Fort Ord respondents, the Fort Jackson graduates (a) said they had been better informed about correct typing procedures by their instructor (video tapes are used at Fort Ord to present most of the typing instruction) (Question C-2); (b) were less inclined to report that their instructors had given them detailed information about why they had failed a criterion test (Question C-13); and (c) were less sure that they had been adequately informed about the rewards for good course performance (Question D-9).

Course Dropout Interview Responses. At Fort Ord, most of the dropouts had never taken a criterion test. Fort Jackson dropouts reported that sometimes they were told why they failed a test and at other times they were not told (Question C-13, Appendix B).

Opinion Area 14. OPINIONS REGARDING HOW STUDENTS ARE ASSIGNED TO THE COURSE

The interview with course dropouts contained the following question: "How did you get assigned to the 71B10/20 course? Did you ask for it? or what?" The answers to this question have been summarized and are presented in Question F-6, Appendix B. Important points mentioned by the dropouts included:

(1) Many respondents said that it was their recruiter who suggested that they apply for the 71B10/20 course.

(2) Many respondents, at time of recruitment, had expressed an interest in another MOS. However, their request could not be met, so they enlisted for 71B10/20.

(3) Some respondents wanted to work in the clerical field, but had not realized that they would be expected to become skilled typists.

Opinion Area 15. OPINIONS REGARDING COURSE COUNSELING SESSIONS

This was another area addressed during the interview with the course dropouts. Comments provided by the respondents are summarized under Question F-7, Appendix B. The interviewees reported that:

(1) The counseling sessions were helpful in that they received information about what would happen to them if they were dropped from the course.
(2) About half of the Fort Ord respondents reported that they received no counseling. Rather, they were simply told that they were being dropped from the course.
(3) The majority of respondents said that the counseling sessions were of no help—no solution for their academic problems resulted.

The reader should be cautioned that the above information indicates only that those students who became course dropouts were not helped by the counseling sessions. It is quite possible that many students who eventually graduated from the course were helped by such sessions.

Based on discussions with course instructors, it would appear that a counseling session (a) is held after a student has been in academic difficulty for some days, and (b) is held primarily to determine whether anything can be done to motivate the student. From the instructor's standpoint, counseling sessions seem to be held for the purpose of deciding whether to drop the student. Slow learners who appear to be unmotivated, or who in fact report that they "want out" of the course, usually are dropped. Those slow learners who express an apparent genuine interest in trying to complete the course usually are given a second chance to demonstrate that they can meet the course requirements.

Opinion Area 16. OPINIONS REGARDING REASONS FOR FAILING COURSE

During the dropout interview, each respondent was asked to comment on "the main reasons for your attriting from this course?" Their comments are summarized under Question F-8, Appendix B. Important points mentioned by the interviewees include:

(1) Most respondents were dropped because of poor typing.
(2) The comments of most respondents suggested that there was not much that could have been done to prevent them from becoming dropouts.

As part of this study, information was obtained about the academic progress of 59 students who eventually were dropped from the course. Based on an analysis of their training records, it was concluded that: (a) 33 students were dropped because they were not meeting course typing requirements, (b) 13 students were dropped because they could not learn the PI material, and (c) 13 students were dropped because of a combination of academic problems. This information is displayed in Table 4 (see Opinion Area 3).

The following points should be made with reference to the data contained in Table 4. First, because of the Group Typing practices at Fort Ord, many students at that ATC are dropped for typing reasons *before* they ever see a PI. Secondly, some students did report that they had difficulty with the PIs (discussed in Annex A). However, it would appear that some dropouts first have difficulty in learning how to type. They then become discouraged and stop trying to learn the PI material.

Table 4

Main Academic Reasons for Dropping 59 Students From the MOS 71B10/20 Course

Army Training Center	Type of Academic Difficulty		
	Could Not Learn PI Material	Could Not Meet Typing Requirement	Difficulty With Both PI and Typing
Fort Ord	5	19	4
Fort Jackson	8	14	9
Totals	13	33	13

Opinion Area 17. SUGGESTIONS FOR HOW TO IMPROVE THE COURSE

Questions C-25 and C-26 of the Student Questionnaire (see Appendix A) asked for suggestions on how to make the typing portion of the course more interesting (Question C-25) and how to make the PI portion of the course more interesting (Question C-26). The replies to these two questions are shown in Tables 5 and 6.

With reference to Table 5, many students said that more time should be allowed for nontypists to master the typing requirements of the course. Some students reported they were led to believe that they would have up to seven weeks to meet the typing requirements. Instead, they found that within a two-week period they had to meet what to them seemed an unreasonable requirement for those who could not type at entry into the course.

Table 5

Percentage of Students Who Listed a Particular Course Improvement Category as One Way to Improve the Typing Portion of the MOS 71B10/20 Course

Course Improvement Category	Fort Jackson	Fort Ord
Have Less Typing and Less Testing	11.2	9.7
Allow for More Typing and Testing	19.9	15.9
More Individual Attention to Students	7.5	6.2
Improve Instructor Capabilities	5.8	3.1
Improve Quality of Instructional Material	12.4	14.6
Improve Classroom Equipment/Facilities	10.4	17.6
Improve (Relax) Training Atmosphere	8.7	6.6
Provide for Explanation of Material	5.4	15.9
Nothing: Typing Can't be Made Interesting	2.5	2.6
Nothing: Typing Portion OK As Is	10.8	5.3
Other	5.4	2.6

Table 6

Percentage of Students Who Listed a Particular Course Improvement Category as One Way to Improve the Programmed Instruction Portion of the MOS 71B10/20 Course

Course Improvement Category	Fort Jackson	Fort Ord
Spend Less Time on PIs	0.9	2.1
Spend More Time on PIs	7.8	4.6
More Individual Attention to Students	12.6	8.2
Improve Instructor Capabilities	4.3	1.5
Improve Quality of PIs	29.1	34.9
Use Peer Instruction	4.8	1.0
Improve (Relax) Training Atmosphere	4.3	1.5
Provide Better Explanation of Material	16.1	28.2
Improve Testing Procedures	7.0	1.5
Select Course Students More Carefully	0.9	1.0
Nothing: Can't Make PIs Interesting	1.3	2.1
Nothing: PIs Are Now All Right	8.7	6.7
Other	2.2	6.7

Many students suggested that the quality of the typing instructional materials could be improved. By this, they usually meant that the typing exercise material should be made more interesting.

The suggestions related to "improvements in classroom equipment and/or facilities" referred mostly to the fact that many of the course typewriters were in disrepair. Also, for a large class there were not always enough typewriters.

An interesting finding relates to the difference in percentage of Fort Ord and Fort Jackson respondents who suggested that the typing materials could be better explained. This percentage was three times as high at Fort Ord (15.9 vs. 5.4), where video tapes are used during the first week of Group Typing to present the instructional material.

It is evident from Table 6 that many students felt that the quality of the PIs could be improved. Frequently mentioned suggestions included: (a) shorten or eliminate some PIs, (b) make PI material more readable (provide a glossary of terms and reformat the instructional material), (c) try to make the material more interesting, and (d) make the material more job-relevant.

Many students reported that a better explanation could be provided for the PI material. In particular, they thought that the instructors could do a better job of explaining the material to slow learners. A number of students suggested that some PIs be introduced and perhaps taught entirely by platform instruction. To a considerable extent, these last points are the same as those expressed by those students who listed a suggestion which was assigned to the "More Individual Attention to Students" category (see Table 6).

To conclude this section, a few summary comments seem in order. It would appear that both BAAC course students and instructors are favorably disposed toward the course. As would be expected, instructors had more kind things to say than students. Both students and instructors were most negative when reporting on the incentives used with the course. Neither group felt that their course-related efforts were appropriately recognized.

There were few differences between the way men and women respondents answered the student questionnaire. In general women students were somewhat more favorably disposed toward the course. This is understandable since, at entry, women students are more apt than men to possess some typing skills. In fact, student attitudes toward the BAAC course seem most directly related to their course entry typing ability. If they can type at course entry they are quite apt to get through the course without trauma, and therefore are apt to report that they like the course.

A course can be analyzed in terms of cost-effectiveness factors and/or in terms of humanistic considerations (whether or not students and instructors are satisfied with the course and their role with respect to it). This latter type of analysis is similar to what is termed "job satisfaction" research. Many investigators believe that job satisfaction and cost-effectiveness are highly interrelated. They feel that when analyzing and restructuring a job position, both sets of factors need to be considered. Similarly, they would claim that, when analyzing and modifying a training program, both cost-effective and humanistic factors should be considered. The problem is that there is little evidence to show that having "happy" students and/or instructors results in a more productive (cost-effective?) training program. Assuming that the volunteer army is here to stay, it probably will become more important to study what can be done to keep students and instructors satisfied with their lot, and what, if any, relationship this has to the success of a training program.

IDENTIFICATION OF POTENTIAL COURSE GRADUATES AND DROPOUTS

This section of the report will concentrate on the problem of how to identify those students who probably will or probably will not successfully complete the 71B10 course. The discussion begins with a description of how student opinions about the course might be used to distinguish between potential course graduates and course dropouts, and between fast and slow learners. The discussion then turns to a description of the relation between entry-level academic potential and typing speed, and end-of-course performance. Finally there is a discussion of an equation that has been developed to predict course completion time for those students who eventually do graduate from the course.

DIFFERENCES IN OPINIONS ABOUT THE COURSE

The procedures for developing a "discrimination score" are described in detail in the Technical Note attached to Appendix A. The purpose of this score was to provide a means for identifying student opinions and characteristics that might be used to distinguish between course graduates and dropouts, and between fast and slow learners. For each question reported in Appendix A, the discrimination score provides an index of the degree to which various groups of respondents gave significantly different responses to the question. For a particular Training Center the maximum discrimination score for a question would be 15. A question that attained a discrimination score of 14 or 15 for both Fort Ord and Fort Jackson data would highly discriminate among the various respondent groups of this study.

The reader can scan the right-hand column of Appendix A and identify the questions that have a high discrimination score. As this is done, it should be remembered that the Student Questionnaire was administered some three-plus weeks into the 71B10/20 course. By this time, most of the slow learners and potential dropouts already had been identified; in fact, some persons had graduated and others had already been dropped from the course.

The questionnaire responses reflect opinions and attitudes that developed during the earlier weeks of the course. These responses have little practical predictive value because they were obtained too late in the course. Fast and slow learners and dropouts had already been identified by other means.

It appears that most of the important attitudes about the 71B10 course are formed during the first and second week of the course. They probably are fairly well developed by the end of the first course week. If this is so, it might be useful to develop a questionnaire composed of high discrimination score items and administer this questionnaire at the end of the first course week. This information would be timely, and of practical value to the decision makers who must decide, during the second or third week of the course, who will be dropped. The questions listed below would seem to be the ones that might be administered to students, or at least to potential slow learners and/or dropouts, at the end of the first week of the 71B10/20 course.

Those questions that discriminated well between the respondent groups seem to address areas in which a poor student could rationalize his course performance by downrating the course. The responses to these questions provide good evidence in support of the phenomenon that persons report positively on those situations which seem to be associated with their own success. Conversely, there is a tendency for persons to report negatively and to withdraw from those situations associated with their own failure. This raises a knotty problem for designers of a training program: Should the program be designed to maximize success in the early portions of the program, thereby hoping to

maintain the motivation of most students? Or should the early portions of the program be designed to maximize failure, thereby hoping to identify and weed out those who probably will not successfully complete the course?

DIFFERENCES IN COURSE ENTRY CHARACTERISTICS

Typing skill is not a prerequisite for assignment to the 71B10 course. However, students do have to possess a minimum academic potential as assessed by aptitude tests. Table 7 shows some of the important pre-course and early-course characteristics for the students who were the subjects for this study. Column 1 of Table 7 presents the average characteristics for all course Graduates. Column 5 presents comparable characteristics for course dropouts. The last characteristic shown in Table 7 relates to typing speed at course entry. This characteristic is of special importance.

Table 7

Summary and Comparison of Student Pre-Course and Early Course Performance Characteristics for All Graduates, for Fast, Medium, and Slow Learners, and for Dropouts From the MOS 71B10 Course

		Course Graduates					Significance of Difference (t test)[a]		
Comparison Variable		All Grads (1)	Fast 3rd (2)	Mid. 3rd (3)	Slow 3rd (4)	(5)	Column Comparisons	Row Comparisons (1a-1b) (5a-5b)	Disc. Score
Educ. Level	(a)[b]	12.5	13.4	12.2	12.1	11.9	1-5**,2-4**,2-5**	2.60**	11
	(b)	12.2	13.1	12.2	12.0	11.9	2-4**,2-5**	--	5
CL Score	(a)	113.5	120.8	113.4	108.2	104.8	1-5**,2-4**,2-5**	--	11
	(b)	113.4	121.1	115.4	110.9	110.4	2-4**,2-5**	--	5
GT Score	(a)	110.1	116.8	108.4	107.3	100.9	1-5**,2-4**,2-5**	--	11
	(b)	110.0	117.8	110.5	107.9	108.4	2-4**,2-5**	2.16**	4
AFQT Score	(a)	53.7	66.5	51.3	48.1	48.7	1-5**,2-4**,2-5*	--	10
	(b)	55.6	66.1	58.8	53.2	52.1	2-4**,2-5**	--	5
Entry NWPM[c]	(a)	16.2	24.2	15.7	8.4	5.1	1-5**,2-4**,2-5**	--	11
	(b)	15.8	26.6	15.8	5.6	1.2	1-5**,2-5**,2-4**,4-5*	2.11*	13

[a]** = significant at the .01 level of confidence; * = significant at the .05 level.

[b]Row (a) contains Fort Ord data; row (b) contains Fort Jackson data.

[c]Entry NWPM = the entry typing test rate.

With reference to the Discrimination Scores (right-hand column of Table 7), all four academic potential characteristics—high school level, CL (Clerical Aptitudes) scores, GT (General Technical Aptitude) scores, and AFQT (Armed Forces Qualification Test) scores—discriminated fairly well between the various groups of course students at Fort Ord. However, these same characteristics discriminated very poorly between the various student groups at Fort Jackson. The Contractor is not certain of the reasons for this difference.

Of importance to this study is the finding that there is a high positive relationship between entry typing speed and successful completion of the 71B10 course. There is an

almost perfect relationship between typing speed and the student "learner" category to which a trainee eventually can be assigned—fast, medium, or slow learner or course dropout. This finding is supported by the data displayed in Table 4 which show that most students are dropped from the 71B10 course because of an inability to show suitable progress towards meeting the course typing requirement.

To identify more precisely the relationship between beginning typing ability and probability of completing the course, the data in Table 8 were developed. These data show the following:

(1) For Fort Ord students: (a) 4 of 6 students who could type no more than 5 NWPM on their timed-writing check on the 5th day of the course were eventually dropped from the course; (b) 4 of 27 (15%) of the course dropouts could type no more than 5 NWPM on the 5th day of the course; (c) 14 of 27 (52%) of the course dropouts could type no more than 10 NWPM on the 5th day of the course; (d) of the 214 students who had a typing speed of 11 NWPM or greater, 201 (94%) completed the course.

(2) For Fort Jackson students: (a) 10 of 12 students who could type no more than 5 NWPM on their fifth day were dropped from the course; (b) 10 of 33 (30%) of the course dropouts could type no more than 5 NWPM on the fifth day; (c) 28 of 33 (85%) of the course dropouts could type no more than 10 NWPM on their timed-writing check on the fifth day; (d) of the 181 students who had typing speeds of 11 NWPM or greater, 176 (97%) completed the course.

The results shown in Table 8 are contaminated to some extent by the fact that at Fort Ord the students in Group Typing concentrate almost exclusively on the acquisition of typing skills. At Fort Jackson, students in Group Typing also may study some of the early PIs in the course. Thus, at Fort Ord there is a chance that those dropping from the course would have improved their typing skills somewhat more than the dropouts at Fort Jackson.

Table 8

Number of Course Students, Graduates, and Dropouts Who Typed at Various Rates in the Timed-Writing Check on the 5th Day of Course[a]

Timed-Writing Check on the 5th Day of the Course	Fort Ord			Fort Jackson		
	All Students	Graduates	Dropouts	All Students	Graduates	Dropouts
0-5	6	2	4	12	2	10
6-10	21	11	10	34	16	18
11-15	45	37	8	18	17	1
16-20	56	55	1	30	27	3
21-25	42	39	3	35	45	0
26-30	24	24	0	30	30	0
31+	47	46	1	58	57	1
Total	241	214	27	227	194	33

[a]Data based on analysis of training records for class 74-08, plus additional WAC records from Fort Ord, plus the records of all dropouts interviewed during the study.

The student monitoring and counseling procedures employed at Fort Ord are designed to determine rapidly whether a student can meet the typing requirements of the course. When possible, students are dropped from the course at the end of the first week of training or early in the second week. At Fort Jackson, students seldom are dropped before the beginning of the third week of the course. As an illustration, training records were obtained for 27 dropouts from the BAAC course at Fort Ord. Of these students, 26% were dropped on or before the 7th day of training; 59% had been dropped by the end of the 12th day of training. Training records were obtained for 33 dropouts from the BAAC course at Fort Jackson. None had been dropped during the first two weeks of the course. By the end of the 12th course day, 27% had been dropped. Although quite strict, the practices followed at Fort Ord do seem to get a greater percentage of nontypists to a point where they can meet the typing requirement of the course. Thus, the course at Fort Ord is administratively more efficient in that it identifies early in the course (often at the end of the first course week) those students who should be dropped.

PREDICTION OF STUDENT PERFORMANCE IN THE 71B10 COURSE

Two types of performance data can be obtained and studied in a self-paced, variable-length course. One is the actual level of performance demonstrated by the trainee. In the 71B10 course, this is represented by the end-of-course typing rate score and the number of EOC test parts passed on the student's initial attempt. Or, if certain minimal objectives have to be met (i.e., meeting a minimum acceptable typing rate and passing all portions of an end-of-course test) then the *time* it takes the student to reach this minimum level is evidence of student performance. It is this latter information that is of particular importance to managers of variable-length training programs. It is important for them to be able to predict course completion time so that duty assignments can be made in a timely manner, and training facilities and resources can be efficiently managed.

Total time to complete a course is composed of academic and nonacademic time. Academic time is defined as the amount of time used for instructional purposes (PI texts, typing practice, test-taking, remedial training, etc.). Nonacademic time consists of time away from the classroom because of other duties, leave, passes, appointments, or sickness. Nonacademic time for a given student is extremely difficult to predict. Therefore, an attempt was made to predict *academic* time since it is a more stable measure of rate of learning.

Collection of Performance Data

The end-of-course (EOC) typing rate, the number of EOC test parts passed on the initial attempt, and the academic and total time spent by each student in the 71B10 course were obtained from the AIT trainee records maintained at each ATC. The time data obtained from the trainee records were recorded in half-hour units. Thus, a full week of academic training (32 1/2 hours of classroom time) would be considered 65 half-hour units long.

Analysis of Data

The first activity in this analysis was the computation of correlation matrices. The goal was to identify those factors that were likely to be related to the student performance criteria. The potential predictor variables were grouped into two categories. The first category consisted of those predictors for which scores could be obtained on the first day the student was in the course. These variables consisted of CL, GT, and AFQT scores,

years of education, and entry typing speed. The second category consisted of performance scores obtained early in the course. These were the times spent in learning the first PIs and taking the first criterion tests.[1]

The criterion variables consisted in EOC typing speed, number of EOC test parts passed initially, academic time, and total time in the course. Correlation matrices were computed and analyzed separately for Fort Ord and Fort Jackson. The correlations of the predictor variables with these criteria are shown in Table 9.

Table 9

Correlations of Predictor Variables With Student Performance Criteria

(Sample Sizes in Parentheses)[a]

	Performance Criteria							
	Fort Ord				Fort Jackson			
	Time		EOC Typing Speed	EOC Test Parts Passed	Time		EOC Typing Speed	EOC Test Parts Passed
Predictors	Academic	Total			Academic	Total		
Category 1								
CL	-.515 (176)	-.494 (177)	.283 (174)	.273 (176)	-.314 (147)	-.328 (149)	.194 (153)	.028 (155)
GT	-.284 (176)	-.276 (177)	-.023 (174)	.314 (176)	-.212 (147)	-.228 (149)	.068 (153)	.107 (155)
AFQT	-.381 (167)	-.375 (168)	.089 (165)	.351 (167)	-.300 (144)	-.288 (146)	.124 (150)	.164 (152)
Education	-.440 (190)	-.452 (191)	.285 (189)	.258 (190)	-.374 (143)	-.388 (145)	.199 (151)	.184 (151)
Entry Typing Speed	-.669 (210)	-.618 (210)	.706 (207)	.227 (209)	-.695 (208)	-.660 (210)	.777 (214)	.297 (216)
Category 2								
PI 32 Time	.426 (146)	.421 (146)	-.265 (143)	-.069 (145)	.572 (116)	.524 (116)	-.326 (121)	-.255 (121)
Σ PI 17 - CT 23 Time	.688 (195)	.682 (195)	-.269 (192)	-.108 (194)	.430 (192)	.397 (192)	-.199 (197)	-.200 (195)

[a]The data base upon which these correlations are based did not include: (a) those students who were dropped from the course; and (b) some students who graduated very early from the course.

[1]The recommended sequence of the initial PIs and CTs was as follows: PI-32, PI-17, CT-17, PI-6, CT-6, PI-23, CT-23. This sequence of instruction was followed at Fort Ord. However, there were not enough training materials available at Fort Jackson for this sequence to be followed. Thus, their times were not representative of the instructional time that would be taken in a typically sequenced course. For this reason, instead of evaluating each PI and CT separately, a grouped time score for PI-17 through CT-23 was recorded. PI-32 was considered separately, as only about half of the students ever received this PI.

These results show a highly significant relationship between entry typing speed and end-of-course performance (for both EOC typing speed and training time). This is true at both ATCs. However, early time in the course (PI-17 through CT-23 time) was also highly related to academic and total time for Fort Ord, but to a lesser degree at Fort Jackson. These findings may be due to differences in the sequential presentation of instruction at each ATC.

The CL score was highly related to time-to-complete the course at Fort Ord, but not as highly related at Fort Jackson. This result might have occurred because more early graduates (42) at Fort Jackson were missing CL scores than at Fort Ord (15). To examine this hypothesis, the 23 early graduates with CL scores (completing the course in ≤ 10 days) were removed from the Fort Ord data. Correlations were then obtained on the remaining data. The correlation between CL and academic time declined to -.454 from .515. This decline still left the correlation above that of Fort Jackson (-.314). However, other correlations at Fort Ord did decline to the Fort Jackson levels. For example, academic time with GT now correlated -.210 (N = 154) compared to -.212 at Fort Jackson; academic time with AFQT now correlated -.294 (N = 147) compared to -.300 at Fort Jackson. Thus, it may be inferred that if we had the CL scores for the early graduates at Fort Jackson, the CL/academic time correlation would have been higher, but probably not as high as was obtained at Fort Ord.

Correlation matrices were developed which show the intercorrelations of all the predictors as well as the criteria. These matrices are presented in Tables 10, 11, and 12, for Fort Ord, Fort Jackson, and both ATCs combined. In addition, the distribution of CL scores at each ATC is presented in Table 13. Inspecting these tables, we find that the number of dropouts at Fort Ord was related to their CL scores (16 of the 20 dropouts had CL scores below 110), whereas at Fort Jackson the distribution of dropouts across CL scores was fairly even. This coincides with the finding of the lower CL/academic time correlation at Fort Jackson described previously. The entry typing speed/academic time correlations were almost the same at both ATCs. In addition, they were the highest correlations that were obtained. It follows then, that in this study the entry typing speed is the "true" source of variance for academic time. That the CL correlates more highly with the entry typing speed at Fort Ord than at Fort Jackson can account for the differences in predictability of CL at the two ATCs.

The validities of the ACB scores as predictors are underestimated in this study. The correlations of CL, GT, AFQT, and education with the criterion variables in Table 9 are lower than they would be in representative samples from the mobilization population. The values are lower because the students were selected for these courses on the basis of their CL scores, and the bottom half of the population was excluded because they could not meet the aptitude area prerequisites. If the correlations were statistically corrected to represent the entire range of scores, the predictive value of CL and other variables related to CL (i.e., GT, AFQT, education) would be increased.

The results, then, reflect the degree of relationship for the sample of students actually attending the course, but underestimate the values that would be obtained for full-range samples. In addition, the validities of the ACB scores were further underestimated by some preselection of the sample on the criterion variables. Dropouts were deleted from the correlational analyses, as were early finishers of the course. There were more such eliminations at Fort Jackson than at Fort Ord, thus accounting for the differences between ATCs.

The next phase in the data analysis was the development of equations to predict academic time in the 71B10 course. Stepwise multiple linear regression analyses were performed on the data to derive the predictive equations. This technique selects variables for a linear regression equation one at a time. It begins by entering the predictor variable

Table 10

Correlation Matrix of Predictive and Criterion Variables: Fort Ord

(Sample Sizes in Parentheses)

Variable No.		Means and Standard Deviations		
		Mean	Standard Deviation	N
1	CL	112.60	10.34	200
2	GT	109.17	14.41	200
3	AFQT	53.55	20.20	178
4	Education (years)	12.39	1.29	224
5	Entry Typing Speed	14.88	11.02	238
6	PI-32 Time (half-hours)	7.71	10.15	156
7	PI-17–CT-23 Time (half-hours)	55.31	22.49	200
8	Academic Time	188.84	64.31	214
9	Total Time	208.00	72.67	215
10	EOC Test Parts Passed Initially	6.73	1.79	214
11	EOC Typing Speed	28.33	8.23	212

Variable No.	1	2	3	4	5	6	7	8	9	10	11
1	1.000 (200)										
2	0.616 (200)										
3	0.563 (178)	0.691 (178)									
4	0.203 (180)	0.119 (180)	0.227 (158)								
5	0.436 (193)	0.213 (193)	0.224 (171)	0.411 (214)							
6	-0.243 (126)	-0.096 (126)	-0.101 (118)	-0.130 (147)	-0.396 (153)						
7	-0.382 (165	-0.255 (165)	-0.252 (157)	-0.292 (178)	-0.284 (197)	0.219 (139)					
8	-0.515 (176)	-0.284 (176)	-0.381 (167)	-0.440 (190)	-0.669 (210)	0.426 (146)	0.688 (195)				
9	-0.494 (177)	-0.276 (177)	-0.375 (168)	-0.452 (191)	-0.618 (210)	0.421 (146)	0.682 (195)	0.957 (214)			
10	0.273 (176)	0.314 (176)	0.351 (167)	0.258 (190)	0.227 (209)	-0.069 (145)	-0.108 (194)	-0.430 (213)	-0.448 (214)		
11	0.283 (174)	-0.023 (174)	0.089 (165)	0.285 (189)	0.706 (207)	-0.265 (143)	-0.269 (192)	-0.429 (211)	-0.394 (212)	0.059 (211)	1.000 (212)

Table 11

Correlation Matrix of Predictive and Criterion Variables: Fort Jackson

(Sample Sizes in Parentheses)

Variable No.		Means and Standard Deviations		
		Mean	Standard Deviation	N
1	CL	112.96	9.72	186
2	GT	109.74	13.20	186
3	AFQT	55.10	17.77	181
4	Education (years)	12.11	1.11	187
5	Entry Typing Speed	13.02	12.75	244
6	PI-32 Time (half-hours)	6.22	4.39	149
7	PI-17–CT-23 Time (half-hours)	44.26	17.11	204
8	Academic Time	185.52	90.49	208
9	Total Time	207.12	100.85	210
10	EOC Test Parts Passed Initially	6.54	1.76	216
11	EOC Typing Speed	27.35	9.46	214

Variable No.	1	2	3	4	5	6	7	8	9	10	11
1	1.000 (186)										
2	0.636 (186)										
3	0.336 (181)	0.546 (181)									
4	0.269 (165)	0.203 (165)	0.136 (160)								
5	0.207 (178)	0.087 (178)	0.157 (173)	0.311 (178)							
6	-0.024 (115)	0.067 (115)	-0.086 (112)	-0.118 (114)	-0.528 (147)						
7	-0.105 (142)	-0.177 (142)	-0.227 (139)	-0.174 (141)	-0.171 (204)	0.236 (120)					
8	-0.314 (147)	-0.212 (147)	-0.300 (144)	-0.374 (143)	-0.695 (208)	0.572 (116)	0.430 (192)				
9	-0.328 (149)	-0.228 (149)	-0.288 (146)	-0.388 (145)	-0.660 (210)	0.524 (116)	0.397 (192)	0.975 (208)			
10	0.028 (155)	0.107 (155)	0.164 (152)	0.184 (151)	0.297 (216)	-0.255 (121)	-0.199 (197)	-0.510 (208)	-0.514 (210)		
11	0.194 (153)	0.068 (153)	0.124 (150)	0.199 (151)	0.777 (214)	-0.326 (121)	-0.200 (195)	-0.563 (206)	-0.540 (208)	0.346 (213)	1.000 (214)

Table 12

Correlation Matrix of Predictive and Criterion Variables: Fort Ord and Fort Jackson Combined

(Sample Sizes in Parentheses)

Variable No.		Means and Standard Deviations		
		Mean	Standard Deviation	N
1	CL	112.77	10.03	386
2	GT	109.45	13.82	386
3	AFQT	54.33	19.00	359
4	Education (years)	12.26	1.22	411
5	Entry Typing Speed	13.94	11.95	482
6	PI-32 Time (half-hours)	6.98	7.90	305
7	PI-17–CT-23 Time (half-hours)	49.73	20.68	404
8	Academic Time	187.20	78.24	422
9	Total Time	207.57	87.63	425
10	EOC Test Parts Passed Initially	6.63	1.77	430
11	EOC Typing Speed	27.84	8.87	426

Variable No.	1	2	3	4	5	6	7	8	9	10	11
1	1.000 (386)										
2	0.625 (386)										
3	0.457 (359)	0.626 (359)									
4	0.231 (345)	0.156 (345)	0.176 (318)								
5	0.318 (371)	0.146 (371)	0.179 (344)	0.380 (392)							
6	-0.174 (241)	-0.047 (241)	-0.094 (230)	-0.112 (261)	-0.348 (300)						
7	-0.267 (307)	-0.218 (307)	-0.245 (296)	-0.220 (319)	-0.199 (401)	0.243 (259)					
8	-0.400 (323)	-0.241 (323)	-0.324 (311)	-0.402 (333)	-0.681 (418)	0.418 (262)	0.523 (387)				
9	-0.395 (326)	-0.244 (326)	-0.312 (314)	-0.414 (336)	-0.642 (420)	0.396 (262)	0.501 (387)	0.969 (422)			
10	0.155 (331)	0.216 (331)	0.254 (319)	0.235 (341)	0.268 (425)	-0.118 (266)	-0.128 (391)	-0.465 (421)	-0.475 (424)		
11	0.241 (327)	0.015 (327)	0.092 (315)	0.266 (340)	0.749 (421)	-0.255 (264)	-0.211 (387)	-0.507 (417)	-0.480 (420)	0.212 (424)	1.000 (426)

Table 13

Distribution of CL Scores Among All Students, Graduates, and Dropouts[a]

CL Scores		All Students	Graduates	Dropouts
Less than 100	(a)	2	1	1
	(b)	5	4	1
100-104	(a)	45	35	10
	(b)	24	18	6
105-109	(a)	45	40	5
	(b)	40	34	6
110-114	(a)	36	34	2
	(b)	44	37	7
115-119	(a)	27	26	1
	(b)	29	24	5
120-124	(a)	14	14	0
	(b)	24	21	3
125-129	(a)	17	16	1
	(b)	12	10	2
Over 130	(a)	14	14	0
	(b)	8	8	0
TOTAL	(a)	200	180	20
	(b)	186	156	30

[a]Row (a) contains Fort Ord data; row (b) contains Fort Jackson data.

Range =	(a) 71-142	X =	(a) 112.6	SD =	(a) 10.3
	(b) 71-148		(b) 113.0		(b) 9.7

most highly correlated with the criterion. A simple correlation coefficient is then calculated between this variable and the criterion. (With more than one predictor, a multiple R is calculated.)

The regression analysis then selects that variable which, when combined with the first, is most useful—that is, the one that adds the most to the multiple correlation coefficient and yields the best two-predictor equation from among the possible equations containing the first variable selected. The technique then selects the variable which, when combined with the first two variables, produces the best three-predictor equation. Subsequent variables are selected in a similar manner. Variables can also be removed if they are found to be no longer useful. Any variable that provides a nonsignificant contribution is removed from the equation.

This process is continued until no more variables will be admitted into the equation and no more will be rejected. The process then terminates and presents the last "best" regression equation. According to the decision rules used with the analysis technique, the last variable added to the equation must produce a statistically significant increase in the multiple correlation according to a pre-selected confidence level.

Two problems were examined in this analysis. The first involved determining how accurately academic time to complete the 71B10 course could be predicted, given the

information available about each student on the first day of training (Category 1 predictor-variables). The second problem was to determine how well one could predict time to complete the 71B10 course after a sample of the individual's early course performance and learning rate were obtained (includes Category 2 variables).

The "best" predictive equations of academic time at Fort Ord and Fort Jackson are presented in Table 14. These results show that *early* course time (PI-17 through CT-23)

Table 14

"Best" Predictive Equations Selected by Regression Analyses

Predictions To Be Made On First Day In Course

Equation No. 1 — Fort Ord

$$Y = -3.2818A - 1.84673 + 453.7163$$

Key: Y - Academic Training Time (half-hours)
A - Entry Typing Speed (NWPM)
B - CL Score

Standard Error = 43.5 (half-hours)

MR = .72
N = 173

No. 2 — Fort Jackson

$$Y = -4.9781A + 260.3391$$

Key: Y - Academic Training Time (half-hours)
A - Entry Typing Speed (NWPM)

Standard Error = 65.2 (half-hours)

MR = .70
N = 208

Predictions To Be Made During Training

No. 3 — Fort Ord

$$Y = -3.0281A + 1.6360C + 147.4510$$

Key: Y - Academic Training Time (half-hours)
A - Entry Typing Speed (NWPM)
C - PI-17 through CT-23 Time (half-hours)

Standard Error = 35.2 (half-hours)

MR = .83
N = 192

No. 4 — Fort Jackson

$$Y = -4.6133A + 1.8696C + 171.7124$$

Key: Y - Academic Training Time (half-hours)
A - Entry Typing Speed (NWPM)
C - PI-17 through CT-23 Time (half-hours)

Standard Error = 55.4 (half-hours)

MR = .78
N = 192

increased significantly the ability to predict academic time in the course. The relationship was slightly higher at Fort Ord, possibly because the sequence of course presentation was more stable there than at Fort Jackson. The authors believe that if the recommended instructional sequence had been followed at Fort Jackson, the same degree of correlation would have been found there.

It should be noted that Equation No. 2 contains only one predictor, Entry Typing Speed (ETS). The multiple regression analyses consistently produced combinations of predictor variables which did not have as high a correlation with academic time as did ETS alone. This resulted from the selective reduction of the sample size as other predictors were added. As stated earlier, there were many "fast learners" at Fort Jackson for whom we did not have ACB or AFQT scores. As the regression analysis requires that each person in the sample have all of the predictor scores used in the equation derivation, these fast learners were left out. Their deletion contributed to the lowered multiple correlation coefficients obtained with more than one predictor. Thus, the single predictor equation was the "best" we were able to obtain from the Fort Jackson data.

That entry typing speed and time in the initial sections of the course together provide a better prediction than either alone is not surprising. The 71B10 course is composed of two components—the acquisition or improvement of a typing skill, and the acquisition of facts by means of PI texts. The use of a relevant predictor for each component would account for more of the variance in the criterion (academic time to complete the course) than either predictor alone. Statistically, this is explained by a low correlation between predictor variables, and high correlations between each predictor and the criterion.

The accuracy of these equations was determined by applying them to the data from which they were derived. The resulting Standard Errors (SE) are shown in Table 14. Also each one of the equations was applied to the data of the other ATC to determine the generalizability of the equations. The Standard Errors obtained in this "cross-validation" analysis are presented next to the within-ATC SEs for comparison in Table 15. In addition, the estimated (from the equations) and actual training time data were converted to "training days"[1]. The results are shown in Table 15. The greater accuracy of all the equations upon Fort Ord data is clearly seen in this table. Whereas 93.8% of the estimated times were within ±4 days of the actual times at Fort Ord for Equation No. 3, 79.1% were within the same time frame at Fort Jackson. Similarly, only 74% of the estimates from Equation No. 4 were within ±4 days of the actual times at Fort Jackson, but 87% were within ±4 days at Fort Ord. The same results occurred for Equations No. 1 and No. 2.

Thus, the Fort Jackson equations predict the Fort Ord criterion more accurately than they do the Fort Jackson criterion variable (the values which were used to derive the equation). On the other hand, the Fort Ord equations are considerably more accurate when applied to its own data than when applied to Fort Jackson data. The only explanation that we can offer for these findings is that the Fort Jackson criterion data are more unstable, of higher variance, and thus more difficult to predict using any linear function, than the Fort Ord data. For this reason, it appears advisable to maintain the separateness of the ATC data. The equations do not appear generalizable across ATCs. This may be due to the considerable differences in course administration described previously, or differences in sampling variations, or both.

In addition to developing the predictive equations for academic completion time, several relationships between individual characteristics and student success were studied. CL score, entry typing speed, and typing speed on the fifth day were separately correlated with the dichotomous performance variable, graduate/dropout using the biserial

[1] 13 half-hours = 1 training day.

Table 15

Cross-Validation of Predictive Equations

Estimate of Actual Training Time ("Training Days")	Percentage of Estimates Within Actual Training Time Periods							
	Equation 1		Equation 2		Equation 3		Equation 4	
	Fort Ord	Fort Jackson	Fort Ord	Fort Jackson	Fort Ord	Fort Jackson	Fort Ord	Fort Jackson
0	10.0	6.6	15.6	5.4	15.1	9.4	14.1	9.4
±1	25.2	12.8	21.4	17.0	28.6	20.8	24.5	17.2
±2	20.0	18.5	19.2	19.7	25.5	22.9	17.7	20.8
±3	13.8	15.2	19.2	17.7	15.1	14.1	15.6	13.5
±4	13.3	13.3	11.0	10.2	9.4	12.0	15.1	13.0
$\pm \geq 5$	17.6	32.2	16.2	30.0	6.2	20.9	13.0	26.0
Standard Errors of Estimate (half-hour units)	43.5	67.8	48.4	65.2	35.2	59.5	41.5	55.4

technique. The results are shown in Table 16 for Fort Ord, Fort Jackson, and the combined group. It is readily observed that the best relationships exist between typing speed on the fifth day of the course and course success. Also, entry typing speed is correlated fairly well with success. Notice, however, the different relationship between Fort Ord and Fort Jackson on the CL score and success. This is probably due to the instability of the CL relationship as discussed earlier in this report.

The typing training at Fort Jackson during the first week of the course serves a useful function by permitting a better prediction by the fifth day of training of who will graduate/drop from the course. This instruction at Fort Jackson seems to be more effective than that at Fort Ord during the comparable period, at least for predicting success in the training program.

Table 16

Biserial Correlation of Two Entry Variables and One Early Course Variable With Graduates and Dropouts of the MOS 71B10 Course

Variable	N	Value of Biserial Coefficient of Correlates (r_b)
Clerical Score		
Fort Ord	200	.43
Fort Jackson	186	.17
Combined	386	.28
Recorded Entry Typing Speed		
Fort Ord	238	.54
Fort Jackson	227	.62
Combined	465	.58
Typing Speed 5th Course Day		
Fort Ord	238	.61
Fort Jackson	226	.85
Combined	464	.75

STUDENT BACKGROUND AND COURSE PERFORMANCE CHARACTERISTICS

This section contains brief discussions of some additional data comparisons made during this study.

STUDENT BACKGROUND CHARACTERISTICS

Table 17 contains a display of the background information obtained for those students who completed the Student Questionnaire. Points of interest with respect to the data are as follows:

(1) The background characteristics for both Fort Ord and Fort Jackson students were similar, the exception being that more of the Fort Jackson students had some prior experience with self-paced, programmed text-supported instruction.

(2) A higher percentage of graduates than dropouts had pre-Army typing experience.

(3) Approximately 75% of the students at both ATCs had an enlisted commitment for the 71B10/20 course.

STUDENT EOC TEST PERFORMANCE

As shown in Table 18, many 71B10 students fail one or more of the eight EOC test parts when they first take that test. As a result of these failures, they are returned to the classroom for remedial training on those PIs associated with the failed EOC test part. Obviously, at the time of the initial EOC test many students are not fully prepared for it. On the other hand, the average male student does pass 6.6 of 8 EOC test parts during the initial test session. This suggests that most students are fairly well prepared for the EOC test.

Each part of the EOC test is related to a specific programmed text studied during the course (with the exception of PI-32, which is not covered in the EOC test). Of those EOC test parts that were failed, the percentage of failures for each part is shown in Table 19. The failure rate is highest for PI-11 (both ATCs combined). For some reason the failure rate for PI-9 was high at Fort Jackson, but low at Fort Ord. Conversely, the failure rate for PI-21 was high at Fort Ord, but low at Fort Jackson. This type of information should be continually collected at both ATCs so that:

(1) The course proponent, the Adjutant General School, would know which PIs were in most need of attention—in need of being rewritten.

(2) Each ATC would know which PIs should receive special instructional emphasis, e.g., conduct a more intensive review session for those PIs before allowing students to take the EOC test.

COURSE PERFORMANCE OF MEN AND WOMEN

Percentagewise, only slightly more women than men who started the 71B10 course eventually graduated (see Table 17). Also, at entry into the course more women then

Table 17

Background Characteristics of Students Who Completed the Student Questionnaire

(Percentage of Respondents Answering "Yes" or "No" to Background Questions)

Question		Graduates		Dropouts		Men		Women		Totals	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Have you had prior typing experience?	(a)[a]	56.6	43.4	14.3	85.7	47.0	53.0	82.1	17.9	51.3	48.7
	(b)	58.8	41.2	2.8	97.2	45.6	54.4	61.3	38.7	48.1	51.9
Have you held a civilian typing job?	(a)	15.7	84.3	7.1	82.9	12.6	87.4	28.6	71.4	14.6	85.4
	(b)	15.7	84.3	8.3	81.7	10.8	89.2	32.3	67.7	14.3	85.7
Have you held a civilian clerical job?	(a)	33.7	66.3	22.2	77.8	31.3	68.7	39.3	60.7	32.3	67.7
	(b)	33.6	66.4	25.0	75.0	27.4	72.6	54.8	45.2	31.9	68.1
Do you play a (finger-played) musical instrument?	(a)	37.4	72.6	32.1	67.9	35.9	64.1	42.9	57.1	36.7	63.3
	(b)	34.6	65.4	33.3	66.7	34.8	65.2	32.3	67.7	34.4	65.6
Do you have an enlisted committment for this course?	(a)	77.9	22.1	55.6	44.4	75.0	25.0	76.9	23.1	75.2	24.8
	(b)	74.3	25.7	69.4	30.6	75.2	24.8	64.5	35.5	73.4	26.6
Have you had prior experience with PIs and/or self-pacing?	(a)	23.8	76.2	10.7	89.3	20.5	79.5	34.6	65.4	22.2	77.8
	(b)	33.3	66.7	19.4	80.6	31.0	69.0	29.0	71.0	30.7	69.3

[a]Row (a) refers to Fort Ord data; row (b) refers to Fort Jackson data.

Table 18

Percentage of Students Who Passed All Eight or Fewer Parts of the End-of-Course (EOC) Test During Their Initial Attempt to Pass That Test

EOC Test Part	Fort Jackson (N=216)	Fort Ord (N=214)	Both ATCs (N=430)
Percentage of Students Who Passed:			
All Eight	41.2 (N=89)	47.2 (N=101)	44.2 (N=190)
7 out of 8	22.7 (N=49)	24.3 (N=52)	23.5 (N=101)
6 out of 8	12.5 (N=27)	11.2 (N=24)	11.9 (N=51)
5 out of 8	8.3 (N=18)	4.2 (N=9)	6.3 (N=27)
4 out of 8	7.4 (N=16)	5.1 (N=11)	6.3 (N=27)
3 out of 8	4.2 (N=9)	3.7 (N=8)	4.0 (N=17)
2 out of 8	2.3 (N=5)	2.3 (N=5)	2.3 (N=10)
1 out of 8	1.4 (N=3)	0.5 (N=1)	0.9 (N=4)
None	0.0 (N=0)	1.4 (N=3)	0.7 (N=3)

Table 19

Failure Rate of Each EOC Test Part as a Percentage of All Test Parts Failed

EOC Test Part	Fort Ord	Fort Jackson
PI-17	11.7	16.1
PI-6	5.7	5.4
PI-23	14.2	10.1
PI-13	14.9	10.4
PI-21	22.3	9.1
PI-11	18.4	18.3
PI-4	5.3	4.4
PI-9	7.4	26.2

men can type, and have had previous job-related typing experience. This seems to account for most of the findings contained in Table 20. This table shows that:

(1) Women complete the course faster than men.

(2) At the time of course completion, the average woman can type faster than the average man.

Table 20

Comparison of End-of-Course Performance and Course Completion Times for Men and Women Graduates of the MOS 71B10 Course

Performance Measure	Fort Ord			Fort Jackson		
	Men	Women	*t* test Comparison[a]	Men	Women	*t* test Comparison[a]
Academic Time to Complete Course[b]	200.1 (N=171)	144.0 (N=43)	7.60**	208.3 (N=150)	126.6 (N=58)	7.74**
Total Time to Complete Course[b]	218.3 (N=172)	166.8 (N=43)	5.40**	230.6 (N=151)	207.7 (N=59)	6.96**
EOC Typing Speed (NWPM)	27.1 (N=169)	33.1 (N=43)	3.72**	25.8 (N=151)	32.6 (N=58)	4.15**
EOC Test Performance, 1st Testing Session[c]	6.6 (N=171)	7.3 (N=43)	3.32**	6.5 (N=152)	7.1 (N=59)	2.74*
% of Class 74-08 Students Who Graduated	97.2 (N=175)	100.0 (N=27)		92.1 (N=151)	93.0 (N=66)	

[a]** = significant at the .01 level; * = significant at the .05 level of confidence.

[b]Course completion times are reported in half-hour units.

[c]Total number of EOC test parts = eight. Number reported represents the average number of test parts passed during the student's first EOC test.

While preparing Table 20, it was found that women, on their first attempt, passed more parts of the EOC test than did men. Although statistically significant, this difference does not seem to be of much practical importance; the average man does quite well (passes 6.6 test parts) during his first EOC testing session.

BAAC COURSE PREREQUISITES

In concluding this report some comments should be made about the prerequisites of the BAAC course. The findings of this study strongly imply that success in the BAAC course depends on two different types of skills—cognitive skills and perceptual-motor skills. Cognitive skills are related to the successful mastery of programmed instructional material. Perceptual-motor skills are related to the mastery of typing skills. Cognitive skills are assessed by the ACB and are reflected in CL and GT Aptitude Area scores. An AFQT score provides another measure of cognitive skills. These and other cognitive skill assessments are made prior to assignment to the BAAC course, and a CL score of 90 (recently lowered from 100) is a prerequisite of the course.

Perceptual-motor skills are not assessed prior to assignment to the BAAC course. Rather, these skills are assessed by a typing test administered after the student has been assigned to the BAAC course.

The study findings clearly showed that success in the BAAC course is related both to cognitive and perceptual-motor skills. However, the findings showed also that success in the BAAC course is most directly related to one's ability to learn how to type. Given a minimum academic potential (as evidenced by a minimum CL score of 100 for the students in this study) a student succeeds or fails the BAAC course depending on his ability to learn how to type. Combining the results from both Forts Ord and Jackson, 75% of those students who could not type at a rate of more than 5 NWPM at the end of the first week of the course eventually had to be dropped from the course (Table 8). In light of this finding it would appear that:

(1) All students should be allowed to participate in the first week of Group Typing of the 71B10/20 course even though some students may have no typing skills at the time of entry into the course.

(2) A student who cannot type at a rate higher than 5 NWPM by the end of the fifth day of Group Typing should be dropped from the course.

(3) The correlation between typing speed at the end of the fifth course day and whether or not a student was dropped from the course suggests that the typing instruction procedures at Fort Jackson are more effective than those employed at Fort Ord. This possibility merits further investigation.

Appendix A

SUMMARY AND COMPARISON OF QUESTIONNAIRE RESPONSES FROM INSTRUCTORS, STUDENTS, AND DROPOUTS OF THE MOS 71B10/20 COURSE

Summary and Comparison of Questionnaire Responses From Instructors, Students, and Dropouts of the 71B10/20 Course

The Question
Section B. Group Typing
1.[a] Do you think that the use of audio tapes is a good way to teach typing?
2.[a] Do you think that the group typing practice sessions are too long, too short, or about right in length?
3.[b] How well do you think you were informed about correct typing procedures by your group typing instructor(s)?
4.[a,b] How well do you think the audio tapes inform you about correct typing procedures?
5.[a,b] Were you able to easily understand the typing instructions presented to you by the audio tapes?
6.[a] Do you think that the group typing portion of this course was very dull and boring, very interesting, or what?
7.[a] Do you think that the amount of practice allowed during class hours for group typing is too much, too little, or about right?
8.[c] As you see it, what are some of the major problems with the current procedures for conducting Group Typing?
9.[c] Do you have any suggestions for how to improve Group Typing procedures?
Section C. Self-Paced Typing and Programmed Tests
1. Do you think that the typing practice sessions are too long, too short, or about right in length?
2. How well do you think you were informed about correct typing procedures by your instructor(s)?
3. How do you feel about the typing instruction given in this course? Do you like it, dislike it, or what?
4. Have you been able to easily understand the instruction given you about how to type correctly?

(Continued)

	Course Graduates[a,b]				Graduates[c]				Significance of Difference[d] (*t*-test)		
	All (1)	Fast 3rd (2)	Mid 3rd (3)	Slow 3rd (4)	Drop-outs (5)	Men (6)	Women (7)	Instruc-tors (8)	Columns	Rows	Disc. Scores[e]
(a)	6.1	5.6	6.1	6.1	4.2	--	--	6.3	4-5[d]	1a-1b	4
(b)	5.2	5.0	6.3	5.7	5.9	--	--	4.6	--	5a-5b	0
(a)	4.3	4.1	4.6	4.2	3.7	--	--	4.2	1-5	--	4
(b)	4.2	1.0	4.3	4.2	4.0	--	--	4.3	--	--	1
(a)	5.3	5.4	5.5	5.1	4.6	5.2	6-7	--	6-7	1a-1b	1
(b)	6.8	5.0	6.0	7.0	6.5	--	--	--	--	5a-5b	1
(a)	6.2	5.4	6.5	6.1	5.5	--	--	5.8	1-5	--	4
(b)	5.9	5.0	6.6	6.5	5.6	--	--	5.0	--	--	1
(a)	6.7	6.6	7.2	6.4	6.1	--	--	6.7	--	1a-1b	1
(b)	5.5	5.0	6.0	6.1	5.7	--	--	5.2	--	--	1
(a)	5.0	3.4	5.3	4.9	4.4	--	--	4.7	--	--	1
(b)	5.7	1.0	5.3	6.1	5.2	--	--	5.0	--	--	1
(a)	4.3	4.9	3.9	4.4	3.8	--	--	3.8	2-4,2-5,4-5	--	4
(b)	4.2	1.0	4.2	4.4	3.9	4.1	4.8	4.0	6-7	--	2
(a)											
(b)					Open-ended question						
(a)											
(b)					Open-ended question						
(a)	4.4	4.3	4.5	4.4	3.7	4.4	4.7	--	1-5,2-5,4-5, 6-7,	--	10
(b)	4.4	4.1	4.6	4.3	3.7	4.4	--	--	1-5,4-5	--	9
(a)	4.8	4.2	4.8	5.4	4.5	--	--	--	2-4,4-5	1a-1b	4
(b)	5.7	4.4	5.5	6.0	6.5	--	--	--	1-5,2-4, 2-5	5a-5b	8
(a)	5.2	4.8	5.4	5.1	4.6	--	--	--	--	--	1
(b)	5.5	4.9	5.4	5.9	5.4	--	--	--	2-4	--	2
(a)	6.1	6.0	6.1	6.1	5.1	--	--	--	1-5,4-5	--	5
(b)	6.3	5.8	6.1	6.6	6.1	--	--	--	--	5a-5b	1

(Continued)

[a]Fort Ord data are shown in line (a); Fort Jackson data are shown in line (b).

[b]The higher the value, the more favorable the response on a 9-point rating scale.

[c]Values not shown unless men-women difference was statistically significant.

[d]Underlined comparisons were significant at the .01 level; all others at the .05 level.

[e]Discrimination score is the degree to which question discriminates between subsets of respondents. For a description of how discrimination scores were developed, see the Technical Note which follows this table.

Section C. *(Continued)*

5. Do you think that the typing portion of this course was too easy, too difficult, or about right?

6. Do you think that the typing portion of this course is very dull and boring, very interesting, or what?

7. Do you think that the amount of practice allowed during class hours for typing is too much, too little, or about right?

8. Have you been able to easily understand the programmed instruction lessons used in this course?

9. How do you feel about the programmed instruction lessons? Do you like them, dislike them, or what?

10. Do you think that the programmed instruction lessons used with this course are very easy to learn, difficult to learn, or about right?

11. At the end of each programmed instruction lesson there is a criterion test. In your opinion are the test items related to the instructional material, usually not related, or what?

12. In your opinion are the criterion test items too easy, too difficult, or about right?

13. When you fail the criterion test for a PI do the instructors give you detailed information on why you failed and what to study to pass the test?

14. Do you think that discovering your strengths and weaknesses in this course by taking criterion tests is a good way to learn the course material and improve your performance?

15. In your opinion how do the instructors feel about using self-paced instruction? Do they seem to like the idea of letting a student learn at his own rate?

16. In your opinion have the instructors of this course been willing to help you?

17. During the practice typing sessions in the classroom how closely do the instructors check the speed and/or accuracy of your typing?

18. In your opinion were the instructors willing to tell you the objectives of the 71B10 course? That is, were they willing to tell you just what you had to learn in order to graduate from the course?

19. Did the instructors seem to be clearly willing to tell you what would happen to you if you did not meet the objectives of the 71B10 course?

(Continued)

	Course Graduates[a,b]				Graduates[c]				Significance of Difference[d] (*t*-test)		
	All (1)	Fast 3rd (2)	Mid 3rd (3)	Slow 3rd (4)	Drop-outs (5)	Men (6)	Women (7)	Instruc-tors (8)	Columns	Rows	Disc. Scores[e]
(a)	4.4	4.5	4.5	4.3	3.7	--	--	3.8	1-5,2-5,4-5	--	11
(b)	4.5	4.4	4.4	4.6	4.2	--	--	4.7	--	--	0
(a)	4.8	4.3	4.8	5.2	4.2	--	--	4.3	4-5,2-4	1a-1b	4
(b)	5.5	4.6	5.4	5.9	5.4	--	--	4.1	2-4	5a-5b	2
(a)	4.3	4.3	4.2	4.4	3.6	--	--	4.0	1-5,2-5	--	4
(b)	4.1	3.8	4.2	4.1	3.9	--	--	4.5	--	--	1
(a)	5.6	6.6	5.4	5.1	4.5	--	--	5.9	1-5,2-5,2-4	--	11
(b)	5.6	5.8	5.6	5.5	4.8	--	--	6.1	1-5,2-5,4-5	--	8
(a)	5.2	5.6	5.0	4.9	4.4	--	--	7.1	1-5,2-5	--	7
(b)	5.5	5.5	5.3	5.5	4.4	--	--	6.9	1-5,2-5,4-5	--	11
(a)	4.1	4.1	4.2	4.1	3.7	--	--	4.3	--	1a-1b	1
(b)	4.4	4.3	4.3	4.4	3.8	--	--	4.5	1-5,4-5	--	10
(a)	7.4	8.0	7.4	7.1	5.1	--	--	7.1	1-5,2-5,4-5 2-4	--	15
(b)	7.1	7.9	7.5	6.9	6.0	--	--	8.2	1-5,2-5,4-5 2-4	--	12
(a)	4.4	4.4	4.6	4.3	4.0	--	--	4.0	--	--	1
(b)	4.3	4.5	4.2	4.5	3.9	--	--	4.5	1-5,2-5,4-5	--	8
(a)	7.1	7.4	7. 7.0	7.0	4.3	--	--	--	1-5,2-5,4-5	1a-1b	12
(b)	6.5	6.6	6.4	6.5	5.3	--	--	--	4-5	--	2
(a)	6.8	7.3	6.7	6.5	4.8	--	--	--	1-5,2-5,4-5 2-4	--	14
(b)	7.1	7.6	6.8	7.1	5.9	--	--	--	1-5,2-5,4-5	5a-5b	12
(a)	6.7	6.8	6.8	6.6	5.2	--	--	--	1-5,2-5,4-5	--	13
(b)	6.9	6.9	6.9	6.9	5.5	--	--	--	1-5,2-5,4-5	--	11
(a)	7.1	7.6	7.0	6.8	5.2	7.0	7.6	--	1-5,2-5,4-5 2-4,6-7	--	14
(b)	6.9	6.9	7.0	6.8	6.3	--	--	--	--	5a-5b	1
(a)	5.9	6.0	5.5	6.3	6.3	--	--	6.6	--	1a-1b	0
(b)	7.2	7.0	7.0	7.5	6.7	--	--	6.1	--	--	0
(a)	6.6	6.7	6.6	6.3	5.5	6.4	7.3	--	1-5,2-5,6-7	--	9
(b)	6.7	6.5	6.3	6.9	6.1	--	--	--	--	--	0
(a)	6.9	6.9	7.3	6.6	6.5	6.8	7.6	6.0	6-7,1-8	1a-1b	1
(b)	7.4	7.1	7.0	7.9	7.2	--	--	6.5	2-4,1-8	--	0

(Continued)

Section C. *(Continued)*

20. Did the instructors or someone clearly tell you what would happen to you if you graduated from the 71B10 course ahead of schedule?

21. Some people think that the 71B10/20 course is interesting. Other people think it is dull and boring. What do you think?

22. When you finish the 71B10/20 course how much of the instruction do you think you will remember?

23. While taking this course how often have you been assigned details such as Company CQ which take you away from your studies?

24. How do you feel about getting detail assignments which take you away from your studies? Do you think they have a good or bad effect on your course performance, or doesn't it make much difference?

25. What do you think could be done to make the typing portion of this course more interesting? Please list any suggestions you have.

26. What do you think could be done to make the programmed instruction (PI) portion of this course more interesting? Please list any suggestions you have.

Section D. Incentives and Counter-Incentives

1. What, if any, types of rewards are given in this course for good performance? Please list them.

2. What types of rewards do you think could be or should be given to students for superior performance—for completing their study ahead of schedule, or learning lesson material especially well? Please list below any suggestions you have.

3. Do you feel that you have been adequately rewarded for good performance in this course?

4. How do the instructors of this course motivate you to do well in the course? Do they reward you for good performance? Punish or threaten you for poor performance? Use a mixture of rewards, punishments, and threats?

5. In your opinion do the instructors reward you fairly?

6. In your opinion do the instructors use rewards consistently, or inconsistently, or what?

7. How do the instructors seem to feel about using rewards and promises to motivate you?

8. About how often do students get rewarded for fast or good performance in this course?

9. In your opinion were you clearly informed about the rewards you could receive for good performance in this course?

(Continued)

	Course Graduates[a,b]				Graduates[c]				Significance of Difference[d] (t-test)		
	All (1)	Fast 3rd (2)	Mid 3rd (3)	Slow 3rd (4)	Drop-outs (5)	Men (6)	Women (7)	Instruc-tors (8)	Columns	Rows	Disc. Scores[e]
(a)	5.9	5.7	6.4	5.7	5.6	5.7	7.3	--	6-7	--	1
(b)	5.7	5.7	5.5	6.0	6.5	--	--	--	--	--	1
(a)	5.0	5.1	4.8	5.1	4.0	--	--	--	--	1a-1b	0
(b)	5.7	5.5	5.4	6.1	4.5	--	--	--	1-5,4-5	--	10
(a)	6.0	6.2	6.1	5.9	3.7	--	--	--	1-5,2-5,4-5	--	14
(b)	6.2	6.0	6.0	6.5	5.0	--	--	--	1-5,4-5	5a-5b	10
(a)	3.2	2.8	3.6	3.1	3.8	--	--	--	--	1a-1b	0
(b)	4.9	4.9	5.1	4.5	5.6	5.2	3.6	--	6-7	5a-5b	0
(a)	3.5	3.2	3.5	3.7	3.7	--	--	--	--	1a-1b	1
(b)	2.7	2.7	2.8	2.8	3.3	--	--	--	--	--	0
(a)											
(b)					Open-ended question						
(a)											
(b)					Open-ended question						
(a)											
(b)					Open-ended question						
(a)											
(b)					Open-ended question						
(a)	4.4	4.1	4.7	4.1	3.5	--	--	4.9	1-5	--	4
(b)	4.5	3.8	4.5	4.6	4.3	--	--	4.7	2-4	--	1
(a)	5.3	5.5	5.1	5.2	4.8	--	--	6.1	1-8	--	0
(b)	5.1	4.8	5.1	5.2	4.1	--	--	5.5	1-5,4-5	--	11
(a)	5.6	5.8	5.7	5.4	4.7	--	--	--	1-5,2-5	--	6
(b)	5.4	4.9	5.3	5.6	4.9	--	--	--	--	--	1
(a)	4.7	5.0	4.7	4.4	5.0	--	--	--	--	--	1
(b)	4.4	3.3	4.6	4.3	4.7	--	--	--	2-5	--	1
(a)	5.5	5.9	5.5	5.3	4.6	--	--	6.2	1-5,2-5,1-8	--	7
(b)	5.4	5.1	5.7	5.4	4.5	--	--	6.8	1-5,4-5,1-8	--	9
(a)	5.3	5.4	5.3	5.0	4.3	--	--	4.6	--	1a-1b	2
(b)	4.8	4.0	4.7	5.2	4.4	--	--	4.7	2-4	--	1
(a)	6.2	5.9	6.4	6.1	4.5	--	--	6.6	1-5,2-5,4-5	1a-1b	12
(b)	4.5	3.4	4.3	4.9	4.8	--	--	5.7	2-4,2-5	--	3

(Continued)

Section D. *(Continued)*

10. What, if any, types of punishments or threats of punishment are used in this course? Please list them.

11. In your opinion were you clearly informed about the negative incentives or punishments which would be given for poor course performance?

12. Does it seem to you that good students are penalized for finishing early in the 71B10/20 course?

13. How do the instructors seem to feel about using punishments and/or threats to motivate you?

14. In your opinion do the instructors punish you fairly?

15. In your opinion do the instructors use punishments or threats consistently, inconsistently, or what?

Section E. Study Habits and Preferences

1. Since you started taking this course how many times have you been to study hall to practice typing?

2. Since you started taking this course how many times have you been to study hall to study the PIs?

3. Are study hall facilities available to you if you want additional help or want to practice typing after normal class hours?

4. How often do you get help from any of the other students?

5. How often do you ask for help from your course instructors(s)?

6. When you learn a subject how do you feel about working by yourself?

7. When you learn a subject how do you feel about working in a group or class?

8. After you graduate from this course would you like to continue using PIs to develop additional skills on the job?

Section F. Interest in Clerical Duty Assignments

1. Before you started the 71B10/20 course how interested were you in doing clerical work in the Army?

2. Has the taking of this course increased or decreased your interest in doing clerical work in the Army?

(Continued)

	Course Graduates[a,b]				Graduates[c]				Significance of Difference[d] (*t*-test)		
	All (1)	Fast 3rd (2)	Mid 3rd (3)	Slow 3rd (4)	Drop-outs (5)	Men (6)	Women (7)	Instruc-tors (8)	Columns	Rows	Disc. Scores[e]
(a)											
(b)					Open-ended question						
(a)	5.5	5.3	6.1	5.1	4.5	--	--	--	1-5	--	4
(b)	5.8	5.2	5.7	5.7	5.3	--	--	--	--	--	0
(a)	4.6	5.0	4.8	4.2	5.0	4.8	3.6	4.9	6-7	--	1
(b)	4.5	4.7	4.2	5.0	4.9	4.8	2.7	6.3	6-7,1-8	--	0
(a)	5.1	5.0	4.9	5.5	4.8	--	--	3.6	1-8	--	0
(b)	5.3	5.4	4.9	5.4	5.9	--	--	4.3	--	5a-5b	1
(a)	5.7	5.7	5.8	5.6	5.0	--	--	--	--	--	1
(b)	5.7	5.0	5.8	5.9	5.1	--	--	--	2-4,4-5	--	3
(a)	4.7	4.7	4.7	4.7	5.3	--	--	--	--	--	0
(b)	4.5	4.3	4.7	4.4	5.1	--	--	--	--	--	0
(a)	2.4	1.4	2.2	3.2	3.0	2.5	1.2	--	2-5,2-4,6-7	1a-1b	4
(b)	1.6	1.5	1.3	1.8	2.9	--	--	--	1-5,4-5,2-5	--	11
(a)	2.5	2.4	2.4	2.7	2.0	2.7	1.3	--	6-7	1a-1b	0
(b)	2.0	2.3	1.8	2.0	3.0	2.2	1.4	--	1-5,4-5,6-7	--	9
(a)	7.7	7.7	7.5	7.7	6.2	7.6	8.3	--	1-5,2-5,4-5, 6-7	1a-1b	6
(b)	6.7	6.6	6.8	6.9	5.9	--	--	--	4-5	--	3
(a)	4.6	4.0	5.2	4.6	3.5	--	--	--	1-5,4-5	1a-1b	6
(b)	3.7	3.2	3.8	3.8	2.3	--	--	--	1-5,4-5	5a-5b	10
(a)	5.2	5.1	5.4	5.3	4.7	--	--	--	--	--	0
(b)	5.0	5.0	4.8	5.1	4.9	--	--	--	--	--	0
(a)	6.5	7.1	6.3	6.1	5.6	--	--	--	1-5,2-5,2-4	1a-1b	8
(b)	6.9	6.9	6.6	7.0	6.3	--	--	--	--	--	0
(a)	6.0	5.6	6.4	5.8	5.5	--	--	--	--	--	1
(b)	6.2	5.6	6.4	6.1	6.0	--	--	--	--	--	1
(a)	5.0	5.8	5.0	4.7	4.0	5.3	3.7	--	2-5,2-4,6-7	--	4
(b)	5.5	5.4	4.8	6.0	3.9	--	--	--	1-5,4-5,2-5	--	11
(a)	5.5	5.9	5.4	5.1	--	--	--	2-5	--	2-5	--	0
(b)	6.1	5.7	6.1	6.2	5.6	--	--	--	--	--	1
(a)	5.3	5.2	5.5	5.3	2.9	5.5	4.3	--	1-5,2-5,4-5 6-7	1a-1b	13
(b)	5.8	5.0	5.7	6.3	4.2	--	--	--	1-5,2-4,4-5	5a-5b	11

(Continued)

Section F. *(Continued)*

3. Before you started the 71B10/20 course were you interested in becoming a skilled typist?

4. Has the taking of this course increased or decreased your interest in becoming a skilled typist?

5. If you have your choice, what type of job would you like in the Army after completing this course? Briefly describe your first three choices.

6. How did you get assigned to the 71B10/20 course? Did you ask for it? or what?

7. What do you think about the counselling sessions? Were they at all helpful to you?

8. To end this interview, what would you say are the main reasons for you attriting from this course? Could it have been prevented? What do you think could have been done to help you get through the course?

	Course Graduates[a,b]				Graduates[c]				Significance of Difference[d] (*t*-test)		
	All (1)	Fast 3rd (2)	Mid 3rd (3)	Slow 3rd (4)	Drop-outs (5)	Men (6)	Women (7)	Instruc-tors (8)	Columns	Rows	Disc. Scores[e]
(a)	5.0	5.2	4.6	5.2	4.4	--	--	--	--	--	0
(b)	5.3	5.0	5.0	5.4	5.5	--	--	--	--	--	1
(a)	5.5	5.6	5.4	5.4	3.0	--	--	--			
(b)	5.9	5.1	5.9	6.0	4.5	--	--	--			
(a)											
(b)					Open-ended question						
(a)											
(b)					Open-ended question						
(a)											
(b)					Open-ended question						
(a)											
(b)					Open-ended question						

TECHNICAL NOTE TO APPENDIX A

Discrimination Score. The data display in this appendix was created to provide a means for identifying those attitudes and opinions that might be used to distinguish between course graduates and dropouts, and between fast and slow learners. To accomplish this, certain rules of logic were developed and then converted into a set of steps for scoring the statistical findings and response trend associated with each question.

Following the scoring procedures, a discrimination score was derived for each question. A *discrimination score* is a derived score which reflects the degree to which the answers to any particular Student Questionnaire question were different for the groups and subgroups of students examined during the study. This score is displayed in the right-hand column of the table. The two groups examined in this study were (a) course graduates and (b) course dropouts. The following three subgroups examined were all part of the course graduate group:

(1) "Fast 3rd"–students who completed the course before two-thirds of their classmates.
(2) "Slow 3rd"–students who completed the course after two-thirds of their classmates.
(3) "Mid 3rd"–students who completed the course in the middle third of the course completion time.

The steps for developing the discrimination score for each question were as follows:

(1) Is there a statistically significant difference between responses from graduates and dropouts? If "no," assign a score of zero. If yes:
   (a) Assign a score of 6 if significant at the .01 level.
   (b) Assign a score of 3 if significant at the .05 level.
(2) Is there a statistically significant difference between "slow 3rd" learners and dropouts? If "no," assign a score of zero. If "yes":
   (a) Assign a score of 4 if significant at the .01 level.
   (b) Assign a score of 2 if significant at the .05 level.
(3) Is there a statistically significant difference between responses from the "fast 3rd" learners and dropouts? If "no," assign a score of zero. If "yes":
   (a) Assign a score of 2 if significant at the .01 level.
   (b) Assign a score of 1 if significant at the .05 level.
(4) Is there a statistically significant difference between responses from "fast 3rd" and "slow 3rd" learners? If "no" assign a score of zero. If "yes":
   (a) Assign a score of 1 if significant at the .01 level.
   (b) Assign a score of 0 if significant at the .05 level.
(5) Response Trend Analysis. Do the responses for the "fast," "mid" and "slow" learners and for the dropouts fall into a consistent upward or downward trend?
   (a) If all four values ascend or descend, assign a score of 2.
   (b) If three adjacent values ascend or descend, assign a score of 1.
(6) Develop a discrimination score for Fort Ord data. A maximum score of 15 is possible.
(7) Develop a discrimination score for Fort Jackson data. A maximum score of 15 is possible.

Each question having a high discrimination score was further examined to determine whether there seemed to be a logical reason for the pattern of responses to that question. This involved looking at the interview comments, considering the impact of related course practices, and considering the particular question under examination to judge how fast, slow, and dropout students might be expected to respond to the question. By following this general algorithm, the responses to most questions could be logically accounted for.

Appendix B

SUMMARY OF RESPONSES TO QUESTIONS[1] IN THE SCHEDULED INTERVIEW WITH MOS 71B10/20 COURSE DROPOUTS[2]

Section B: Group Typing

B-3 The majority of students said that they were informed of correct typing procedures entirely by way of video tapes. Only two of sixteen respondents reported any explanation being given by their Instructor.

Most respondents said they had been reasonably well informed about the correct typing procedures.

B-4 Practically all of the interviewees agreed that the tape presentations were clear. However, several stated that the tapes were too fast. That is, a new tape would begin before they had a clear understanding of the information on the tape just completed.

Tapes were not used at Fort Jackson.

B-5 Again, some students commented that they experienced difficulty because the tapes were too fast—hard to keep up with. Most students said they could understand the tapes. One person mentioned faulty operation of the TV set, but this did not interfere with the sound.

Tapes were not used at Fort Jackson.

B-8 The major problem encountered by students in tape typing was that the tapes went too fast. As a result the student doesn't have time to follow the instructions on the tape. Additionally, some students complained of sun glare which made it very difficult for them to see the TV screen.

The majority of respondents reported no major problem with Group Typing. Two said they liked Group Typing. Some persons said they were not given enough time to learn how to type. Some respondents said that there should be more Instructors in Group Typing. One student said new typewriters were needed.

B-9 Most students gave suggestions on how to improve Group Typing procedures. Consistent with previous responses, some said the tapes should be shown at a slower pace. Others felt the instruction should be more individualized. A small number expressed the desire for a live Instructor. One individual wanted more time for practice (more than a week). He was told by the recruiter that he had 7 weeks to meet the standards and felt "the Army cheated me".

Eight respondents provided sugtestions. Two suggested lengthening the time devoted to Group Typing; two others suggested having more break time.

Section C: Self-Paced Typing and Programmed Texts

C-4 Six of sixteen students were dropped at the end of the first week because of poor typing. Therefore, they had no self-paced instruction in typing. Several others indicated the instruction was clear, while the remainder claimed they received no instruction, only timed writings during the self-paced portion of typing instruction.

Only two of eighteen Dropouts complained about the typing instruction being unclear; four respondents said sometimes it was unclear.

[1] A list of the questions contained in the Scheduled Interview is shown in Appendix A.

[2] For each question: (a) the first statement summarizes replies from 16 dropouts from the course at Fort Ord; (b) the second statement summarizes replies from 18 dropouts from the course at Fort Jackson.

C-8 More than half of the Dropouts interviewed said they never worked on programmed texts. There was very little consistency among the responses of the other respondents. In general, the opinion was that most PIs weren't too hard, but the students preferred not to work on them for one reason or another, e.g., "knew I was getting a discharge".

Four Dropouts said the PIs were too difficult; three said they were easy; nine said they were difficult sometimes. Students complained about vocabulary in PIs—didn't understand some words. A few respondents said the Instructors were not willing to help them.

C-13 Over three-quarters of the persons interviewed never took a criterion test. Two others said they did not fail a criterion test. The other respondent stated that an *AI* told him what he missed, recorded the score on a card, tore up the test paper and gave him a *new* PI.

Sixty-one percent of the Dropouts reported that the Instructors informed them of why they failed a criterion test no more than 50 percent of the time. Many respondents said that some Instructors were good at giving back information, while other *Is* gave back little or no information.

C-16 An overwhelming majority of the Dropouts interviewed said that the Instructors were willing and actually did help them in the course. Only three interviewees claimed that the Instructors did not or were not willing to help them.

Only two respondents said the *Is* were not willing to help the students. Fifty-percent of the Dropouts said the *Is* were willing to help them about half the time; seven respondents said the *Is* were willing most of the time.

C-17 Most respondents agreed that the Instructors or *AIs* carefully checked timed writings for speed and accuracy. However, three persons stated that students checked their own papers. However, only one of the three indicated that the Instructors *never* double checked the time writing scores.

Eleven of the eighteen respondents reported that the *Is* checked their typing quite often. Apparently there were some days when the checking was very cursory.

C-18 Fourteen of sixteen Dropouts said they were told about the course objectives. Seven of the fourteen mentioned only objectives regarding tape typing.

Only one respondent said that the *Is* were unwilling to tell students about the objectives of the course. Most respondents said the Instructors were fairly free with information about the course.

C-19 About two-thirds of the respondents said they were told what would happen if they did not meet the course objectives. Half of these students believed they would be dropped from the course; the others said they would be reassigned to another course, e.g., cook or infantry. One student expressed surprise that he was dropped at the end of one week in a supposedly self-paced course.

All respondents said they were told what would happen to them if they didn't meet the course objectives. Go before "drop" board; get extra details; go to the cook's school, etc., were some of the things they were told would happen to them.

C-24 Less than one-third of those interviewed missed classes because of duty assignments, and, felt that this had a bad effect on their course performance. All the rest either had no details that interfered with classes, or, felt that their detail assignments were so limited as not to adversely effect their performance.

Those students who were given many details complained that they interfered with their classroom; half the respondents didn't believe details had much affect on their course activities. A few said they had difficulty staying awake after details.

C-25 More than two-thirds of the students offered one or more suggestions for how to make the typing portion of the course more interesting. One popular idea was to provide a greater variety of interesting copy for students to type. Also, several students complained that they needed more time.

The most frequent suggestion was to increase the number of instructors in the classroom. Often this was combined with the suggestion that the *Is* should be better at explaining the course material to the students. Four respondents thought the typing portion of the course was all right as it is. A few *Ss* wanted more time to type and more frequent breaks from typing.

C-26 Three-quarters of the respondents had never worked on a PI, and had no suggestions for how to improve them. Two of the students said that they felt it would be better if an Instructor taught the material or least gave an oral introduction to each PI.

The most frequent suggestion was to require *Is* to explain PI material more clearly, especially when *Ss* need help. Other suggestions were:

- need more *Is* and *AIs*; develop some training aids.
- get rid of irrelevant material.
- get new PIs because pages are missing.
- give students more time to study PIs. (Apparently students sometimes are told how much time they should spend studying particular PIs).
- update PIs; explain vocabulary.

Section D: Incentives and Counter-Incentives

D-1 About seventy-five percent of the interviewees expressed knowledge of some type of reward(s) given to students for good performance. These mostly included 3-day passes and/or promotions for early graduates. There also was mention of choice assignments, such as becoming an *AI* or being assigned to a job in the Pentagon.

Most respondents said students are not rewarded for good performance in the classroom. *NOTE:* each Instructor cadre has its own reward system. One cadre awards 3-day passes to students if they complete so many PIs within a particular period of time. This scheme apparently is working fairly well. (Students of that cadre did not complete the questionnaire.)

D-2 Other than those listed in D-1, there were only a couple of different suggestions. These included awarding trophies and certificates, as well as making early assignments. Two of the students felt that no rewards should be given. One said "(completing) the course is a reward". The other said, "people who fail often try (as hard) as the people who pass".

Promotions and 3-day passes were the most frequently mentioned rewards. Recognition in some form (certificates, ribbons, letter of commendation) was mentioned fairly often also.

D-4 About half of the interviewees said that Instructors emphasized threats to motivate them, e.g., be dropped from course, be sent to cook or infantry school. Two respondents stated that Instructors employed threats *and* promises. A fourth of the respondents said the Instructors did nothing to motivate students.

Most respondents reported that punishments or threats were used to motivate students—extra details if you don't do well; will go to cook's school if you flunk out; will get sent to see CO if you don't do better. Six persons reported that a mixture of rewards and threats were used.

D-7 The majority of respondents reported that they *did not know* how the Instructors felt about using rewards and promises to motivate them. Two interviewees said the Instructors did not use rewards and promises at all. Only one person said the Instructors even mentioned promotion possibilities.

Most respondents reported that the Instructors didn't seem to care one way or the other about using rewards as motivators. Six thought that the Instructors were against the use of rewards.

D-10 In listing the types of punishment or threats of punishment used in the course, students mentioned being sent to cook or infantry school most frequently. A little less than fifty percent of those interviewed did not list anything or answered "none."

Standard practice is to threaten to drop slow learners from the course; they are told they will be sent to cook's school or to the infantry. Also, they are threatened with extra details. On occasion, students are told that they can get an Article 15, or even be discharged from the Army, if they do not shape up.

D-13 One third of the students did not know how the Instructors felt about using punishments and/or threats to motivate them. About one quarter said the Instructors emphasized the use of threats. The remainder indicated that Instructors did not use or seldom used threats or punishments in the course.

Most respondents reported that the Instructors did not seem to care one way or the other about using punishments and threats. A few reported that the Instructors seemed to be in favor of using punishments and threats. A few said that the Instructors did not seem to care what happened to the students.

Section E: Study Habits and Preferences

E-3 All but one of the Dropouts interviewed knew of the availability of study halls. Fifty percent of them said they attended study hall voluntarily during the course. Only two stated they were ever *requested* to attend. One student did not know if study hall was available after the first week of training.

Study hall is available two nights per week. One room is used for both the practice of typing and the study of PI's. This bothered some of the students. A few reported that they could not go to study hall because they were on details. Many students said they had voluntarily gone to study hall, found it too noisy and smoky and had not gone back.

E-5 Slightly more than half of the interviewees said they asked for Instructor's help more than once during the course. The remaining students never asked for help. Various reasons were given for not seeking help, such as "I didn't think he would help me," or, "I thought I knew the material."

Eight respondents reported that they often sought help while five reported that they seldom or never asked Instructors for assistance. Five persons reported that the Instructors were not helpful—would not explain the PI's to them.

E-6 About one third of the Dropouts indicated a preference for learning a subject by themselves. Most students said they would rather work with a group or in a class. Three people stated they sometimes preferred working alone, at other times in a group, depending on the subject.

Sixteen of eighteen respondents said they liked working on their own. However, many qualified this by saying that they liked to work on their own when they understood the instructional material. When the material was difficult, they preferred group instruction. Many students reported that the Instructors could have been more helpful.

Section F: Interest in Clerical Duty Assignments

F-2 Less than half of the respondents said they were interested in becoming skilled typists before the course began. The majority reported no interest or desire to learn how to type. One person was already a skilled typist (high school training) before entering the course.

Seventeen of eighteen Dropouts reported that the course had decreased their interest in doing clerical work in the Army. A few said they had never been very interested in clerical work, and in fact, had wanted to take another course but has been assigned to the 71B10/20 course.

F-4 Three of the interviewees indicated an increased interest in becoming a skilled typist as a result of taking the course. On the other hand, over half said their interest had *decreased*. Two people indicated no change of interest.

Seventeen of eighteen respondents said that taking the course had decreased their interest in typing. Most reported that they did not like typing, that they could not learn to type. Some reported that they had not realized when they signed up for the course that they would have to learn how to type. These persons made a distinction between clerical work and typing, which they considered secretarial work.

F-6 Among the variety of reasons given for assignment to the course, the majority said that the recruiter was directly or indirectly involved. Sometimes the recruiter would suggest the BAAC Course because of a high CL test score. Three individuals asked for the course; three others did not know why they were assigned.

Out of eighteen respondents, eight had originally requested assignment to another MOS but had been assigned to the 71B10/20 MOS because of lack of openings; four respondents had wanted to work in the administrative field but did not know that they would have to learn to type; four persons scored high on administrative tests so they were assigned to the course. For all respondents, it would be reasonable to conclude that they had either been mis-assigned (given the BAAC course when they had wanted another) or had found out early in the course that they didn't like typing or couldn't learn the PI material.

F-7 About half of the Dropouts interviewed received some type of counseling before being dropped. Only one person said that counseling was helpful. Almost half of the respondents said they received no counseling at all.

Seven respondents reported that the counseling sessions were helpful, particularly the first one or two sessions. Also, they said that the sessions were helpful in informing them what would happen if they were dropped from the course. Apparently, however, the sessions were not especially helpful in helping them solve their academic problems. Eight persons said that the counseling sessions were of little or no help, usually reporting that at their first session they were merely informed that they were about to be dropped from the course.

F-8 Ten of sixteen interviewees said they were dropped from the course because of poor typing. Four of the remaining six students preferred outside work. One said he worked too fast and the other missed class too often because of doctor and counseling appointments. Half of the students said more time for study and/or typing would have helped get them through the course. A little less than half of those interviewed felt nothing could have been done. They just didn't like the course and wanted to get out of it.

The comments of most respondents suggested that there wasn't much that could have been done to prevent them from becoming dropouts. Six persons said they could not learn to type; five said they could not learn the PI material. Most respondents thought they might have gotten through the course if given more time. A few complained that the Instructors could have been more helpful, especially in providing clear and careful explanations of the PI material. Two respondents reported that slow learners are harrassed by the instructors.