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AN ANALYSIS OF COMPLETION TIMES AT VARIOUS ARMY TRAINING CENTER--ETC(U)
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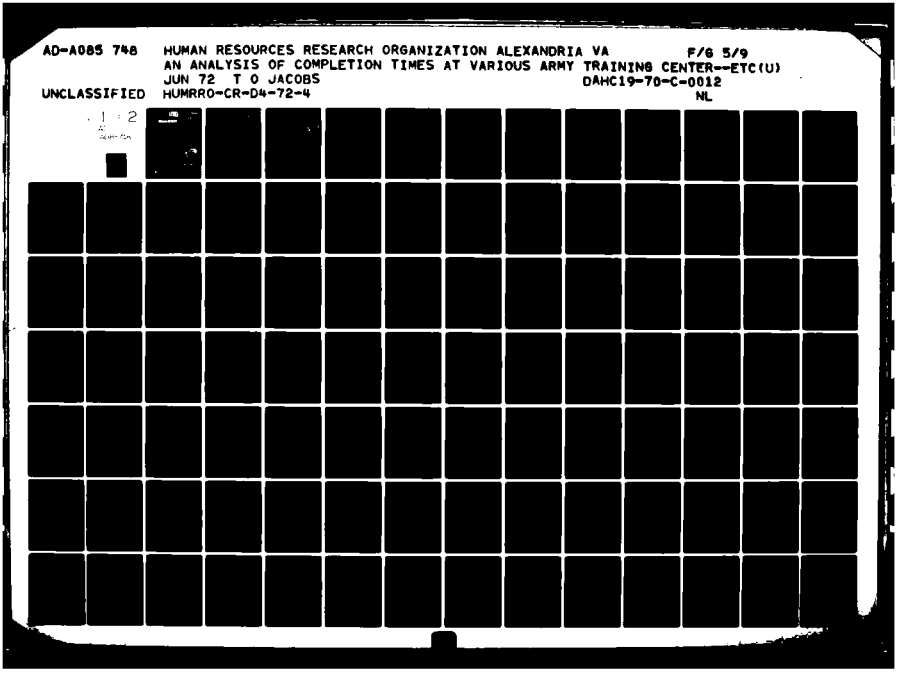

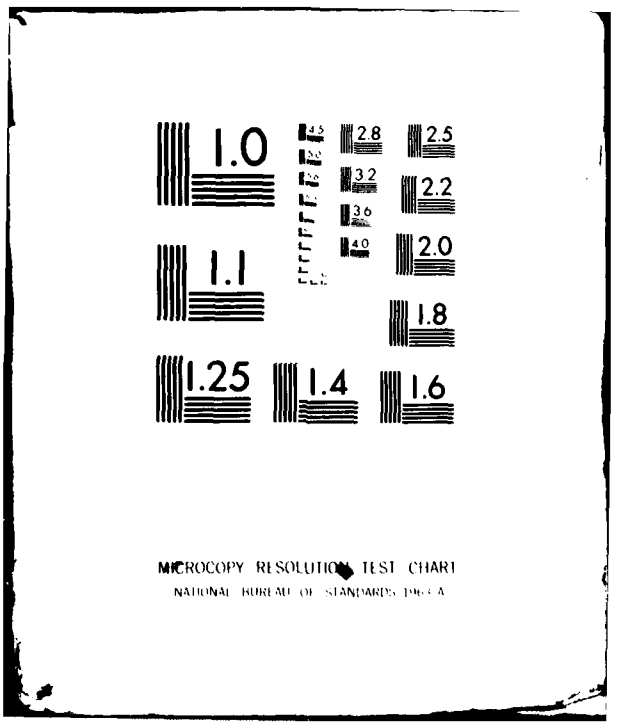
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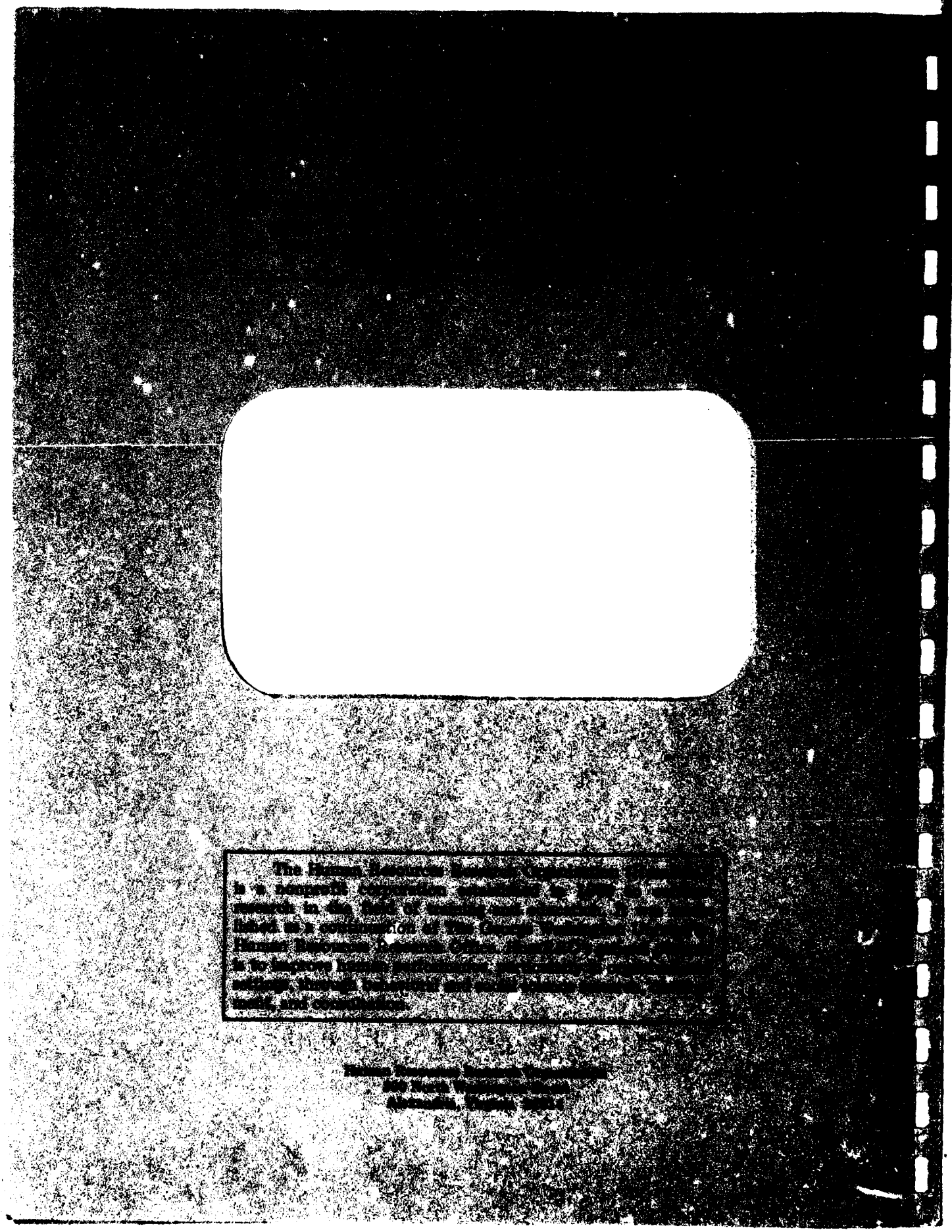


CONSULTING REPORT

An Analysis of Completion Times at Various Army Training Centers of Programmed Instruction Materials for MOS 71 B 10, MOS 71 H 20, & MOS 71 B 20/30

T. O. Jacobs

June 1972

HumRRO-CR-D4-72-4

DAHC19-73-C-0013

This Consulting Report has been prepared to provide information to the requesting agency on the results of technical advisory service. It has been issued by the Director of HumRRO Division No. 4. It has not been reviewed by, nor does it necessarily represent the official opinion or policy of the President, Human Resources Research Organization or the Department of the Army.

AD A086 771

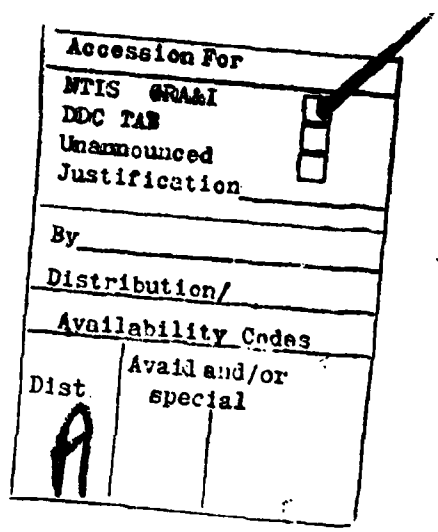
HumRRO Division No. 4
Fort Benning, Georgia

FOREWORD

This report discusses research that was accomplished by the Human Resources Research Organization (HumRRO) Division No. 4 located at Fort Benning, Georgia. The objectives of the research were to conduct an analysis of possible differences in completion times at the various Army Training Centers of programmed instruction materials leading to the award of MOS 71 B 10, MOS 71 H 20, and MOS 71 B 20/30, and to find a way of predicting course completion times, if possible,

The research was conducted by Dr. T. O. Jacobs, Director of HumRRO Division No. 4. SP5 Thomas M. Meierhofer of the colocated U.S. Army Infantry Human Research Unit assisted with the statistical analysis. This Unit is commanded by LTC Willys E. Davis.

HumRRO research for the Department of the Army is conducted under Contract DAHC 19-70-C-0012. Training, Motivation, and Leadership Research is conducted under Army Project 2Q062107A712.



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An Analysis of Completion Times at Various Army Training Centers of Programmed Instruction Materials for MOS 71 B 10, MOS 71 H 20, and MOS 71 B 20/30

INTRODUCTION

In October 1971, HumRRO assistance was requested by the U. S. Army Adjutant General School to conduct an analysis of possible differences in completion times at the various Army Training Centers of programmed instruction materials leading to award of MOS 71B10, MOS 71H20, and MOS 71B20/30. Preliminary analyses of course completion times had indicated that differences probably exist. These differences had proven to be an administrative problem, in that they made difficult the expedient assignment of students on completion of MOS training. The request for HumRRO assistance was to determine the extent to which differences did exist among the Training Centers in course material completion time, and to find a way of predicting course completion times, if possible. The present Consulting Report presents the results of the study that was conducted in response to this request.

METHOD

In order to accomplish the objectives set for the research, it appeared desirable to confirm, first, that differences in course completion times did, in fact, exist among the Training Centers, and then to determine whether differences in course completion times, if they existed, could be attributed to differences in quality of input to the courses.

Accordingly, data were collected by the Training Centers, at the request of the Adjutant General's School, starting approximately at the beginning of the first quarter of Calendar Year 1972. The data consisted of potential predictor variables, on the one hand, and hours required for completion of the various subparts of the course materials, on the other hand. These variables are shown in Table 1. As can be seen from examination of the table, the predictor variables consisted, in the main, of selected aptitude area scores from students' Forms 20. In addition, years of education, entry typing speed, and entry error were recorded. For dependent variables, the table shows, in addition to the various subparts of the course: the EOC Test; Sum C+CT (the sum of hours spent initially on Text and Criterion Test); the sum of the hours of retake, on the average; the average lesson at which the first retake occurred; the number of lessons completed, on the average; and the EOC typing speed and error scores.

Table 2 shows the number of subjects on whom data were collected at each of the Training Centers for each of the MOS's. For 71B20/30, the number of subjects available from the various training centers was too small to permit independent analyses, with the result that they all were combined into one pool.

Table 1

Description of Variables

Variable	Description
Predictor	
VE	Verbal. Measure of general learning ability. Highly related to academic success.
PA	Pattern Analysis. General measure of ability to visualize spatial relationships.
MA	Mechanical Aptitude. General measure of mechanical ability.
ELI	Electronics Information. Measure of interest and aptitude, not at the level of the experienced worker in such jobs, but at the level of the young man who can learn to do such jobs.
GIT	General Information Test. Complex test that spans both the general learning ability and mechanical areas.
CI	Classification Inventory. Description of the man -- what he has done, what he likes to do, and how he sees himself as a leader.
ARC	Army Radio Code Aptitude Test. Measures perceptual speed and accuracy. (Auditory perception)
ED	Years of education.
AR	Arithmetic Reasoning. Measure of general learning ability. Highly related to academic success.
ENTRY T.S.	Entry Typing Speed.
ENTRY ERROR	Entry Error Score.

Table 1 (Continued)

Description of Variables

Variable	Description
Dependent	
12-21 etc.	Texts and Criterion Tests for MOS Training
EOC Test	End of Course Test
Sum C+CT	Sum of Hours spent initially on text and Criterion Test
Sum Retake	The sum of hours spent in retaking portions of courses
1st Retake	The average lesson at which the first retake occurred
Lessons	The number of lessons completed, on the average (reverse side of data sheet)
EOC T.S.	End of Course Typing Speed
EOC Error	End of Course Error Score
I	Initial
T	Total

Table 2

NUMBER OF SUBJECTS BY MOS AND TRAINING CENTER

Training Center	71 B 10	71 H 20	71 B 20/30*
Fort Jackson	46	22	
Fort Polk	32	25	
Fort Wood	24	28	
Fort Knox	54	42	
Fort Dix	41	32	
ALL POSTS COMBINED			51

*Number of subjects available for this MOS at each post too small for independent analysis.

The analysis proceeded in two steps. In the first, analyses of variance were run on both the predictor variables and the dependent variables. The predictor variables were included in the analysis to determine if there were significant differences among the Centers in the quality of the input, as measured by the scores shown in Table 1. The analysis of dependent variables was, of course, intended to determine whether there were, in fact, significant differences among the Training Centers in time required for course completion.

The second major step in the analysis involved computing correlations among the predictor variables and the dependent variables to determine whether any differences among Centers in average amounts of time required to complete the course could be predicted from a knowledge of differences in input quality of trainees.

RESULTS

As was noted above, each of the predictor variables was submitted to an analysis of variance. Table 3 presents the means and standard deviations of the predictor variables and the dependent variables for MOS 71B10. Similar data are presented in Table 4 for 71H20. Table 5 shows insufficient cases were available from the various Training Centers to prepare the same kind of Table for MOS 71B20/30. However, Table 5 shows the overall means and standard deviations for this MOS, all Training Centers combined.

Examination of Table 3 shows that there are several differences from Training Center to Training Center in the means for the predictor variables, and also for many of the dependent variables. The result of the analysis of variance test are shown in the last column of each table. In this last column, two numbers appear. The first is the F ratio, the last step in the analysis of variance, which is used to determine whether observed differences are significant. The second number, designated p, is the significance level itself. The number indicates the number of times in 100 that differences of any given magnitude would have been expected to occur by chance. Thus, for VE, for MOS 71B10, the probability is .05. This indicates that differences among means this large would be expected to occur less than five times per hundred, by chance alone. This level of significance is conventionally used as the borderline between significant and non-significant findings, with a smaller probability indicating a higher level of significance.

Examination of Table 3 shows that there were significant differences among Training Centers in three of the possible predictor variables - VE, MA, and GIT. The first two of these were significant at the .05 level, while the third was significant at the .01 level. In addition, it should be noted that differences in entry typing speed were highly significant between the Training Centers. On the other hand, differences in education level were not.

TABLE 3

Means and Standard Deviations of Predictors and Dependent Variables

MOS 71 B 10

	JACKSON (N=46)		POLK (N=32)		WOOD (N=24)		KNOX (N=54)		DIX (N=41)		F	p
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ		
VE	113.80	20.11	105.91	19.05	115.08	14.54	116.24	18.48	119.29	13.96	2.79	.05
PA	107.61	20.26	102.34	20.13	108.38	16.38	109.78	17.18	114.90	17.28	2.21	NS
MA	108.63	15.21	104.53	17.62	110.50	14.32	106.26	15.99	114.49	12.94	2.48	.05
ELI	99.02	21.95	91.25	27.52	99.04	23.15	100.81	21.31	106.76	20.15	2.17	NS
GIT	101.76	17.64	94.28	18.55	104.33	13.18	100.63	14.40	107.56	14.57	3.39	.01
CI	101.93	22.60	100.31	20.41	104.88	24.41	99.91	22.71	105.05	17.83	.48	NS
ARC	110.87	64.61	94.22	23.98	116.00	20.79	104.00	29.29	98.15	25.57	1.68	NS
ED	12.88	1.84	12.00	2.48	12.58	2.30	12.89	2.69	13.61	2.40	2.17	NS
AR	108.85	19.93	100.06	21.18	106.08	18.26	110.98	21.03	112.90	17.68	2.26	NS
ENTRY T.S.	11.52	12.72	6.53	10.90	13.25	10.35	18.54	7.65	14.71	13.48	6.39	.001
ENTRY ERROR	1.85	2.76	2.53	4.31	3.25	3.54	1.98	2.51	1.51	2.38	1.51	NS
12-21 I	2.52	7.21	2.40	5.14	1.22	1.53	1.18	0.94	1.10	0.71		
12-21 T	2.54	7.21	2.73	5.16	1.24	1.53	1.18*	0.9 *	1.10*	0.71*	1.47	NS
12-22 I	2.28	2.29	3.15	1.52	No Data		1.62	0.93	2.01	0.97		
12-22 T	2.28*	2.29*	3.15*	1.52*	No Data		1.62*	0.93*	2.01*	0.97*	7.01	.001

*I = T

TABLE 3

Means and Standard Deviations of Predictors and Dependent Variables

MOS 71 B 10

		JACKSON (N=46)		POLK (N=32)		WOOD (N=24)		KNOX (N=54)		DIX (N=41)		F	p
		$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ		
12-17	I	5.43	3.53	6.51	2.67	4.08	1.45	4.59	1.60	4.34	3.13		
	T	5.72	3.40	6.62	2.92	4.13	1.46	4.62	1.64	4.63	3.32	4.58	.01
12-6	I	7.20	4.21	5.27	2.78	3.86	1.87	5.90	3.53	4.79	3.31		
	T	7.30	4.27	5.80	3.21	4.01	1.81	5.92	3.53	4.79*	3.31*	4.62	.001
12-13	I	4.60	3.36	3.20	1.29	2.31	1.65	3.10	1.75	3.21	2.64		
	T	5.24	4.36	3.26	1.32	2.46	1.76	3.10*	1.75*	3.24	2.63	6.00	.001
12-23	I	8.01	8.18	5.67	2.87	2.85	1.41	4.63	2.49	4.78	3.77		
	T	8.79	8.12	5.67*	2.87*	3.01	1.53	4.63*	2.49*	4.87	3.76	8.08	.001
12-9	I	7.84	6.51	4.24	2.38	2.68	1.87	4.08	2.22	3.83	2.24		
	T	9.02	7.62	4.61	2.57	2.91	1.86	4.20	2.32	4.03	2.27	13.01	.001
12-11	I	18.00	15.16	12.61	7.72	3.99	2.68	8.59	5.53	8.77	6.59		
	T	18.43	15.05	12.76	7.65	4.32	2.90	9.01	5.89	8.97	6.74	12.35	.001
12-4	I	5.40	4.31	4.63	3.02	2.56	1.92	4.12	2.38	3.54	1.81		
	T	5.68	4.26	4.63*	3.02*	2.56*	1.92*	4.20	2.58	3.63	1.82	5.25	.001
EOC TEST	I	9.01	4.46	6.92	2.82	6.94	2.99	6.47	2.36	12.15	4.20		
	T	10.55	5.16	6.92*	2.82*	7.84	3.51	6.86	2.96	14.54	6.25	22.33	.001
SUM C + CT		63.92	38.05	54.69	14.12	29.74	10.10	43.85	15.20	48.68	19.55	10.22	.001

*I = T

TABLE 3

Means and Standard Deviations of Predictors and Dependent Variables

MOS 71 B 10

	JACKSON (N=46)		POLK (N=32)		WOOD (N=24)		KNOX (N=54)		DIX (N=41)		F	p
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ		
SUM RETAKE	4.85	6.87	1.69	3.57	1.98	3.80	1.13	3.72	3.16	4.19	4.46	.01
1st RETAKE	2.48	2.82	0.91	1.89	1.79	2.89	1.43	3.21	2.76	3.36	2.59	.05
LESSONS	8.17	8.03	13.69	8.42	7.38	5.69	0.00	0.00	4.88	6.89	8.56	.001
EOC T.S.	25.78	7.15	26.94	9.40	23.00	3.23	27.13	6.56	26.95	8.33	1.58	NS
EOC ERROR	2.41	2.00	2.00	2.37	1.58	1.28	2.85	2.10	3.56	2.24	4.61	.01

*I = T

TABLE 4

Means and Standard Deviations of Predictors and Dependent Variables

MOS 71 H 20

	JACKSON (N=22)		POLK (N=25)		WOOD (N=28)		KNOX (N=42)		DIX (N=32)		F	p
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ		
VE	115.95	13.45	118.76	13.38	126.29	13.99	121.26	14.16	122.66	11.89	2.14	NS
PA	112.95	15.16	117.16	15.22	116.61	17.05	112.71	14.08	111.22	21.81	0.68	NS
MA	114.50	17.37	112.28	15.07	112.71	13.89	112.40	14.24	114.00	16.61	0.12	NS
ELI	105.14	20.82	109.64	14.61	108.64	15.99	109.43	18.34	107.81	25.75	0.21	NS
GIT	104.14	12.07	108.12	11.58	109.29	17.46	111.95	12.00	112.59	16.75	1.52	NS
CI	112.73	15.13	105.16	18.82	108.04	22.89	105.64	22.18	104.09	18.07	0.73	NS
ARC	118.95	16.41	106.36	23.53	110.61	25.95	111.21	24.19	102.53	24.38	1.78	NS
ED	14.27	1.45	14.38	1.68	14.14	1.88	13.17	2.02	14.28	1.94	2.71	.05
AR	114.82	16.51	125.16	14.69	119.43	13.01	116.24	17.67	116.69	22.75	1.41	NS
ENTRY T.S.	18.73	8.44	18.52	13.26	17.04	11.41	18.71	8.43	16.38	15.29	0.27	NS
ENTRY ERROR	2.95	2.70	5.76	5.17	4.04	4.23	2.00	1.75	2.53	3.56	5.19	.001
12-1 I	2.36	1.92	1.12	0.52	1.36	0.79	1.4	0.8	1.43	0.72		
T	2.36*	1.92*	1.12*	0.52*	1.36*	0.79*	1.4 *	0.8 *	1.43*	0.72*	5.28	.001
12-2 I	1.77	1.19	0.68	0.44	1.25	0.64	1.09	0.95	0.97	0.46		
T	1.77*	1.19*	0.68*	0.44*	1.25*	0.64*	1.09*	0.95*	1.04	0.52	5.86	.001

*I = T

TABLE 4

Means and Standard Deviations of Predictors and Dependent Variables

MOS 71 H 20

		JACKSON (N=22)		POLK (N=25)		WOOD (N=28)		KNOX (N=42)		DIX (N=32)		F	p
		$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ		
12-3	I	1.73	1.55	0.69	0.27	1.13	0.63	1.17	0.76	1.09	0.67		
	T	1.73*	1.55*	0.69*	0.27*	1.13*	0.63*	1.17*	0.76*	1.09*	0.67*	4.60	.01
12-7	I	6.95	7.11	4.79	1.77	3.90	1.69	3.00	1.91	4.33	2.29		
	T	7.50	7.04	5.02	1.65	3.90*	1.69*	3.00*	1.91*	4.57	2.08	7.59	.001
12-42	I	3.55	1.99	2.71	0.97	3.47	1.53	2.69	1.59	4.03	3.15		
	T	3.55*	1.99*	2.78	0.95	3.47*	1.53*	2.69*	1.59*	4.03*	3.15*	2.58	.05
12-38	I	3.09	2.24	1.98	1.58	2.31	1.35	2.00	1.30	2.44	1.79		
	T	3.09*	2.24*	1.98*	1.58*	2.31*	1.35*	2.00*	1.30*	2.54	2.03	1.90	NS
12-30	I	3.64	2.26	2.93	1.30	3.11	1.41	2.55	1.45	3.48	2.84		
	T	3.68	2.34	2.93*	1.30*	3.11*	1.41*	2.55*	1.45*	3.50	2.87	1.70	NS
12-45	I	3.18	2.06	2.34	1.54	2.45	0.93	3.65	1.92	2.41	2.32		
	T	3.45	1.95	2.34*	1.54*	2.45*	0.93*	3.65*	1.92*	2.91	2.36	3.11	.05
12-35	I	3.73	1.93	3.61	2.16	3.31	1.64	3.85	2.20	3.03	2.27		
	T	3.82	1.94	3.69	2.14	3.41	1.93	3.85*	2.20*	3.23	2.40	.50	NS
12-40	I	2.27	1.75	1.74	0.80	1.86	1.45	2.05	1.39	1.92	1.32		
	T	2.27*	1.75*	1.86	0.92	1.86*	1.45*	2.05*	1.39*	1.92*	1.32*	0.38	NS
12-44	I	2.59	1.89	2.06	1.42	2.15	1.71	1.54	1.33	2.01	1.81		
	T	2.59*	1.89*	2.06*	1.42*	2.20	1.72	1.54*	1.33*	2.26	1.85	1.83	NS

*I = T

TABLE 4

Means and Standard Deviations of Predictors and Dependent Variables

MOS 71 H 20

		JACKSON (N=22)		POLK (N=25)		WOOD (N=28)		KNOX (N=42)		DIX (N=32)		F	p
		$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ		
12-39	I	8.68	6.77	6.64	4.20	5.26	2.09	2.25	1.05	2.30	1.45		
	T	8.68*	6.77*	6.70	4.14	5.26*	2.09*	2.25*	1.05*	2.35	1.44	19.83	.001
12-41	I	2.50	2.24	1.68	1.66	1.23	0.59	1.48	1.05	1.28	0.87		
	T	2.59	2.20	1.70	1.65	1.23*	0.59*	1.48*	1.05*	1.34	0.89	4.16	.01
12-43	I	2.14	1.25	1.94	0.83	2.51	1.10	1.60	1.06	2.84	1.95		
	T	2.64	2.06	1.94*	0.83*	2.55	1.07	1.60*	1.06*	3.15	2.12	5.72	.001
EOC TEST	I	11.73	7.34	8.62	1.77	10.62	3.73	7.32	3.10	10.68	5.46		
	T	12.45	7.97	9.02	1.66	10.85	3.80	7.32*	3.10*	13.36	7.44	7.72	.001
SUM C + CT		59.41	18.50	43.54	7.01	45.63	10.72	37.60	8.82	44.16	13.91	12.10	.001
SUM RETAKE		2.27	4.42	0.99	2.06	0.43	0.93	0.00	0.00	4.47	5.20	7.22	.001
1st RETAKE		2.82	4.32	2.48	4.66	2.64	5.31	0.00	0.00	3.94	5.03	0.55	NS
LESSONS		0.00	0.00	4.68	7.67	7.32	5.84	0.00	0.00	1.41	4.44	7.33	.01
EOC T.S.		27.77	5.17	32.28	9.03	26.86	7.09	27.88	8.85	30.84	10.78	2.33	NS
EOC ERROR		2.86	2.25	2.68	1.70	1.75	1.65	2.31	1.83	4.47	3.68	5.83	.001

*I = T

TABLE 5

Means and Standard Deviations of Predictors and Dependent Variables

MOS 71 B 20/30

All Posts Combined
(N=51)

	$\bar{X}$	σ
VE	119.02	15.51
PA	109.82	20.09
MA	109.82	15.49
ELI	100.88	22.12
GIT	105.22	15.40
CI	103.18	21.93
ARC	105.06	25.07
ED	13.04	2.01
AR	113.84	19.71
ENTRY T.S.	25.53	11.25
ENTRY ERROR	3.65	3.12

		$\bar{X}$	σ
12-27	I	2.13	1.51
	T	2.20	1.56
12-32	I	1.34	1.76
	T	1.34*	1.76*
12-38	I	2.45	1.58
	T	2.45*	1.58*
12-30	I	3.76	2.22
	T	3.84	2.17
12-31	I	1.08	1.51
	T	1.08*	1.51*
12-35	I	4.54	2.35
	T	4.55	2.35
12-33	I	2.65	1.46
	T	2.78	1.55

		$\bar{X}$	σ
EOC	I	6.02	2.80
TEST	T	6.35	3.12
SUM C + CT		23.88	8.85
SUM RETAKE		0.58	1.93
1st RETAKE		1.06	2.63
LESSONS		0.37	2.66
EOC T.S.		38.06	9.29
EOC ERROR		3.14	2.03

*I = T

Examination of the remainder of Table 3, in which the dependent variables occur, shows that student performance was highly significantly different on many of the subportions of the course, from Training Center to Training Center. For this analysis, the total time required for completion of the book was highly similar to initial time, and seemed a more realistic variable to use, because the interest of the Adjutant General School was focused on total time for course completion, rather than on initial time for booklet completion.

In addition to differences among Training Centers on the various subparts of the course, there were highly significant differences on the EOC Test, and on total hours for completion (Sum C+CT and Sum Retake). However, the differences among Training Centers on the EOC Typing Speed score were not significant.

Table 4 shows the results of a similar analysis for 71H20 subjects. Examination of differences between Training Centers in quality of input, the predictors, shows that the number of significant differences across centers is lower for MOS 71H20 than was so for 71B10. For MOS 71H20, there were significant differences only for education, and entry typing error. For the Army Classification Battery Aptitude Scores, none was significant. However, there were highly significant differences among Training Centers in time required to complete the subportions of the programmed instruction. Examination of the table shows that differences were either significant or highly significant for nine of the comparisons. In addition, differences for the EOC Test were highly significant, as was the case for EOC Typing Error. However, EOC Typing Speed did not demonstrate significant differences across Training Centers. Perhaps particularly noteworthy is the fact that the average number of hours spent in retake also differed very significantly from Training Center to Training Center. (The average number of hours spent in retake differed significantly for MOS 71B10, as well.)

Given that substantial differences existed on many of the programmed instruction books from Training Center to Training Center, the next step in the analysis was to attempt to identify possible ways of predicting these differences. Accordingly, correlations were obtained among the predictor variables, and between the predictor variables and the dependent variables, in turn. These correlations are shown in Tables A-1 through A-11.

Using these correlations, multiple correlations were then computed between the predictors, using only VE, PA, MA, ELI, GIT, CI, ARC, and ED, and the dependent variables. The multiple correlations, together with the B weights are shown in Tables B-1 through B-42, Appendix B. Examination of the multiple correlations in these tables reveals a very disappointing picture. For MOS 71B10, for example, a total of 65 multiple correlations was computed. That is, for each subportion of the course, e.g., Booklet

12-21, a multiple correlation was computed between the predictors and that variable for each of the Training Centers. Thus, there were thirteen dependent variables, with five correlations (one for each Training Center) for each variable. Of these 65, only 17 were significant. The picture is even worse for MOS 71H20. There were, for this MOS, 18 dependent variables. There were 88 multiple correlations, allowing for missing data on two of the variables for one Center. Of these 88 correlations, only 9 were significant.

The lack of significance in the multiple correlations can be attributed, in part, to small sample sizes. That is, as the number of variables used to predict a dependent variable increases, the magnitude of the correlation required for significance also increases, unless sample sizes also increase. With the relatively small sample sizes in the present study, the obtained correlations were simply too low to reach significance. It is possible that with larger sample sizes, this would not have been the case.

However, examination of the B weights and of the correlations between predictors and dependent variables in Appendix A suggests that small sample sizes are only a part of the problem. There is no consistent pattern of correlations from one Training Center to another. That is, a given variable, VE, for example, correlates in one fashion with trainee performance at one Training Center, and in an entirely different fashion with trainee performance at another Center. Education, also normally a significant predictor, behaves in the same way. This suggests that while there are in many cases highly significant differences from Training Center to Training Center in student performance on various subportions of the instruction, for both of the MOS's under primary study, these differences may be a result of other factors than the predictor measures included in the present study.

It was clear at this point in the analysis that one of the major purposes of the project had not been achieved, i.e., to develop a means for predicting the differences in student performance from Training Center to Training Center. One final analysis therefore was initiated, the results of which are shown in Tables 6 - 16. For each of the two MOS's for which an adequate number of test subjects existed, the data were inspected for each of the dependent variables, and the two predictor variables that best predicted the dependent variable were then selected. (NOTE: This was a visual inspection only; it consequently is possible that the optimum set was not always chosen.) Multiple correlations then were run between those two predictor variables and the dependent variable. In the table, the key results are found in the columns labeled Predictors, $r_{1.23}$, and p. The "Predictors" column identifies which two of the original eight variables were selected to predict each of the dependent variables. The "$r_{1.23}$" column indicates the strength of the resulting multiple correlation, and the "p" column indicates whether the resulting correlation was significant. (NS represents "Not Significant," while a number indicates the level of significance of a correlation that did achieve significance.)

TABLE 6

Betas and Multiple Correlations to Variable Solutions

MOS 71 B 10 Fort Knox

df = 1/52 N = 54

Variable x_1	Predictors x_2	x_3	Correlations $r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-21	CI	MA	-.24565	.10297	.43555	-.35851	.25912	.33875	6.74042	.05
12-22	CI	PA	-.30107	.22223	.22342	-.36915	.30470	.42291	11.32611	.01
12-17	VE	ARC	-.57882	-.47400	.55346	-.45623	-.22149	.60751	30.41727	.01
12-6	VE	GIT	-.54459	-.46598	.58670	-.41355	-.22335	.57384	25.53003	.01
12-13	ED	CI	-.47426	-.38319	.30165	-.39457	-.26417	.53699	21.07032	.01
12-23	ED	PA	-.36881	-.33770	.33848	-.28744	-.24041	.43266	11.97602	.01
12-9	ED	PA	-.50143	-.41074	.33848	-.40930	-.27220	.56306	24.13883	.01
12-11	ED	VE	-.47744	-.36922	.66617	-.41616	-.09199	.48234	15.76615	.01
12-4	GIT	ED	-.16065	-.26855	.34242	-.07782	-.24190	.27832	4.36640	.05
EOC TEST	VE	ED	-.34840	-.27125	.66617	-.30150	-.07040	.35233	7.37016	.01
SUM C+CT	VE	PA	-.51133	-.36627	.62432	-.46321	-.07708	.51486	18.75638	.01
SUM RETAKE	MA	GIT	-.26848	-.30841	.53078	-.14588	-.23098	.33227	6.45342	.05
1ST RETAKE	VE	ELI	-.42635	-.38985	.50502	-.30803	-.23429	.47187	14.89530	.01
LESSONS					NO DATA					
EOC T.S.	PA	ARC	.26823	.24340	.48001	.19672	.14897	.29837	5.08179	.05
EOC ERROR	ELI	ARC	.25093	.27884	.34560	.17553	.21818	.32385	6.09289	.05

TABLE 7

Betas and Multiple Correlations to Variable Solutions

df = 1/44 MOS 71 B 10 Fort Jackson N= 46

Variable	Predictors		Correlations							
x_1	x_2	x_3	$r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-21	GIT	ED	.20890	.22920	.25024	.16167	.18874	.27755	3.67233	NS
12-22	GIT	ARC	-.17342	-.15660	.02377	-.16979	-.15256	.23095	2.47906	NS
12-17	ARC	ED	-.21905	-.16236	-.10394	-.23850	-.18715	.28745	3.96318	NS
12-6	VE	ARC	-.26254	-.19768	.05396	-.25261	-.18405	.32047	5.03615	.01
12-13	GIT	CI	-.46720	-.46782	.65343	-.28186	-.28365	.51418	15.81341	.001
12-23	ED	VE	-.26472	-.19022	.55583	-.23007	-.06234	.26974	3.45278	NS
12-9	CI	ARC	-.25022	-.16866	.08529	-.23756	-.14840	.29064	4.05969	NS
12-11	CI	ELI	-.42401	-.32826	.54080	-.34837	-.13986	.44003	10.56514	.001
12-4	CI	ARC	-.27011	-.26580	.08529	-.24925	-.24454	.36376	6.71022	.01
EOC TEST	ED	PA	-.35281	-.26094	.14964	-.32095	-.21291	.41084	8.93499	.001
SUM C+CT	CI	ARC	-.27799	-.22784	.08529	-.26045	-.20563	.34533	5.95759	.01
SUM RETAKE	MA	VE	-.40936	-.39898	.57213	-.26921	-.24495	.45600	11.55117	.001
1ST RETAKE	MA	CI	-.29393	-.25702	.51153	-.22003	-.14447	.31907	4.98712	.01
LESSONS	ED	ELI	-.38914	-.36240	.13630	-.34618	-.31522	.49894	14.58428	.001
EOC T.S.	ED	VE	.55179	.32886	.55583	.53397	.03206	.55243	19.32600	.001
EOC ERROR	PA	ARC	-.30822	-.14815	.03051	-.30398	-.13888	.33804	5.67643	.01

TABLE 8

Betas and Multiple Correlations to Variable Solutions

df = 1/22 MOS 71 B 10 Fort Wood N = 24

Variable	Predictors		Correlations							
x_1	x_2	x_3	$r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-21	MA	ED	.27068	-.11323	.60171	.53110	-.43280	.43905	5.25347	.05
12-22					NO DATA					
12-17	CI	ED	-.35144	-.44385	.43551	-.19515	-.35886	.47735	6.49240	.05
12-6	PA	CI	-.30190	-.33605	.17187	-.25157	-.29281	.41755	4.64567	.05
12-13	ELI	CI	-.26782	-.45667	.36917	-.11489	-.41426	.46899	6.20325	.05
12-23	CI	ARC	-.61261	-.59417	.31490	-.47234	-.44543	.74433	27.32994	.01
12-9	GIT	ED	-.65919	-.55278	.46774	-.51283	-.31291	.71486	22.99182	.01
12-11	MA	ED	-.33059	-.47449	.60171	-.07067	-.43197	.47784	6.50948	.05
12-4	GIT	ED	-.30521	-.41479	.46774	-.14234	-.34821	.43345	5.08953	.05
EOC TEST	CI	ARC	-.31095	-.45623	.31490	-.18570	-.39775	.48909	6.91730	.05
SUM C+CT	ARC	ED	-.41635	-.40830	.45167	-.29138	-.27669	.48403	6.73145	.05
SUM RETAKE	PA	ELI	-.28926	-.32156	.70826	-.12343	-.23414	.33316	2.74671	NS
1ST RETAKE	VE	ED	-.36187	-.21633	.59098	-.35962	-.00380	.36188	3.31527	NS
LESSONS	VE	ED	-.58890	-.52576	.59098	-.42749	-.27312	.62877	14.38442	.01
EOC T.S.	VE	CI	.50268	.35289	.32713	.43365	.21103	.54079	9.09346	.01
EOC ERROR	VE	CI	-.30117	-.19616	.32713	-.26540	-.10934	.31840	2.48196	NS

TABLE 9

Betas and Multiple Correlations to Variable Solutions

MOS 71 B 10 Fort Dix

df = 1/39 N = 41

Variable	Predictors		Correlations							
x_1	x_2	x_3	$r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-21	PA	CI	.29206	.22558	.08062	.27567	.20336	.35551	5.64203	.05
12-22	ARC	ED	.37605	.35632	.35218	.28604	.25558	.44568	9.66691	.01
12-17	PA	ED	-.41406	-.43181	.31604	-.30839	-.33435	.52160	14.57636	.01
12-6	MA	ARC	-.33060	-.34790	.15486	-.28352	-.30399	.44665	9.71908	.01
12-13	GIT	ED	-.46231	-.49736	.45740	-.29694	-.36154	.56311	18.10890	.01
12-23	ARC	ED	-.32351	-.47630	.35218	-.17782	-.41367	.50454	13.31812	.01
12-9	ARC	ED	-.24042	-.49316	.35218	-.07619	-.46633	.49829	12.88182	.01
12-11	ARC	ED	-.59556	-.57192	.35218	-.44995	-.41346	.71024	39.69818	.01
12-4	ARC	ED	-.38373	-.52094	.35218	-.22862	-.44042	.56317	18.11469	.01
EOC TEST	VE	ARC	-.58342	-.55145	.43821	-.42300	-.36609	.66982	31.73728	.01
SUM C+CT	ARC	ED	-.48920	-.59682	.35218	-.31852	-.48464	.66713	31.27843	.01
SUM RETAKE	PA	ARC	-.50387	-.60294	.29344	-.35775	-.49796	.69318	36.07217	.01
1ST RETAKE	VE	GIT	-.37272	-.31422	.39267	-.29479	-.19847	.41501	8.11484	.01
LESSONS	ARC	ED	-.44347	-.41503	.35218	-.33940	-.29550	.52264	14.65659	.01
EOC T.S.	ARC	ED	.33392	.38455	.35218	.22659	.30475	.43915	9.31846	.01
EOC ERROR	ELI	CI	-.16056	-.33555	.23415	-.08675	-.31524	.34599	5.30339	.05

TABLE 10

Betas and Multiple Correlations to Variable Solutions

MOS 71 B 10 Fort Polk

df = 1/30 N = 32

Variable x_1	Predictors x_2	x_3	Correlations $r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-21	VE	ED	.18195	.20907	.40483	.11639	.16195	.23460	1.74724	NS
12-22	PA	GIT	-.32251	-.55162	.56566	-.01541	-.54290	.55177	13.13110	.01
12-17	CI	ED	-.30281	-.27223	-.10342	-.33454	-.30683	.42992	6.80217	.05
12-6	ELI	ED	-.27684	-.31363	.17376	-.22927	-.27379	.38644	5.26672	.05
12-13	PA	MA	-.35936	-.43090	.68800	-.11943	-.34873	.43953	7.18335	.05
12-23	VE	ED	.22569	-.46915	.40483	.49708	-.67038	.65322	22.32832	.01
12-9	PA	ED	-.25139	-.44337	.05307	-.22850	-.43124	.49864	9.92781	.01
12-11	PA	ED	.15988	-.16029	.05307	.16886	-.16925	.23265	1.71673	NS
12-4	PA	GIT	-.40711	-.33995	.56566	-.31589	-.16126	.42828	6.73875	.05
EOC TEST	ELI	GIT	-.40064	-.37323	.68258	-.27314	-.18679	.42326	6.54733	.05
SUM C+CT	GIT	ED	-.28747	-.28057	.13625	-.25396	-.24597	.37685	4.96570	.05
SUM RETAKE	MA	ED	-.33539	-.36143	.08580	-.30664	-.33512	.47325	8.65807	.01
1ST RETAKE	GIT	ED	-.18875	-.38610	.13625	-.13872	-.36720	.40983	6.05591	.05
LESSONS	ARC	ED	-.34532	-.45970	.20324	-.26274	-.40630	.52679	11.52288	.01
EOC T.S.	ARC	ED	.15146	.33402	.20324	.08717	.31630	.34475	4.04660	NS
EOC ERROR	MA	ARC	-.19787	.38954	.06157	-.22270	.40325	.44850	7.55388	.05

TABLE 11

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Knox

df = 1/40 N = 42

Variable	Predictors		Correlations							
x_1	x_2	x_3	$r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	P
12-1	ARC	ED	.38679	-.23356	.23201	.46607	-.34169	.50998	14.05955	.01
12-2	PA	CI	-.19480	-.25941	.20309	-.14823	-.22931	.29725	3.87695	NS
12-3	ARC	ED	-.46165	-.28069	.23201	-.41909	-.18346	.49494	12.97773	.01
12-7	MA	ARC	-.23955	-.45579	.11933	-.18784	-.43338	.49247	12.80697	.01
12-42	ARC	ED	.32130	.31666	.23201	.26193	.25589	.40643	7.91500	.01
12-38	MA	ELI	.21513	.24533	.37610	.14310	.19151	.27887	3.37307	NS
12-30	PA	CI	.16066	-.22187	.20309	.21457	-.26545	.30556	4.11931	.05
12-45	PA	GIT	-.21518	.17921	.33097	-.30826	.28123	.34166	5.28635	.05
12-35	VE	CI	-.25474	-.32149	.27107	-.18088	-.27246	.36561	6.17184	.05
12-40	CI	ARC	-.15279	.06855	-.06314	-.14906	.05914	.16379	1.10271	NS
12-44	PA	CI	-.21302	-.18844	.20309	-.18227	-.15142	.25954	2.88904	NS
12-39	PA	ED	.17521	.34813	.46404	.01741	.34005	.34847	5.52866	.05
12-41	CI	ARC	-.21914	-.22758	-.06314	-.23444	-.24238	.32640	4.76965	.05
12-43	VE	CI	-.24150	-.34072	.27107	-.16097	-.29709	.37430	6.51688	.01
EOC TEST	GIT	CI	-.34664	-.33115	.37330	-.25913	-.23442	.40921	8.04531	.01

TABLE 11 (Continued)

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Knox

Variable x_1	Predictors x_2	x_3	Correlations $r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
SUM C+CT	PA	CI	-.20054	-.34346	.20309	-.13641	-.31576	.36852	6.28589	.05
SUM RETAKE					NO DATA					
1ST RETAKE					NO DATA					
LESSONS					NO DATA					
EOC T.S.	ARC	ED	.32207	.62080	.23201	.18817	.57714	.64722	28.83420	.01
EOC ERROR	ARC	ED	.29914	.31548	.23201	.23880	.26008	.39177	7.25247	.05

TABLE 12

Betas and Multiple Correlations to Variable Solutions

df = 1/20 MOS 71 H 20 Fort Jackson N = 22

Variable	Predictors		Correlations							
x_1	x_2	x_3	$r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-1	PA	CI	-.47162	-.42364	.27660	-.38381	-.31748	.56170	9.21872	.01
12-2	PA	CI	-.36415	-.18312	.27660	-.33947	-.08922	.37411	3.25465	NS
12-3	CI	ED	-.28184	-.43081	.32195	-.15969	-.37940	.45657	5.26707	.05
12-7	PA	MA	-.49809	-.30019	.30897	-.44812	-.16173	.52130	7.46327	.05
12-42	CI	ED	-.55389	-.39891	.32195	-.47466	-.24609	.60090	11.30276	.01
12-38	VE	ED	-.55173	-.37284	.45118	-.48153	-.15558	.56893	9.57198	.01
12-30	PA	ED	-.27456	-.18346	.18863	-.24881	-.13653	.30555	2.05947	NS
12-45	MA	CI	.33822	-.28692	.10856	.37377	-.32750	.46945	5.65362	.05
12-35	PA	CI	-.56137	-.42307	.27660	-.48116	-.28998	.62673	12.93763	.01
12-40	MA	ARC	-.20042	-.15536	.44074	-.16376	-.08319	.21388	.95873	NS
12-44	MA	CI	-.27573	-.28170	.10856	-.24807	-.25477	.37439	3.26040	NS
12-39	VE	MA	-.33211	-.34188	.33038	-.24601	-.26060	.41328	4.11957	NS
12-41	PA	ED	.51573	-.26170	.18863	.58594	-.37223	.63214	13.31113	.01
12-43	VE	GIT	-.27558	-.48066	.66052	.07434	-.52976	.48389	6.11475	.05
EOC TEST	GIT	ED	-.24758	.16135	.15523	-.27936	.20471	.31968	2.27653	NS

TABLE 12 (Continued)

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Jackson N = 22

df = 1/20

Variable x_1	Predictors x_2	x_3	Correlations $r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	P
SUM C+CT	VE	PA	-.36267	-.31222	.17886	-.31697	-.25553	.44129	4.83654	.05
SUM RETAKE	VE	GIT	-.27042	-.30957	.66052	-.11698	-.23230	.32179	2.31016	NS
1ST RETAKE	ELI	CI	.18897	.14435	.22609	.16476	.10710	.21586	.97742	NS
LESSONS					NO DATA					
EOC T.S.	ELI	GIT	.34661	.46203	.60804	.10420	.39867	.46938	5.65140	.05
EOC ERROR	PA	ARC	-.41015	.24584	-.09037	-.39113	.21049	.46062	5.38615	.05

TABLE 13

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Wood

df = 1/26 N = 28

Variable x_1	Predictors x_2	x_3	Correlations $r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-1	VE	MA	-.39988	-.35496	.40691	-.30613	-.23039	.45188	6.67135	.05
12-2	MA	ED	-.43189	-.41737	.26121	-.34651	-.32686	.53486	10.41841	.01
12-3	PA	ELI	-.57125	-.44122	.53882	-.46995	-.18800	.59280	14.08692	.01
12-7	CI	ED	-.23474	-.19690	.25981	-.19687	-.14575	.27370	2.10544	NS
12-42	VE	ED	-.36247	-.63922	.54178	-.02286	-.62683	.63951	17.99111	.01
12-38	PA	ELI	-.44616	-.32126	.53882	-.38477	-.11394	.45637	6.83956	.05
12-30	CI	ARC	.53008	-.44528	-.28260	.43933	-.32113	.61308	15.65804	.01
12-45	GIT	CI	-.20220	-.25015	.31150	-.13763	-.20728	.28228	2.25104	NS
12-35	VE	ED	-.31756	-.33917	.54178	-.18940	-.23656	.37467	4.24587	.05
12-40	ARC	ED	-.34922	-.35496	.03232	-.33810	-.34403	.49009	8.21905	.01
12-44	MA	GIT	.09451	.25388	.23186	.03767	.24515	.25651	1.83123	NS
12-39	MA	ELI	.34225	.39345	.62998	.15649	.29486	.41179	5.30921	.05
12-41	VE	ELI	-.34572	.23262	.36568	-.49728	.41447	.51801	9.53531	.01
12-43	VE	CI	-.23942	-.63331	.12450	-.16310	-.61300	.65366	19.39670	.01
EOC TEST	MA	ED	-.30176	-.35219	.26121	-.22512	-.29339	.41384	5.37297	.05

TABLE 13 (Continued)

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Wood

Variable x_1	Predictors x_2	x_3	Correlations $r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	P
SUM C+CT	VE	ED	-.25592	-.39564	.54178	-.05884	-.36376	.39872	4.91473	.05
SUM RETAKE	MA	ED	-.40306	-.60904	.26121	-.26184	-.54065	.65940	20.00231	.01
1ST RETAKE	MA	ED	-.35323	-.62124	.26121	-.20494	-.56771	.65198	19.22317	.01
LESSONS	MA	ED	-.32135	-.34181	.26121	-.24906	-.27675	.41789	5.50111	.05
EOC T.S.	VE	GIT	.44796	.30903	.31201	.38945	.18752	.48209	7.87214	.01
EOC ERROR	GIT	ARC	.09271	.17180	-.06611	.10452	.17871	.20098	1.09442	NS

TABLE 14

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Dix

df = 1/30 N = 32

Variable	Predictors		Correlations							
x_1	x_2	x_3	$r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-1	MA	VE	-.40232	-.35498	.52076	0.29838	-.19960	.43692	7.07806	.05
12-2	VE	ELI	-.44106	-.38025	.51245	-.33388	-.20915	.47623	8.79936	.01
12-3	VE	CI	-.17045	.11568	.13487	-.18950	.14124	.22054	1.53375	NS
12-7	ELI	ED	-.14110	.22694	.62530	-.46471	.51752	.42780	6.72043	.05
12-42	ELI	CI	-.26549	.22195	.45350	-.46094	.43099	.46694	8.36481	.01
12-38	ARC	ED	-.28154	-.25857	.53871	-.20040	-.15061	.30881	3.16255	NS
12-30	MA	GIT	-.26756	-.34849	.64641	-.07265	-.30153	.35287	4.26683	.05
12-45	GIT	ARC	-.24858	-.10629	.60740	-.29160	.07083	.25487	2.08412	NS
12-35	MA	ARC	-.40152	-.44951	.70537	-.16807	-.33096	.46503	8.27765	.01
12-40	VE	ELI	.30376	.30761	.51245	.19816	.20606	.35154	4.23019	.05
12-44	VE	ED	-.20332	-.20897	.56569	-.12516	-.13817	.23307	1.72322	NS
12-39	PA	ELI	.29747	.30370	.71144	.16484	.18643	.32504	3.54401	NS
12-41	ELI	CI	.14007	.26950	.45350	.02247	.25931	.27024	2.36356	NS
12-43	VE	ED	.16244	.16009	.56569	.10570	.10029	.18228	1.03106	NS
EOC TEST	MA	ELI	.33499	.31747	.77549	.22276	.14472	.34723	4.11289	NS

TABLE 14 (Continued)

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Dix

Variable x_1	Predictors x_2	x_3	Correlations $r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
SUM C+CT	GIT	CI	-.11287	.20986	.51440	-.30028	.36432	.33219	3.72109	NS
SUM RETAKE	CI	ED	-.28448	-.25405	.43493	-.21458	-.16072	.31918	3.40291	NS
1ST RETAKE	VE	CI	.30181	-.28399	.13487	.34641	-.33071	.44550	7.42839	.05
LESSONS	VE	GIT	-.21045	-.25873	.63745	-.07668	-.20985	.26539	2.27305	NS
EOC T.S.	VE	ED	.31321	.36498	.56569	.15698	.27618	.38726	5.29275	.05
EOC ERROR	MA	CI	.17516	.15600	.49325	.12979	.09198	.19257	1.15534	NS

TABLE 15

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Polk

df - 1/23 N = 25

Variable	Predictors		Correlations							
x_1	x_2	x_3	$r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	P
12-1	PA	CI	.49336	-.38080	-.17204	.44090	-.30495	.57762	11.51614	.01
12-2	ELI	CI	-.13632	.14769	.22462	-.17850	.18778	.22818	1.26332	NS
12-3	PA	CI	.18406	.28692	-.17204	.24054	.32830	.37212	3.69671	NS
12-7	MA	CI	.36451	-.49031	.06936	.40044	-.51808	.63245	15.33258	.01
12-42	ELI	ARC	-.35506	.39845	.36618	-.57854	.61030	.66977	18.71126	.01
12-38	MA	ED	.48145	.25211	.07964	.46432	.21513	.52705	8.84635	.01
12-30	MA	ARC	.28896	.29761	.26697	.22559	.23739	.36856	3.61524	NS
12-45	GIT	CI	-.36188	-.24851	.36769	-.31279	-.13350	.38258	3.94375	NS
12-35	GIT	ED	-.48482	-.18886	.59961	-.58017	.15901	.50124	7.71765	.05
12-40	GIT	CI	-.36436	.29721	.36769	-.54769	.49859	.58970	12.26204	.01
12-44	VE	PA	-.43383	-.38527	.33066	-.34405	-.27151	.50385	7.82547	.05
12-39	ARC	ED	-.32505	-.32252	.15988	-.28066	-.27765	.42518	5.07533	.05
12-41	VE	ED	.31640	.29652	.64249	.21439	.15878	.33899	2.98614	NS
12-43	VE	CI	.33252	.22423	.26485	.29374	.14643	.36126	3.45224	NS
EOC TEST	VE	MA	.13591	.18173	.25218	.09620	.15747	.20419	1.00062	NS

TABLE 15 (Continued)

Betas and Multiple Correlations to Variable Solutions

MOS 71 H 20 Fort Polk

Variable x_1	Predictors x_2	x_3	Correlations $r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
SUM C+CT	MA	GIT	.24082	-.39108	.31233	.40220	-.51670	.54674	9.80694	.01
SUM RETAKE	VE	PA	-.38281	-.29430	.33066	-.32054	-.18831	.42205	4.98485	.05
1ST RETAKE	CI	ARC	.38338	-.42683	-.11588	.33846	-.38761	.54333	9.63353	.01
LESSONS	VE	ARC	.41972	.25078	.38574	.37944	.10441	.43063	5.23627	.05
EOC T.S.	PA	MA	-.23556	.25759	.23981	-.31548	.33324	.40019	4.38596	.05
EOC ERROR	ARC	ED	-.29264	-.18181	.15988	-.27049	-.13856	.32303	2.67960	NS

TABLE 16

Betas and Multiple Correlations to Variable Solutions

MOS 71 B 20/30 All Posts Combined

df = 1/49 N = 51

Variable	Predictors		Correlations							
x_1	x_2	x_3	$r_{1.2}$	$r_{1.3}$	$r_{2.3}$	B_2	B_3	$r_{1.23}$	F	p
12-27	PA	ARC	-.12180	-.16359	.30813	-.07888	-.13928	.17998	1.64041	NS
12-32	VE	PA	-.20186	-.15524	.56197	-.16753	-.06110	.20809	2.21780	NS
12-38	VE	CI	-.07696	-.05336	.26533	-.06756	-.03543	.08420	.34989	NS
12-30	ELI	ARC	.14766	-.09621	.27169	.18765	-.14719	.20462	2.14128	NS
12-31	PA	ARC	-.20855	-.22480	.30813	-.15389	-.17738	.26827	3.80000	NS
12-35	PA	ARC	-.30896	-.34111	.30813	-.22524	-.27171	.40283	9.49153	.01
12-33	CI	ARC	.10635	.10181	.20660	.08912	.08340	.13405	.89657	NS
EOC TEST	VE	ARC	-.31942	-.41366	.25122	-.23002	-.35588	.46977	13.87560	.01
SUM C+CT	VE	ARC	-.23985	-.25036	.25122	-.18887	-.20291	.31000	5.20968	.05
SUM RETAKE	GIT	ARC	-.27855	-.30226	.27263	-.21189	-.24449	.36459	7.51171	.01
1ST RETAKE	MA	ARC	-.28515	-.25842	.42189	-.21426	-.16803	.32329	5.71912	.05
LESSONS	GIT	CI	.25772	.27235	.35325	.18454	.20716	.32246	5.68628	.05
EOC T.S.	VE	ED	.24001	.30942	.66301	.06221	.26818	.31290	5.31827	.05
EOC ERROR	MA	ELI	-.24035	-.09317	.66301	-.31865	.11810	.25609	3.43919	NS

Inspection of the results of this analysis leads to conclusions much like those from the preceding analysis using the full set of predictor variables, except that many more of the multiple correlations from the present analysis proved to be significant. However, examination of the variables that yielded the best prediction shows that for any particular part of the course, or even for the course as a whole, there is remarkable inconsistency from Training Center to Training Center. This inconsistency suggests that the present results probably are largely attributable to chance. That is, if the whole study were to be repeated, it probably would be found that different variables would be selected next time, and that the ones selected in this analysis would no longer be the best predictors, and perhaps not even good predictors.

DISCUSSION

Two major findings have emerged from this study. One is that there are in fact some highly significant differences from Training Center to Training Center in student performance on the various subportions of the instruction for MOS 71B10 and MOS 71H20. (The number of students available for MOS 71B20/30 was too small to permit analysis in this manner.) The number of these differences, and the very high levels of significance achieved by these differences leave no doubt that they are real.

On the other hand, it is equally clear that present efforts to determine the reasons for such differences have not been overly successful. While differences exist from Center to Center in the quality of student input to the courses, these differences in student input quality seem not to be related to the quality of the student's performance on the course, as measured by hours for completion of the various parts of the course. The second of the two different multiple correlation analyses did yield a number of significant relationships between input (or predictor) variables and dependent variables. However, the variability in the predictors chosen, from Center to Center, suggests that there is a substantial degree of unreliability in the findings, and that the results must be used with a great deal of caution. With this caution, the following steps outline the procedure for using the findings in Tables 6-16 to predict student completion times for each subportion of the course, for each of the Training Centers.

For any prospective student's predicted score on any of the dependent variables, the following equation is used:

$$X = \beta_2 \frac{\sigma_1}{\sigma_2} X_2 + \beta_3 \frac{\sigma_1}{\sigma_3} X_3 + (M_1 - \beta_2 \frac{\sigma_1}{\sigma_2} M_2 - \beta_3 \frac{\sigma_1}{\sigma_3} M_3)$$

In this equation, the following definitions apply:

X = the student's predicted score on the dependent variable, as, for example, the number of hours to complete the course.

β = a beta weight. These are taken from the columns of Table labeled B. Please note that the correct B, as indicated by the subscript, must be used, corresponding to the variables in the columns under "Predictors".

σ = standard deviation of the variable concerned.

X_2, X_3 = the student's raw score on the "Predictor". This is obtained from his Form 20.

M = the mean of the variable concerned. Both the means and the standard deviations can be obtained from Tables 3-5.

Step 1. Write down the equation (or, alternatively, use a computer, in which case all the following steps would be done by the programmer) so that the values can be inserted.

Step 2. Depending on which training center is involved, go to the appropriate Table (Tables 6-16) that contains the Betas and multiple correlations for that training center. Use the above formula for prediction only if the multiple correlation is significant. If the correlation was significant, as indicated by the presence of a number in the last column of the table, then copy in the betas corresponding to the variables identified in the columns under "Predictors".

Step 3. Go to Tables 3-5 and copy in the means and standard deviations of the appropriate variables.

Step 4. Go to the student's Form 20, and copy in the Aptitude Area scores identified under "Predictors" in Table 1.

Step 5. Perform the calculations required to solve the equation.

These steps are illustrated in Table 17 for booklet 12-11, for MOS 71 B 10, for Fort Jackson, as a guide for applying the above steps.

TABLE 17

Illustrative Example

Booklet $12\text{-}11_T$, MOS 71 B 10, Ft. Jackson

Step 1.

$$X_1 = \beta_2 \frac{\sigma_1}{\sigma_2} X_2 + \beta_3 \frac{\sigma_1}{\sigma_3} X_3 + [M_1 - \beta_2 \frac{\sigma_1}{\sigma_2} M_2 - \beta_3 \frac{\sigma_1}{\sigma_3} M_3]$$

Step 2. For variable $12\text{-}11_T$, the correlation (.44003) was significant (.001). The "predictors" were CI and ELI. The values are then inserted in the equation as follows:

$$X = (-.34837) \frac{\sigma_1}{\sigma_2} X_2 + (-.13986) \frac{\sigma_1}{\sigma_3} X_3 + [M_1 - (-.34837) \frac{\sigma_1}{\sigma_2} M_2 - (-.13986) \frac{\sigma_1}{\sigma_3} M_3]$$

Step 3. From Table 3, the means and standard deviations are next copied in: (Note that M and σ refer to the predicted or dependent variable, $12\text{-}11_T$. Also that X_2 refers to CI, and X_3 to ELI.)

$$X = (-.34837) \frac{15.05}{22.60} X_2 + (-.13986) \frac{15.05}{21.95} X_3 + [18.43 - (-.34837) \frac{15.05}{22.60} (101.93) - (-.13986) \frac{15.05}{21.95} (99.02)]$$

Note that insertion of means and standard deviations completes the formula, with the exception of the student's raw scores. These are obtained from the student's Form 20.

Step 4. One student's data were selected at random from data sheets collected during this project. His scores were:

$$CI = 92 = X_2$$

$$ELI = 112 = X_3$$

TABLE 17
(cont'd)

These are now inserted in the formula:

$$X = (-.34837)\frac{15.05}{22.60}(92) + (-.13986)\frac{15.05}{21.95}(112) + [18.43 - (-.34837)$$

$$\frac{15.05}{22.60}(101.93) - (-.13986)\frac{15.05}{21.95}(99.02)]$$

X = 19.49 Student's actual hours = 14.

The worked-out example in Table 17 shows not only the computational procedures but also will serve as a check for someone attempting to duplicate the computation, to confirm that the correct tables and columns are being used for the necessary data to complete the computations.

As a further illustration of the problems that might be associated with depending too heavily on these regression equations, however, ten additional students were selected, and their CI and ELI scores processed through the computation. The results are shown in Table 18. If the predicted score (total hours, including hours of retake) for each student is compared with his actual score, it is apparent that the errors of prediction are rather high. Put another way, there are many factors operating to determine how many hours the student will take on any particular subportion of the course. The two selected predictors are only a part of the total set of factors. Consequently, they predict only a part of the student's performance, and there will be errors of prediction because this is so. The more important the other factors are, the greater these errors will be. (An index to the importance of these other factors can be found by squaring the entry in the column labeled $r_{1.23}$, in Tables 6-16. The size of the resulting number, in comparison to 1.00, shows the importance of the two predictors in relation to all factors.)

It is clear that the accuracy of prediction from the present data is not overwhelming. This, of course, raises a question as to why. Three possibilities immediately suggest themselves:

a. The number of students in the samples available for regression analysis was simply too small to permit an adequate level of stability in the results. (This is probably at least a part of the problem.)

b. There may be administrative differences between the centers, and administrative factors that even affect students differently within a given center. For example, it is quite conceivable that differences in administration procedures could make substantial differences in the training time required for any subportion of the course, and for the course as a whole, from center to center. Similarly, major differences from center to center could also be produced by administrative differences in what happens to the student if he finishes the materials early. If the student were to be allowed free time for completing the materials early, or an early leave at the end of all of the materials, then he might well be highly motivated to complete the materials at his best pace. On the other hand, if he is used for work details, or if he is assigned to a casual company at the end of early completion of the course materials as a whole, then he might well turn out to be a "slow learner". (There is already some evidence, from earlier research, to support this as at least one factor.)

TABLE 18

ILLUSTRATIVE EXAMPLE

Computation of Sample Scores

	1	2	3	4	5	6	7	8	9	10	11
CI	92	98	90	84	118	133	88	76	121	92	107
ELI	112	106	101	88	104	120	104	72	72	118	98
PREDICTED	19.49	19.15	21	23.65	14.22	9.15	21.12	26.98	16.54	18.85	17.29
ACTUAL	14.00	11	5	6	4	8	18	7	12	12	31
ERROR	5.49	6.15	16	17.65	10.22	1.15	3.12	19.98	4.54	6.85	-13.71

c. The problem of attempting to predict performance on programed instruction is not typical of the kinds of problems normally solved by such statistics. It is possible that the basic principle of programed instruction, that the student proceeds at his own pace, exchanging time for a lack of input ability, or the reverse, is counter to the whole assumption that performance can be predicted. (This is difficult to accept, however. There may very well be an unusual distribution of student performance results, i.e., not normal, which would make prediction more difficult, and less accurate. This needs to be investigated further.)

It is probable that the present set of results should be interpreted as interim results, and that additional data should be collected. With a considerably larger sample, it would be possible to do a considerably better job of determining where the problems are in making prediction more accurate. Further, with a larger sample, it would be possible to increase the number of predictors used, and that also would increase the precision of the results.

SUMMARY

In this research, there were two basic problems. One was to determine if there was significant variation from training center to training center in the performance of students on the programed materials for MOS 71 B 10 and MOS 71 H 20, and then to attempt to determine the reasons for such variation if found. The findings were:

a. When student performance was compared across training centers, both for hours to complete individual subportions of the course and hours to complete the total course, a substantial number of highly significant differences were found. (For MOS 71 B 10, nine of 10 comparisons across training centers were significant at the .01 level or better. For MOS 71 H 20, of 16 comparisons two were significant at the .05 level and nine at the .01 level or better.) This indicates a pattern of very major differences from center to center.

b. When multiple regression analyses were conducted to attempt to predict the sources of the variation in performance, the results were not encouraging. Many of the correlations were not statistically significant when all the possible predictors were used, and errors of prediction can be expected to be high when only two predictors are used in the alternative approach outlined above. This suggests that there probably are large unmeasured factors at work to produce the differences found between training centers. Differences in administration conditions, and administrative policies concerning what happens to students when they finish work on the programed materials were mentioned as possible factors.

c. A probable additional contributing factor is almost certainly the small sample sizes available for the present analyses. In order to obtain greater predictive precision, it was suggested that larger sample sizes be accumulated, so as to obtain greater stability in the samples, and permit the use of more variables in the predictor equations. Both outcomes would increase the precision of the results.

APPENDIX A

Correlations Among Predictor Variables, and Between Predictor Variables and Dependent Variables

TABLE A-1

Correlation Matrix for Predictors

MOS 71 B 10 -- Fort Knox

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.62432									
MA	.60119	.43672								
ELI	.50502	.57433	.49847							
GIT	.58670	.49082	.53078	.53642						
CI	.42327	.22342	.43555	.36389	.51290					
ARC	.55346	.48001	.31022	.34560	.22779	.12428				
ED	.66617	.33848	.32179	.28344	.34242	.30165	.49085			
AR	.76369	.64844	.56518	.47596	.42679	.40567	.56928	.61956		
ENTRY T.S.	.26129	.15755	.08364	.13543	.06897	.17303	.13900	.21749	.21642	
ENTRY ERROR	.06039	.17871	.10367	.16950	-.09116	.09808	.19354	-.10947	-.00287	.10972

N = 54
df = 52

TABLE A-1 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Knox

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-21	I	.09150	.07607	.10297	-.02518	-.09188	-.24565	.00069	.01848
	T	Same as (I)							
12-22	I	.11947	.22223	.12764	.09584	.11839	-.30107	.01235	-.02321
	T	Same as (I)							
12-17	I	-.57882	-.48001	-.40819	-.28858	-.53115	-.25181	-.47400	-.41023
	T	-.56479	-.48311	-.40631	-.28273	-.53554	-.23267	-.46383	-.42224
12-6	I	-.54225	-.48851	-.39777	-.23915	-.46107	-.29314	-.33807	-.44900
	T	-.54459	-.48781	-.39886	-.23560	-.46598	-.29066	-.33250	-.45415
12-13	I	-.36784	-.27060	-.26576	-.10830	-.24193	-.38331	-.35942	-.47247
	T	-.36979	-.27085	-.26412	-.11333	-.24767	-.38319	-.36060	-.47426
12-23	I	-.36448	-.33770	-.16315	-.11809	-.13648	-.19334	-.28046	-.36881
	T	Same as (I)							
12-9	I	-.37413	-.36156	-.20031	-.19610	-.17670	-.15543	-.39399	-.50527
	T	-.39755	-.41074	-.23442	-.26923	-.19613	-.13434	-.41542	-.50143
12-11	I	-.30589	-.16619	-.11628	-.03048	-.05710	-.13559	-.24970	-.48278
	T	-.36922	-.14709	-.18892	-.07022	-.14774	-.13639	-.21582	-.47744
12-4	I	-.08127	-.05108	-.05884	.04015	-.13605	.05504	-.11733	-.23683
	T	-.06434	-.08883	-.07213	.02769	-.16065	.08585	-.12131	-.26855

TABLE A-1 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Knox

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
EOC TEST	I	-.28072	-.14060	-.10631	-.09522	-.16122	-.20194	-.03467	-.22672
	T	-.34840	-.22631	-.18643	-.17827	-.23041	-.16876	-.05229	-.27125
SUM C + CT		-.51133	-.36627	-.27155	-.15158	-.32064	-.31533	-.22784	-.02893
SUM RETAKE		-.25546	-.19350	-.26848	-.21016	-.30841	.02242	-.04835	-.13634
FIRST RETAKE		-.42635	-.39107	-.31611	-.38985	-.37334	-.19182	-.19228	-.18001
LESSONS		No Data							
EOC T.S.		.22113	.26823	.04968	.10264	.20689	.11763	.24340	.17518
EOC ERROR		.01161	.21096	-.03863	.25093	.02430	-.08002	.27884	.03703

TABLE A-2

Correlation Matrix for Predictors

MOS 71 B 10 -- Fort Jackson

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.39720									
MA	.57213	.62787								
ELI	.38536	.59305	.60332							
GIT	.43865	.42719	.69117	.56271						
CI	.28605	.22183	.51153	.54080	.65343					
ARC	.05396	.03051	.01336	-.07280	.02377	.08529				
ED	.55583	.14964	.19227	.13630	.25024	.10698	-.10394			
AR	.73362	.55272	.55061	.37158	.50673	.30555	.05177	.54111		
ENTRY T.S.	.37273	.19598	.29984	.20209	.23393	.22086	.19853	.55716	.45361	
ENTRY ERROR	.10175	.19574	.18524	.27066	.22382	.09731	.10065	.14086	.14356	.42948

N = 46
df = 44

TABLE A-2 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Jackson

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-21	I	.10961	.06698	.09135	.06322	.20825	.10561	.04649	.22889
	T	.11260	.07042	.09552	.06268	.20890	.10703	.04666	.22920
12-22	I	-.07220	-.11894	-.06020	-.17056	-.17342	-.13640	-.15660	.00029
	T	Same as (I)							
12-17	I	-.12265	-.00751	.06968	.10507	.08586	.10340	-.28205	-.09293
	T	-.14945	.00643	.06418	.06862	.05260	.10108	-.21905	-.16236
12-6	I	-.24936	-.02173	-.17189	-.11246	-.13772	-.11164	-.20172	-.17072
	T	-.26254	-.01016	-.17252	-.13550	-.14891	-.13643	-.19768	-.18673
12-13	I	-.15117	-.20138	-.36696	-.23003	-.54174	-.54173	-.24577	-.11418
	T	-.19539	-.17536	-.41072	-.21582	-.46720	-.46782	-.19262	-.16302
12-23	I	-.11559	-.01667	.07426	-.10934	-.02893	-.06239	-.08791	-.21304
	T	-.19022	-.05229	.01349	-.15130	-.05662	-.10805	-.06207	-.26472
12-9	I	.06097	.04927	-.03977	.01393	-.00837	-.18756	-.10634	.03178
	T	-.05020	.03281	-.12956	-.02298	-.07829	-.25022	-.16866	-.05859
12-11	I	-.03184	-.27126	-.22052	-.31592	-.33182	-.41323	-.10157	-.03593
	T	-.04919	-.27526	-.22941	-.32826	-.34469	-.42401	-.08942	-.00916
12-4	I	-.16097	-.05931	-.18198	-.23672	-.16981	-.26810	-.24625	-.19061
	T	-.14661	-.08420	-.16563	-.23028	-.15401	-.27011	-.26580	-.19126

TABLE A-2 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Jackson

Variables	Predictors							
	VE	PA	MA	ELI	GIT	CI	ARC	ED
EOC TEST I	-.04855	-.17567	-.12681	-.00636	-.03387	-.10898	-.15553	-.27008
T	-.18188	-.26094	-.24812	-.13324	-.14694	-.19474	-.06366	-.35281
SUM C + CT	.05122	-.15236	-.14259	-.11897	-.15478	-.27799	-.22784	-.02893
SUM RETAKE	-.39898	-.21200	-.40936	-.30952	-.29825	-.31139	.09451	-.37681
FIRST RETAKE	-.20841	-.18699	-.29393	-.26883	-.17460	-.25702	-.13253	-.18630
LESSONS	-.37600	-.32548	-.28070	-.36240	-.18606	-.21774	-.20399	-.38914
EOC T.S.	.32886	.11035	.28585	.02509	.18015	.10034	.21402	.55179
EOC ERROR	-.11145	-.30822	-.09667	-.08595	-.01481	-.03241	-.14815	.03502

TABLE A-3

Correlation Matrix for Predictors

MOS 71 B 10 -- Fort Wood

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.36437									
MA	.63375	.57149								
ELI	.56090	.70826	.63463							
GIT	.40077	.42828	.50993	.29244						
CI	.32713	.17187	.36945	.36917	.47421					
ARC	.35016	.36927	.59829	.24481	.60163	.31490				
ED	.59098	.28696	.60171	.36993	.46774	.43551	.45167			
AR	.73568	.40647	.67247	.47769	.52310	.25805	.45868	.66923		
ENTRY T.S.	.60533	.35404	.46990	.52822	.24676	.42049	.17809	.60157	.46544	
ENTRY ERROR	.07473	.08902	.11405	.22202	-.12109	.18042	.24450	.38137	-.00370	.47516

df = 22

TABLE A-3 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Wood

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-21	I	-.00380	-.05781	.27992	.04496	-.05135	-.10314	.06889	-.10911
	T	-.00783	-.06714	.27068	.04081	-.05639	-.08594	.07884	-.11323
12-22	--	No Data							
12-17	I	-.20357	-.27433	-.32417	-.00820	-.30703	-.34088	-.28948	-.41668
	T	-.26361	-.29210	-.34948	-.05265	-.29192	-.35144	-.33109	-.44385
12-6	I	.08816	-.19600	.00102	.00995	-.18720	-.33750	-.08825	-.22626
	T	.00079	-.30190	-.06179	-.09247	-.17851	-.33605	-.09838	-.29074
12-13	I	-.09832	-.12211	-.02525	-.20757	-.07779	-.43087	.11161	-.23559
	T	-.09121	-.21635	-.03366	-.26782	-.04906	-.45667	.04963	-.24335
12-23	I	-.46772	-.04472	-.52853	-.17705	-.26232	-.61766	-.57632	-.52331
	T	-.44730	-.09314	-.52901	-.20373	-.23769	-.61261	-.59417	-.50876
12-9	I	-.28841	.00732	-.33840	.01739	-.63842	-.35262	-.47004	-.48720
	T	-.37062	-.03626	-.40832	-.06728	-.65919	-.48449	-.58127	-.55278
12-11	I	-.19693	-.07000	-.33360	.16782	-.29409	-.33466	-.38244	-.47655
	T	-.22052	-.09385	-.33059	.13849	-.27450	-.22488	-.27434	-.47449
12-4	I	-.34740	-.16304	-.01108	-.11360	-.30521	-.07317	-.16408	-.41479
	T	Same as (I)							

TABLE A-3 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Wood

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
EOC TEST	I	.21780	-.11468	.07677	.23187	-.25639	-.18783	-.41951	-.18238
	T	.17731	-.22928	-.01652	.03370	-.23865	-.31095	-.45623	-.22224
SUM C + CT		-.10574	-.19084	-.14201	.11733	-.39496	-.35553	-.41635	-.40830
SUM RETAKE		-.14226	-.28926	-.19311	-.32156	-.00654	-.18400	-.15778	-.17444
FIRST RETAKE		-.36187	-.09937	-.02786	-.10776	-.09516	-.01087	.18318	-.21633
LESSONS		-.58890	-.39941	-.42008	-.36966	.00580	.15792	-.12102	-.52576
EOC T.S.		.50268	.24329	.38546	.35110	.15522	.35289	.26418	.39767
EOC ERROR		-.30117	-.05848	.05446	.04307	.00343	-.19616	.12558	-.12029

TABLE A-4

Correlation Matrix for Predictors

MOS 71 B 10 -- Fort Dix

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.42389									
MA	.29885	.49126								
ELI	.04650	.53287	.63777							
GIT	.39267	.56821	.48335	.45052						
CI	-.36144	.08062	.14777	.23415	.32106					
ARC	.43821	.29344	.15486	.23412	.43593	-.04483				
ED	.51924	.31604	.36431	.07098	.45740	-.10722	.35218			
AR	.36566	.63282	.45400	.47961	.57985	.05229	.20329	.34302		
ENTRY T.S.	.34541	.27969	-.05351	-.06150	.22402	-.03230	.50897	.37953	.27969	
ENTRY ERROR	.07597	.06392	-.06439	.05694	-.16720	-.12621	.23388	.09296	.06392	.49309

N = 41
df = 39

TABLE A-4 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Dix

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-21	I	.03948	.28996	-.04771	.07018	.09771	.21936	.20839	-.15037
	T	.03722	.29206	-.04795	.07249	.10165	.22558	.21303	-.14331
12-22	I	.16562	.24967	-.04492	.05590	.20310	.07933	.37605	.35632
	T	Same as (I)							
12-17	I	-.05707	-.36143	-.15535	-.31062	-.39927	-.10046	-.21516	-.39550
	T	-.11964	-.41406	-.19216	-.33337	-.42777	-.06774	-.23242	-.43181
12-6	I	-.26200	-.05745	-.33060	-.20402	-.25661	.01830	-.34790	-.36762
	T	Similar to (I) DIF. = 1							
12-13	I	-.24003	-.22871	-.34354	-.16895	-.46629	-.01631	-.38931	-.48544
	T	-.24256	-.22990	-.35241	-.18210	-.46231	-.01477	-.41196	-.49736
12-23	I	-.30844	-.12585	-.22355	.01927	-.07893	.00370	-.30800	-.46072
	T	-.32376	-.13291	-.24348	.01274	-.09874	.00569	-.32351	-.47630
12-9	I	-.18614	-.08146	-.14261	-.09844	-.17951	.06761	-.26188	-.50584
	T	-.16610	-.11855	-.15895	-.14573	-.20167	.12313	-.24042	-.49316
12-11	I	-.41562	-.37960	-.28591	-.21396	-.52293	.00718	-.58922	-.56815
	T	-.41433	-.41477	-.30201	-.00404	-.28210	.01493	-.59556	-.57192
12-4	I	-.36977	-.20071	-.15534	-.00404	-.28210	.10338	-.34306	-.49315
	T	-.37822	-.28691	-.18715	-.08793	-.32990	.11331	-.38373	-.52094

TABLE A-4 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Dix

Variables	Predictors							
	VE	PA	MA	ELI	GIT	CI	ARC	ED
EOC TEST I	-.51582	-.28591	-.10902	-.24722	-.24878	.42564	-.33672	-.24158
T	-.58342	-.40155	-.23961	-.26388	-.38847	.31782	-.55145	-.30303
SUM C + CT	-.43738	-.28553	-.32750	-.20526	-.42395	.11984	-.48920	-.59682
SUM RETAKE	-.39783	-.50387	-.37514	-.32804	-.49830	.06203	-.60294	-.33916
FIRST RETAKE	-.37272	-.27734	-.16112	-.05704	-.31422	-.02526	-.33740	-.22013
LESSONS	-.19475	-.17810	-.01952	.01294	-.27064	.01940	-.44347	-.41503
EOC T.S.	.18392	.24549	.13426	.16417	.34238	.32583	.33392	.38455
EOC ERROR	.12997	.08944	-.03389	-.16056	-.18478	-.33555	.00246	.07917

TABLE A-5

Correlation Matrix for Predictors

MOS 71 B 10 -- Fort Polk

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.61681									
MA	.62724	.68800								
ELI	.69784	.77209	.70730							
GIT	.56867	.56566	.61335	.68258						
CI	.18770	.21906	.41195	.18627	.23427					
ARC	.20678	.12740	.06157	.02724	-.00863	.23788				
ED	.40483	.05307	.08580	.17376	.13625	-.10342	.20324			
AR	.67432	.64229	.59631	.68963	.60383	.31854	.10984	.41213		
ENTRY T.S.	-.02819	.26709	-.23749	-.07727	-.05358	-.00831	.33502	.42216	.26709	
ENTRY ERROR	.21233	.28721	.09005	.06955	-.03137	.11795	.15208	.08464	.28721	.63809

N = 32
df = 30

TABLE A-5 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Polk

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-21	I	.25365	.03447	.10851	.07376	.11535	.13700	-.15064	.24072
	T	.18195	.02833	.03454	.05605	.07102	.12370	-.12505	.20907
12-22	I	-.26731	-.32251	-.26888	-.34163	-.55162	-.06275	.09374	-.19324
	T	Same as (I)							
12-17	I	-.17184	-.02012	-.14638	-.10707	-.10636	-.36781	-.02736	-.28064
	T	-.18535	-.00177	-.11526	-.12495	-.13952	-.30281	-.00602	-.27223
12-6	I	.10600	.00553	-.09979	-.20992	-.07463	-.09688	.13965	-.14669
	T	.00673	-.08037	-.19706	-.27684	-.13523	-.03985	.10455	-.31363
12-13	I	-.28921	-.31365	-.43518	-.30393	-.31093	-.38033	-.36397	.02015
	T	-.32181	-.35936	-.43090	-.36418	-.27658	-.32330	-.30833	-.01976
12-23	I	.22569	.02760	-.10643	-.07170	-.11786	-.15558	.12009	-.46915
	T	Same as (I)							
12-9	I	-.01799	-.19846	-.03569	-.08694	-.10593	-.04479	-.28428	-.38067
	T	-.11187	-.25139	-.10707	-.16586	-.07876	.00993	-.20731	-.44337
12-11	I	.04628	.16301	.13046	.15454	-.10438	-.00885	-.08988	-.15046
	T	.00916	.15988	.08668	.15110	-.11812	-.02371	-.08734	-.16029
12-4	I	-.02122	-.40711	-.18186	-.26152	-.33995	-.14852	.02454	.25977
	T	Same as (I)							

TABLE A-5 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 10 -- Fort Polk

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
EOC TEST	I	-.20184	-.36484	-.39592	-.40064	-.37323	-.24562	.03253	-.25142
	T	Same as (I)							
SUM C + CT		-.04868	-.09891	-.10528	-.18411	-.28747	-.12738	-.09527	-.28057
SUM RETAKE		-.37281	-.15110	-.33539	-.24681	-.18229	.10855	.11541	-.36143
FIRST RETAKE		-.10596	-.00930	-.16415	-.02993	-.18875	.09612	-.15543	-.38610
LESSONS		-.11301	-.03265	.15821	.01177	.02619	.00622	-.34532	-.45970
EOC T.S.		.14187	-.03329	-.03933	.00181	-.02283	.02885	.15146	.33402
EOC ERROR		.07861	-.07642	-.19787	.05838	-.09908	-.07938	.38954	.18699

TABLE A-6

Correlation Matrix for Predictors

MOS 71 H 20 -- Fort Knox

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.59130									
MA	.34428	.37447								
ELI	.53212	.71091	.37610							
GIT	.59051	.33097	.19795	.46663						
CI	.27107	.20309	.33299	.20613	.37330					
ARC	.23292	.41213	.11933	.24975	.01432	-.06314				
ED	.50653	.46404	.15673	.33136	.27966	.29863	.23201			
AR	.70240	.58341	.29368	.51011	.29644	.20223	.41292	.62247		
ENTRY T.S.	.37750	.37224	.06257	.16990	.04088	.28394	.40568	.54942	.39597	
ENTRY ERROR	-.04617	-.14822	-.13481	-.25875	-.10437	-.09157	-.07248	.03438	-.02362	.10238

N = 42
df = 40

TABLE A-6 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 -- Fort Knox

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-1	I	-.14836	-.08731	-.08183	.10206	-.05962	-.18480	.38679	-.23356
	T	Same as (I)							
12-2	I	-.03100	-.19480	-.09733	-.17951	.06284	-.25941	-.11875	-.17466
	T	Same as (I)							
12-3	I	-.24053	-.07343	-.02042	-.03605	.11576	-.05634	-.46165	-.28069
	T	Same as (I)							
12-7	I	.10219	-.12133	-.23955	-.20266	.10317	.10296	-.45579	.21299
	T	Same as (I)							
12-42	I	.22790	.22035	.15929	.04293	.04865	.09266	.32130	.31666
	T	Same as (I)							
12-38	I	.07831	.04111	.21513	.24533	.10143	-.02071	-.02921	.03975
	T	Same as (I)							
12-30	I	-.10936	.16066	-.09045	-.06819	-.17562	-.22187	.01576	-.06159
	T	Same as (I)							
12-45	I	.00020	-.21518	-.17084	-.05115	.17921	.11146	-.00534	-.11278
	T	Same as (I)							
12-35	I	-.25474	-.13241	-.22587	-.19340	-.02407	-.32149	-.18030	-.09291
	T	Same as (I)							

TABLE A-6 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 -- Fort Knox

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-40	I	.01199	-.07184	.03453	-.00902	-.06452	-.15279	.06855	-.01783
	T	Same as (I)							
12-44	I	-.05780	-.21302	-.19209	-.01196	.01434	-.18844	.12470	-.14474
	T	Same as (I)							
12-39	I	.19194	.17521	-.06200	.14290	.04584	-.04441	.12977	.34813
	T	Same as (I)							
12-41	I	-.02184	.05378	.09996	.15887	-.12262	-.21914	-.22758	-.23633
	T	Same as (I)							
12-43	I	-.23726	-.21775	-.07968	-.10431	-.24594	-.34510	-.20631	-.01909
	T	-.24150	-.22021	-.07769	-.11005	-.24548	-.34072	-.20041	-.02313
EOC TEST	I	-.22148	-.26041	-.11660	-.24202	-.34664	-.33115	-.08429	-.10116
	T	Same as (I)							
SUM C + CT		-.13500	-.20054	-.18906	-.14435	-.10609	-.34346	-.14050	-.06408
SUM RETAKE		No Data							
1st RETAKE		No Data							
LESSONS		No Data							
EOC T.S.		.30820	.12829	.11512	-.04146	.09342	.28909	.32207	.62080
EOC ERROR		.13716	.06038	-.18482	.04252	.10635	-.03089	.29914	.31548

TABLE A-7

Correlation Matrix for Predictors

MOS 71 H 20 - Fort Jackson

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.17886									
MA	.33038	.30897								
ELI	.50965	.42971	.72120							
GIT	.66052	.14164	.52207	.60804						
CI	.35259	.27660	.10856	.22609	.25899					
ARC	.29377	-.09037	.44074	.53829	.52638	.10393				
ED	.45118	.18863	.19237	.28203	.15523	.32195	.31599			
AR	.58345	.31610	.61164	.47742	.44835	.46195	.16751	.31777		
ENTRY T.S.	.43458	-.13492	.02080	.25379	.41340	.27892	.30813	.38697	.25305	
ENTRY ERROR	-.43024	.07095	-.12747	-.04481	-.21472	-.07031	.06016	-.05739	-.42672	-.13862

N = 22
df = 20

TABLE A-7 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 - Fort Jackson

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-1	I	-.30599	-.47162	-.08155	-.17085	-.12787	-.42364	.20199	-.22540
	T	Same as (I)							
12-2	I	-.04816	-.36415	.01494	-.21931	.05851	-.18312	-.05165	.03746
	T	Same as (I)							
12-3	I	-.06919	-.03910	-.05841	.14450	.04540	-.28184	.02010	-.43081
	T	Same as (I)							
12-7	I	-.06824	-.49637	-.33918	-.30057	.12220	-.04929	.04897	-.17851
	T	-.14514	-.49809	-.30019	-.26192	.08104	-.09710	.11611	-.16764
12-42	I	-.07893	-.29856	-.13063	.00042	.12344	-.55389	-.02250	-.39891
	T	Same as (I)							
12-38	I	-.55173	-.29097	-.34924	-.33150	-.41883	-.31480	-.23645	-.37284
	T	Same as (I)							
12-30	I	-.11342	-.26065	.00728	-.17112	.03161	-.21495	.08049	-.21498
	T	-.08375	-.27456	-.01231	-.17227	.03199	-.21804	.08029	-.18346
12-45	I	-.06664	.22273	.23798	.16472	.29750	-.28693	.15789	-.03322
	T	-.04648	.26076	.33822	.26185	.25688	-.28692	.18119	.05512
12-35	I	-.26252	-.57127	-.18447	-.34010	.03640	-.39055	-.04397	-.14185
	T	-.34100	-.56137	-.14814	-.30786	-.01717	-.42307	.01018	-.11651

TABLE A-7 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 - Fort Jackson

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-40	I	.00864	-.18613	-.20042	-.15527	.04774	-.06899	-.15536	-.01191
	T	Same as (I)							
12-44	I	.11137	-.30756	-.27573	-.08549	-.05370	-.28170	.00703	-.02674
	T	Same as (I)							
12-39	I	-.33211	.01841	-.34188	-.06117	-.14455	.00144	.03329	-.12624
	T	Same as (I)							
12-41	I	-.12239	.52771	-.00917	.16994	-.04137	-.05057	.03560	-.23387
	T	-.11829	.51573	.02434	.17001	-.02833	-.01785	.07212	-.26170
12-43	I	-.09337	.34583	.01650	.02312	-.28319	.19666	-.03462	.08368
	T	-.27558	.14434	-.10780	-.04877	-.48066	.02724	-.16958	-.10845
EOC TEST	I	-.16754	.08595	.00785	.12467	-.23512	.05165	-.01237	.15467
	T	-.17601	.07621	.01822	.14764	-.24758	.02042	.02600	.16135
SUM C+CT		-.36267	-.31222	-.33212	-.17389	-.08131	-.28599	.05151	-.24874
SUM RETAKE		-.27042	-.03960	.09239	.14293	-.30957	-.16335	.15313	.03234
1st RETAKE		.14417	.02461	.07747	.18897	-.13296	.14435	-.00684	.04623
LESSONS		No Data							
EOC T.S.		.21676	-.04205	.17726	.34661	.46203	.16290	.30338	.13532
EOC ERROR		-.00650	-.41015	-.15756	.05423	.12682	-.08219	.24584	.12823

TABLE A-8

Correlation Matrix for Predictors

MOS 71 H 20 -- Fort Wood

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.43135									
MA	.40691	.45917								
ELI	.36568	.53882	.62998							
GIT	.31201	.28346	.23186	.34278						
CI	.12450	.15981	.04175	.22060	.31150					
ARC	.22910	-.00455	-.09364	-.15787	-.06611	-.28260				
ED	.54178	.30001	.26121	.15573	.30105	.25981	.03232			
AR	.60858	.34189	.43800	.28316	.20120	.01325	.18094	.58022		
ENTRY T.S.	.51937	.23843	.42674	.04349	.19637	-.11059	.06483	.45718	.40734	
ENTRY ERROR	-.00018	.13635	.23916	.12777	.25611	-.07271	.28666	-.01464	-.23176	.09128

N = 28
df = 26

TABLE A-8 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 -- Fort Wood

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-1	I	-.39988	-.11380	-.35496	-.16894	-.30703	-.08676	-.06680	-.17529
	T	Same as (I)							
12-2	I	-.24187	-.23842	-.43189	-.10149	-.02089	.18066	-.25768	-.41737
	T	Same as (I)							
12-3	I	-.27735	-.57125	-.32626	-.44122	-.20467	.03142	.07029	-.17283
	T	Same as (I)							
12-7	I	.02558	-.11541	.05425	.08781	.13436	-.23474	.02185	-.19690
	T	Same as (I)							
12-42	I	-.36247	-.14344	-.12176	-.08022	-.09293	-.26571	-.15561	-.63922
	T	(Same as (I)							
12-38	I	-.19209	-.44616	-.25262	-.32126	-.08134	.14998	-.22688	-.18580
	T	Same as (I)							
12-30	I	.05260	.30202	.18115	.36508	.20393	.53008	-.44528	.15956
	T	Same as (I)							
12-45	I	-.02351	.00143	-.14443	-.00407	-.20220	-.25015	-.05456	-.12030
	T	Same as (I)							
12-35	I	-.31882	.01795	-.25008	-.01075	-.00374	-.12819	.02837	-.31481
	T	-.31756	.01724	-.24075	-.03873	-.01404	-.11088	.05693	-.33917

TABLE A-8 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 -- Fort Wood

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-40	I	-.32389	-.19443	-.03933	-.00528	-.05119	.15319	-.34922	-.35496
	T	Same as (I)							
12-44	I	.03288	.03164	.11128	.06935	.27209	.08824	.03124	.02309
	T	.05489	.04149	.09451	.09148	.25388	.03940	.04133	-.03187
12-39	I	.20903	.23044	.34225	.39345	.23971	.15244	-.24848	-.15125
	T	Same as (I)							
12-41	I	-.34572	.08502	.18741	.23262	.09948	-.21308	-.10229	-.26497
	T	Same as (I)							
12-43	I	-.17166	-.07211	.20896	.12572	.03916	-.63256	-.05448	-.09916
	T	-.23942	-.08210	.18269	.06364	.00488	-.63331	-.02033	-.16523
EOC TEST	I	-.10706	-.17115	-.23806	-.07581	-.06129	.01019	-.18561	-.27936
	T	-.15015	-.20134	-.30176	-.13701	-.08728	-.03184	-.16468	-.35219
SUM C+CT		-.25592	-.15078	-.12712	.03191	.03735	-.02294	-.30191	-.39564
SUM RETAKE		-.31335	-.12204	-.40306	-.34987	-.20216	-.24495	.20006	-.60904
1st RETAKE		-.16343	0.14717	-.35323	-.24952	-.17288	-.25537	.10961	-.62124
LESSONS		-.21153	.00727	-.32135	.03856	-.00093	.17038	.04365	-.34181
EOC T.S.		.44796	.18216	.29971	.08151	.30903	.07854	-.01984	.29610
EOC ERROR		-.06106	.01484	-.05667	.00351	.09271	-.03905	.17180	-.05980

TABLE A-9

Correlation Matrix for Predictors

MOS 71 H 20 -- Fort Dix

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.65327									
MA	.52076	.69269								
ELI	.51245	.71144	.77549							
GIT	.63745	.64082	.64641	.62807						
CI	.13487	.58926	.49325	.45350	.51440					
ARC	.43881	.66330	.70537	.51537	.60740	.59101				
ED	.56569	.71049	.67326	.62530	.61673	.43493	.53871			
AR	.66094	.63343	.52085	.48115	.58988	.42403	.35284	.48843		
ENTRY T.S.	.36603	.35004	.41227	.33037	.32980	.07867	.33319	.42832	.27768	
ENTRY ERROR	.08764	.16027	.15073	.06805	.19657	.09109	.11905	.29120	.09023	.38888

N = 32
df = 30

TABLE A-9 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 -- Fort Dix

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-1	I	-.35498	-.07834	-.40232	-.37099	-.15012	.08861	-.11471	-.30549
	T	Same as (I)							
12-2	I	-.33955	-.27172	-.39854	-.42203	-.19687	-.11503	-.12885	-.15937
	T	-.44106	-.27528	-.38912	-.38025	-.17749	-.05042	-.10167	-.16091
12-3	I	-.17045	-.05613	.05852	-.03673	.00281	.11568	.10513	.05175
	T	Same as (I)							
12-7	I	.05952	.00410	.07439	-.10743	.09752	.15253	.03158	.24100
	T	.04900	-.01616	.04325	-.14110	.05580	.09248	-.01646	.22694
12-42	I	-.19392	.04227	-.20437	-.26549	-.08329	.22195	-.03418	-.04742
	T	Same as (I)							
12-38	I	-.07303	-.09990	-.18358	-.14194	-.15212	-.08965	-.20560	-.24067
	T	-.10430	-.14398	-.22686	-.19744	-.20527	-.17408	-.28154	-.25857
12-30	I	-.07512	-.06117	-.26921	-.16668	-.34434	-.04481	-.20458	-.20742
	T	-.06966	-.06727	-.26756	-.16837	-.34849	-.05671	-.19926	-.21506
12-45	I	-.00971	.09992	-.13290	-.03232	-.25722	.08522	-.12967	.03959
	T	-.01321	.11857	-.08966	.01653	-.24858	.08824	-.10629	-.00764
12-35	I	-.10903	-.20350	-.39615	-.26567	-.29264	-.02258	-.41963	-.21480
	T	-.09974	-.21926	-.40152	-.28512	-.29426	-.10305	-.44951	-.22925

TABLE A-9 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 -- Fort Dix

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-40	I	.30376	.31107	.14185	.30761	.16679	.23355	.08283	.21441
	T	Same as (I)							
12-44	I	-.19733	-.20710	-.11454	-.07735	-.20722	-.12874	-.16420	-.18042
	T	-.20332	-.17948	-.11230	-.04748	-.21185	-.10796	-.17834	-.20897
12-39	I	.12435	.29463	.21873	.30394	.12017	.23142	.12282	.09993
	T	.09871	.29747	.23343	.30370	.11965	.25299	.12231	.09561
12-41	I	-.06775	.01268	.03273	.09299	-.01441	.30294	.10107	.13023
	T	-.07068	.01508	.06945	.14007	-.04935	.26950	.09040	.09881
12-43	I	.23981	.14861	.08927	.13312	.15053	.27279	.06022	.32563
	T	.16244	.04439	.04464	.00762	.00537	.10701	-.07832	.16009
EOC TEST	I	.00858	.27672	.45041	.40172	.17101	.08592	.21668	.24534
	T	.01139	.22084	.33499	.31747	.13111	-.02633	.14019	.10568
SUM C+CT		-.07761	.10742	-.04659	.02233	-.11287	.20986	-.06943	.03564
SUM RETAKE		-.06081	-.04275	-.03707	-.02909	-.11365	-.28448	-.16061	-.25405
1st RETAKE		.30181	.15868	.04789	.01087	.07323	-.28399	-.13233	.05151
LESSONS		-.21045	-.09818	.00656	-.03991	-.25873	-.02581	-.10541	-.04742
EOC T.S.		.31321	.27006	.28409	.29293	.17510	.06385	.19315	.36498
EOC ERROR		-.12669	.07946	.17516	-.03103	.02046	.15600	.13157	.05779

TABLE A-10

Correlation Matrix for Predictors

MOS 71 H 20 - Fort Polk

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.33066									
MA	.25218	.23981								
ELI	.44564	.39097	.66967							
GIT	.63181	.20262	.31233	.46027						
CI	.26485	-.17204	.06936	.22462	.36769					
ARC	.38574	.30366	.26697	.36618	.28750	-.11588				
ED	.64249	.10350	.07964	.35566	.59961	.29808	.15988			
AR	.65432	.42955	.22722	.42376	.64872	.06924	.38143	.51945		
ENTRY T.S.	-.38411	-.24612	.21871	-.01190	-.20716	-.15418	-.27509	-.29007	-.30039	
ENTRY ERROR	-.02197	-.21619	-.13026	-.08397	-.01482	.19115	-.07740	.19111	-.23994	.32372

N = 25
df = 23

TABLE A-10 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 -- Fort Polk

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-1	I	-.01057	.49336	-.30136	-.07786	-.03059	-.38080	.16045	-.29770
	T	Same as (I)							
12-2	I	.12815	-.08823	.05091	-.13632	-.05535	.14769	.11419	-.05996
	T	Same as (I)							
12-3	I	-.05418	.18406	-.03242	.12878	.02276	.28692	.15108	.17315
	T	Same as (I)							
12-7	I	.12243	.32672	.34177	.31505	-.14450	-.50739	.32799	-.04898
	T	-.01842	.26137	.36451	.28253	-.21110	-.49031	.25870	-.13567
12-42	I	.02827	-.20628	-.26289	-.36954	-.31716	-.28416	.42330	-.20705
	T	.01149	-.21469	-.24066	-.35506	-.26477	-.25827	.39845	-.20497
12-38	I	.05109	.05595	.48145	.18813	.08642	-.12347	.22701	.25211
	T	Same as (I)							
12-30	I	.22129	.19463	.28896	.19618	.21344	.05217	.29761	.05826
	T	Same as (I)							
12-45	I	-.08516	-.04939	-.04602	-.22018	-.36188	-.24851	-.03908	.03024
	T	Same as (I)							
12-35	I	-.04524	.07267	.12093	.00805	-.48541	-.03832	-.08764	-.18941
	T	-.08585	.06800	.11646	.03043	-.48482	-.02047	-.06278	-.18886

TABLE A-10 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 H 20 -- Fort Polk

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-40	I	-.24501	-.15645	.20155	.13000	-.36940	.26740	-.01036	-.25103
	T	-.33806	-.18633	.15143	.07992	-.36436	.29721	-.01986	-.29827
12-44	I	-.43383	-.38527	-.25032	-.37351	-.10533	-.02184	-.35199	-.34649
	T	Same as (I)							
12-39	I	-.22982	-.24103	-.07357	-.29901	-.19489	-.02097	-.32505	-.32252
	T	-.24071	-.28526	-.09293	-.30702	-.19521	-.00937	-.35171	-.33051
12-41	I	.33218	.27259	.22098	.14578	.21049	.16022	-.21411	.31260
	T	.31640	.25083	.21698	.12192	.19524	.16437	-.23532	.29652
12-43	I	.33252	-.00410	-.06914	-.00610	.25215	.22423	-.12996	.05555
	T	Same as (I)							
EOC TEST	I	.27745	.21028	.19723	.09553	-.13883	-.17854	.19804	-.08004
	T	.13591	.10858	.18173	.15911	-.12029	-.05998	.13311	-.11915
SUM C+CT		-.00590	.02933	.24082	-.13025	-.39108	-.22654	-.04672	-.27584
SUM RETAKE		-.38281	-.29430	-.06903	-.00653	-.01673	.23442	-.18947	-.14530
1st RETAKE		.11231	-.30508	.00335	.13982	.05065	.38338	-.42683	.22091
LESSONS		.41972	.19484	-.20354	-.00033	.32807	.10425	.25078	.28312
EOC T.S.		-.18707	-.23556	.25759	-.00394	.02516	-.05692	-.11187	-.17085
EOC ERROR		-.11705	-.17656	-.16709	-.21602	-.17771	.15268	-.29264	-.18181

TABLE A-11

Correlation Matrix for Predictors

MOS 71 B 20/30 -- All Posts Combined

	VE	PA	MA	ELI	GIT	CI	ARC	ED	AR	ENTRY T.S.
PA	.56197									
MA	.57768	.67202								
ELI	.56297	.50199	.65969							
GIT	.41355	.46275	.74149	.63544						
CI	.26533	.29458	.48649	.20744	.35325					
ARC	.25122	.30813	.42189	.27169	.27263	.20660				
ED	.66301	.32666	.34729	.42530	.38817	.15049	-.06753			
AR	.55690	.61966	.54737	.46596	.45936	.16955	.45441	.38132		
ENTRY T.S.	.30601	.04935	.01662	.07354	-.05712	-.07291	.06284	.29536	.14293	
ENTRY ERROR	.30848	.27499	.19926	.14938	.08956	.02521	-.00152	.29285	.17422	.33964

N = 51
df = 49

TABLE A-11 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 20/30 -- All Posts Combined

Variables		Predictors							
		VE	PA	MA	ELI	GIT	CI	ARC	ED
12-27	I	-.08678	-.12647	-.02666	.11538	.01521	-.06035	-.12291	.00553
	T	-.09010	-.12180	-.05380	.10129	-.04170	-.07416	-.16359	-.00829
12-32	I	-.20186	-.15524	-.08232	-.10817	.02533	-.07432	-.02698	-.09812
	T	Same as (I)							
12-38	I	-.07696	.02265	.01132	.01104	.09321	-.05336	.02467	-.00125
	T	Same as (I)							
12-30	I	.01351	-.02636	.04129	.13453	.01524	-.06371	-.04518	.04565
	T	.02801	-.02661	.01407	.14766	-.03280	-.04860	-.09621	.02760
12-31	I	-.16484	-.20855	-.13199	-.09691	.05037	-.15108	-.22480	-.05967
	T	Same as (I)							
12-35	I	-.12434	-.30883	-.25833	-.13497	-.07042	-.18554	-.33514	.09548
	T	-.12276	-.30896	-.26172	-.13387	-.07606	-.18374	-.34111	.09333
12-33	I	-.01549	-.00184	.17183	.00237	-.01102	.11284	.22903	-.05589
	T	-.01675	-.08107	.05538	-.01158	-.12018	.10635	.10181	-.04460
EOC TEST	I	-.33453	-.13832	-.24183	-.13876	-.10008	-.05751	-.37933	-.26331
	T	-.31942	-.16557	-.29522	-.18469	-.15254	-.07453	-.41366	-.27940

TABLE A-11 (Continued)

Correlations Between Predictors and Dependent Variables

MOS 71 B 20/30 -- All Posts Combined

Variables	Predictors							
	VE	PA	MA	ELI	GIT	CI	ARC	ED
SUM C+CT	-.23985	-.22490	-.15169	-.06225	-.01646	-.12175	-.25036	-.08033
SUM RETAKE	-.00648	-.13068	-.26394	-.09060	-.27855	-.00729	-.30226	-.09788
1st RETAKE	-.13226	-.19032	-.28515	-.22337	-.16504	-.09539	-.25842	-.07602
LESSONS	-.02782	.10790	.20455	.12345	.25772	.27235	-.10858	.06829
EOC T.S.	.24001	.14889	.02273	-.00658	.02130	-.02351	.03991	.30942
EOC ERROR	-.04838	-.05923	-.24035	-.09317	-.05535	.03134	-.02413	-.03076

APPENDIX B

Regression Coefficients and Multiple Correlations Between Predictors and Dependent Variables

TABLE B-1

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-21

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	.01374	-.03296	-.01751	.00354	.07604
PA	.00371	.00898	-.03637	.01941	.01237
MA	.01290	-.02401	.09030	-.00632	-.05788
ELI	-.00183	-.01472	.00433	-.00530	-.01951
GIT	-.01045	.10091	-.00419	-.00816	-.00395
CI	-.01458	-.00475	-.00764	.01206	.06385
ARC	-.00484	.00765	-.00150	.00768	-.05974
ED	-.00285	.93770	-.23683	.07826	.44185
A	1.03748	-13.32022	1.18172	-0.34117	-4.46636
Multiple	.39 NS	.60 NS	.56 NS	.53 NS	.38 NS
$\bar{x}$	1.18	2.54	1.24	1.10	2.73
σ	.94	7.21	1.52	.71	5.16

TABLE B-2

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-22

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	.00825	-.00590	0	-.00447	.01015
PA	.00958	-.00859	0	.01531	-.01695
MA	.00903	.03766	0	-.02603	.01018
ELI	.00009	-.01605	0	.00334	.00630
GIT	.01187	-.02739	0	-.01119	-.05037
CI	-.02181	-.00037	0	.00985	-.00108
ARC	-.00488	-.00551	0	.01124	.00797
ED	-.02411	.06271	0	.16858	-.12630
A	0.44286	4.00352	0	0.17939	7.79253
Multiple	.51 NS	.29 NS	0	.56 NS	.60 NS
$\bar{x}$	1.62	2.28	0	2.01	3.15
σ	.93	2.29	0	.97	1.52

TABLE B-3

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-17

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=11)	POLK (N=32)
VE	-.01126	-.02940	-.01448	.06609	-.01332
PA	-.01575	-.00129	-.05616	-.04970	.02785
MA	-.00829	.03150	-.01878	.07816	.01927
ELI	.01640	-.00134	.04912	-.04845	-.01598
GIT	-.04670	-.00017	.02567	-.05120	-.00479
CI	.00582	.01797	-.02375	.01846	-.05803
ARC	-.01338	-.01239	-.00102	.00173	.01718
ED	-.05053	-.23557	-.18030	-.65812	-.35032
A	13.04634	8.50925	11.29207	11.03634	13.48197
Multiple	.68**	.34 NS	.66 NS	.64*	.48 NS
$\bar{x}$	4.62	5.72	4.13	4.63	6.62
σ	1.64	3.40	1.46	3.32	2.92

*Significant at the p<.05 level, **Significant at the p<.01 level.

TABLE B-4

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-6

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	-.02045	-.03273	.02047	-.02042	.11152
PA	-.06619	.05284	-.07524	.06254	.02764
MA	-.02513	-.04113	.03441	-.06425	-.04628
ELI	.04331	-.03235	.02914	-.02190	-.07527
GIT	-.05661	.00412	.02081	-.00236	.01219
CI	-.00525	.00710	-.03157	-.00067	-.01060
ARC	-.00125	-.01475	.00610	-.03229	.01280
ED	-.28465	-.27666	-.32365	-.32120	-.63791
A	23.87790	17.06494	7.62529	17.60008	9.22937
Multiple	.64**	.38 NS	.62 NS	.54 NS	.61 NS
$\bar{x}$	5.92	7.30	4.01	4.79	5.80
σ	3.53	4.27	1.81	3.31	3.21

**Significant at the $p<.01$ level.

TABLE B-5

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-13

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	.01600	.03909	.00766	.04863	.00040
PA	-.01872	.00663	-.04088	.00983	.00029
MA	-.00876	-.08868	.04405	-.05261	-.01955
ELI	.01993	.03269	-.00374	.01761	-.00874
GIT	-.00041	-.04961	.03287	-.05678	.00117
CI	-.02538	-.05653	-.03979	.01993	-.00739
ARC	-.01212	-.01180	.01078	-.02917	-.01523
ED	-.23917	-.39663	-.23059	-.33844	.03936
A	9.13560	23.70174	3.90627	11.93423	7.62349
Multiple	.60**	.58*	.63 NS	.63*	.54 NS
$\bar{x}$	3.10	5.24	2.46	3.24	3.26
σ	1.75	4.36	1.76	2.63	1.32

*Significant at the $p<.05$ level, **Significant at the $p<.01$ level.

TABLE B-6

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-23

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	-.01769	-.05094	-.02650	-.03838	.16598
PA	-.04528	-.00697	.00133	-.00809	-.00951
MA	.00657	.15243	-.02991	-.07597	-.04418
ELI	.01809	-.08028	.02152	.03139	-.03040
GIT	.02549	.02633	.06305	.11108	-.02403
CI	-.01610	-.03657	-.03839	-.05076	-.03887
ARC	-.00250	-.01143	-.03887	-.04379	.02017
ED	-.20810	-1.01585	-.04313	-.66593	-1.01766
A	11.12075	22.12778	9.58774	22.46971	12.93146
Multiple	.48 NS	.36 NS	.88**	.60*	.88**
$\bar{x}$	4.63	8.79	3.01	3.24	5.67
σ	2.49	8.12	1.53	2.63	2.87

*Significant at the $p<.05$ level, **Significant at the $p<.01$ level.

TABLE B-7

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-9

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	.01754	.03860	-.00864	.02954	.05831
PA	-.03952	.03953	.03524	.01063	-.06062
MA	-.00570	-.13224	-.00466	.01800	-.00019
ELI	-.00276	.03569	.00861	-.02629	-.00214
GIT	.01236	.09090	-.06259	-.00152	.00521
CI	.00080	-.11255	-.01142	.02019	-.00024
ARC	-.01067	-.01841	-.02317	-.00790	-.01273
ED	-.37784	-.52752	-.18626	-.54958	-.59091
A	12.04103	22.26343	12.50463	6.32898	12.67723
Multiple	.58*	.36 NS	.81*	.55 NS	.59 NS
$\bar{x}$	4.20	9.02	2.91	4.03	4.61
σ	2.32	7.62	1.86	2.27	2.57

*Significant at the $p<.05$ level.

TABLE B-8

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-11

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	-.06101	.10583	-.01911	.06238	-.01205
PA	.00831	-.19645	-.07060	-.17838	.04915
MA	-.01882	.17607	-.08794	-.19017	.02435
ELI	.03017	-.04076	.11465	.17116	.09921
GIT	.01756	-.12508	.02136	.16268	-.17487
CI	.00506	-.24322	-.02611	-.05527	-.01293
ARC	.00991	-.01389	.01792	-.16214	-.02402
ED	-.91394	.11103	-.48977	-1.00452	-.46987
A	22.62532	50.06615	17.12563	43.41811	23.09311
Multiple	.50 NS	.50 NS	.70 NS	.84**	.40 NS
$\bar{x}$	9.01	18.43	4.32	8.97	12.76
σ	5.89	15.05	2.90	6.74	7.65

**Significant at the .01 level.

TABLE B-9

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable 12-4

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	.05734	.02555	-.04876	-.00066	.04993
PA	-.01571	.02277	-.02024	-.01180	-.08470
MA	-.02088	-.03157	.10744	.00630	.04043
ELI	.02238	-.04820	-.00579	.00213	.00215
GIT	-.06054	.03916	-.03705	-.00654	-.05922
CI	.02721	-.03530	.01466	.00750	-.01180
ARC	-.00490	-.02033	-.00970	-.01380	-.00058
ED	-.42842	-.62872	-.43254	-.30397	.22021
A	8.62926	18.49001	7.95992	9.52085	7.76734
Multiple	.44 NS	.46 NS	.67 NS	.58 NS	.60 NS
$\bar{x}$	4.20	5.68	2.56	3.63	4.63
σ	2.58	4.26	1.92	1.82	3.02

TABLE B-10

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable EOC TEST

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	-.05774	.06148	.09111	-.12687	.06765
PA	-.01406	-.06328	-.10926	-.02586	-.03110
MA	.00777	-.08692	.12058	.02127	-.02723
ELI	-.00217	.03150	.03337	-.04984	-.02284
GIT	-.00076	.06814	.05681	-.08230	-.02261
CI	.00008	-.05598	-.05347	.10861	-.02809
ARC	.02465	-.00704	-.10226	-.07590	.01295
ED	-.14440	-1.28734	-.51990	.24063	-.44855
A	13.87448	32.81905	10.64998	37.14742	16.98039
Multiple	.40 NS	.50 NS	.77*	.74**	.59 NS
$\bar{x}$	6.86	10.55	7.84	14.54	6.92
σ	2.96	5.16	3.51	6.25	2.82

*Significant at the $p<.05$ level, **Significant at the $p<.01$ level.

TABLE B-11

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable SUM C + CT

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	-.75037	.62926	-.02752	-.02485	.33978
PA	-.10349	-.34551	-.35823	.07240	-.00351
MA	.12357	-.26779	.18261	-.11493	.06536
ELI	.17526	.11665	.31265	-.07145	-.10955
GIT	-.01078	.16929	.02525	-.15125	-.27767
CI	-.14670	-.54934	-.15528	.12747	-.09784
ARC	-.03107	-.13364	-.12093	-.20679	-.04711
ED	3.42385	-3.78809	-1.66255	-3.38556	-2.18887
A	86.47502	149.40372	69.18243	133.36191	88.92574
Multiple	.71**	.43 NS	.74 NS	.68**	.50 NS
$\bar{x}$	43.85	63.92	29.74	48.68	54.69
σ	15.20	38.05	10.10	19.55	14.12

**Significant at the $p<.01$ level.

TABLE B-12

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable SUM RETAKE

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	-.03315	-.02475	.00948	.03220	-.04663
PA	.00708	.03119	-.05748	-.06737	.02923
MA	-.04056	-.15659	.03691	-.06794	-.09735
ELI	-.01079	-.02516	-.03149	.02173	.00973
GIT	-.07486	.06267	.09648	-.05485	.01899
CI	.05308	-.05202	-.02694	.04074	.03665
ARC	.01839	.00801	-.03750	-.07911	.02668
ED	-.04656	-1.07087	-.20816	.06604	-.38786
A	10.52193	35.64273	5.88696	21.00345	9.60036
Multiple	.44 NS	.54 NS	.43 NS	.72**	.58 NS
$\bar{x}$	1.13	4.85	1.98	3.16	1.69
σ	3.72	6.87	3.80	4.19	3.57

**Significant at the $p<.01$ level.

TABLE B-13

Regression Coefficients and Multiple Correlations

MOS 71 B 10 -- Variable FIRST RETAKE

Predictors	KNOX (N=54)	JACKSON (N=46)	WOOD (N=24)	DIX (N=41)	POLK (N=32)
VE	-.06252	.01221	-.10320	-.06086	.02478
PA	-.01980	.00625	-.03660	-.02549	.00880
MA	.00043	-.05705	.04683	-.01714	-.04789
ELI	-.02578	-.02246	.02167	.02981	.01882
GIT	-.02382	.03891	-.03650	-.02186	-.03037
CI	.00742	-.02019	.00917	-.02067	.02144
ARC	.00772	-.00707	.05944	-.02727	.01380
ED	.15466	-.33542	-.25484	.09609	-.30587
A	12.28286	12.04117	9.46863	17.62051	6.35664
Multiple	.50 NS	.42 NS	.56 NS	.46 NS	.54 NS
$\bar{x}$	1.43	2.48	1.79	2.76	.91
σ	3.21	2.82	2.89	3.36	1.89

TABLE B-14

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-1

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	-.00746	-.02470	-.02081	-.03235	.00474
PA	-.02240	-.04050	.00698	.02613	.01543
MA	-.00357	.00184	-.02125	-.01963	-.02189
ELI	.01779	-.00026	.00936	-.01100	.00779
GIT	.00303	-.00819	-.01071	.01538	.01534
CI	-.00164	-.03348	-.00204	.00007	-.00809
ARC	.01777	.03529	-.00071	.00107	.00055
ED	-.09204	-.12155	.05655	-.09492	-.17693
A	2.35433	11.77870	5.22154	5.42183	2.03179
Multiple	.60*	.63 NS	.54 NS	.69*	.82**
$\bar{x}$	1.4	2.36	1.36	1.43	1.12
σ	0.8	1.92	1.79	0.72	0.52

*Significant at $p<.05$ level, ** Significant at $p<.01$ level.

TABLE B-15

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-2

Predictors	KNOX (N=42)	JACKSON (N-22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.00689	-.01742	.00945	-.02756	.01125
PA	-.00541	-.03030	-.00358	.00279	-.00144
MA	.00346	.02003	-.02300	-.01711	.00838
ELI	-.01062	-.01838	.00624	-.00418	-.01351
GIT	.02059	.04242	.00246	.01047	-.00903
CI	-.01371	-.01145	.00505	-.00472	.00638
ARC	-.00265	-.02121	-.00635	.00681	.00378
ED	-.04288	.25115	-.15435	.08074	-.02856
A	1.64040	2.66263	4.45804	3.97310	0.36726
Multiple	.40 NS	.55 NS	.68 NS	.64 NS	.46 NS
$\bar{x}$	1.09	1.77	1.25	1.04	0.68
σ	0.95	1.19	0.64	0.52	0.44

TABLE B-16

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-3

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	-.02367	.01110	-.00145	-.01499	-.01114
PA	.02212	-.00124	-.01761	-.00555	.00658
MA	.00368	-.03256	.00314	.00479	-.00114
ELI	-.00346	.04167	-.00886	-.00297	-.00021
GIT	.02385	-.00818	-.00165	.00180	-.00478
CI	-.00492	-.02355	.00585	.00201	.00703
ARC	-.01536	.00609	.00255	.00432	.00368
ED	-.06772	-.53032	-.01355	.06421	.06820
A	1.96011	10.28026	3.43166	1.54737	-0.20050
Multiple	.64*	.61 NS	.62 NS	.31 NS	.60 NS
$\bar{x}$	1.17	1.73	1.13	1.09	0.69
σ	0.76	1.55	0.63	0.67	0.27

*Significant at the $p<.05$ level.

TABLE B-17

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-7

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.03043	-.15799	.01982	.02561	.00832
PA	.01517	-.18170	-.02218	-.02517	.00277
MA	-.03326	-.14071	.00118	.03627	.02886
ELI	-.03109	-.01343	.01572	-.04536	.03216
GIT	.00595	.28659	.02435	-.00011	-.04937
CI	.00275	.01173	-.02071	.03096	-.03991
ARC	-.04072	.03393	-.00306	-.02151	.00654
ED	.26859	.05317	-.22088	.54382	.02416
A	4.77639	27.90114	5.18039	-3.78557	5.43239
Multiple	.66**	.63 NS	.44 NS	.50 NS	.70 NS
$\bar{x}$	3.00	7.50	3.90	4.57	5.02
σ	1.91	7.04	1.69	2.08	1.65

**Significant at the $p<.01$ level.

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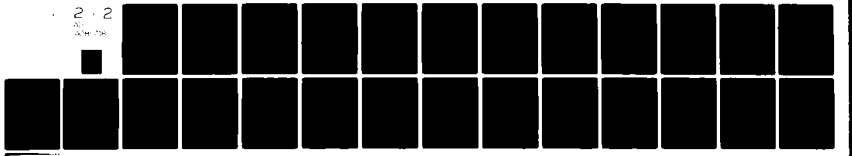

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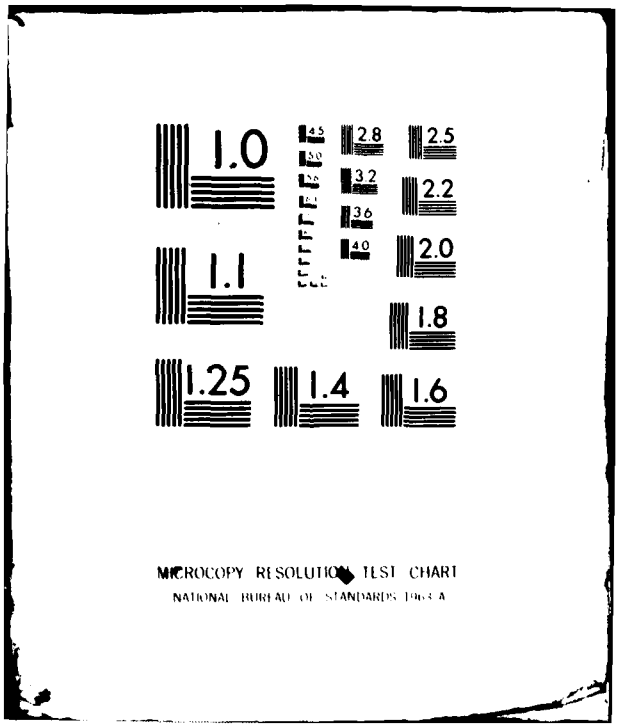
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TABLE B-18

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-42

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.01121	-.00932	-.00098	-.06204	.02726
PA	.00935	-.03303	.00587	.07403	-.01907
MA	.01334	-.04492	.00104	-.03185	-.00466
ELI	-.02168	.04466	-.00538	-.06455	-.02319
GIT	-.00250	.06500	.01303	.01239	-.02311
CI	.00104	-.07117	-.01317	.04963	-.00507
ARC	.01708	-.02325	-.01100	-.01620	.02390
ED	.18304	-.28244	-.51699	.10875	-.10353
A	-2.99115	16.85803	11.90164	7.54323	6.82108
Multiple	.45 NS	.75 NS	.68 NS	.54 NS	.76*
$\bar{x}$	2.69	3.55	3.47	4.03	2.78
σ	1.59	1.99	1.53	3.15	0.95

*Significant at the $p<.05$ level

TABLE B-19

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-38

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	-.00355	-.07443	.01750	.00516	-.03999
PA	-.02745	-.03469	-.03008	.02810	.00234
MA	.02074	-.03262	.00276	.00948	.08204
ELI	.02812	.03488	-.02251	-.01111	-.04353
GIT	.00270	-.01041	.00222	-.00163	-.02513
CI	-.00839	-.01181	.01295	-.00259	-.00785
ARC	-.00276	-.01651	-.01245	-.02587	.01527
ED	.05013	-.15000	-.13925	-.28108	.61142
A	0.34643	22.22482	7.44691	6.01717	-4.85843
Multiple	.38 NS	.64 NS	.58 NS	.36 NS	.70 NS
$\bar{x}$	2.00	3.09	2.31	2.54	1.98
σ	1.30	2.24	1.35	2.03	1.58

TABLE B-20

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-30

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	-.01634	.01041	-.00742	.08652	.00788
PA	.06301	-.01757	.01506	.02202	.00947
MA	-.00608	.02429	-.00429	-.04465	.02405
ELI	-.02236	-.04164	.01707	.01104	-.01641
GIT	-.00579	.02050	-.00277	-.10251	.00967
CI	-.01280	-.02202	.02367	.04581	.00612
ARC	-.00713	.02533	-.01609	-.00760	.01234
ED	-.04466	-.23547	.03433	-.21656	-.05859
A	3.94105	6.74795	-0.04057	4.98283	-2.17558
Multiple	.44 NS	.40 NS	.67 NS	.50 NS	.41 NS
$\bar{x}$	2.55	3.68	3.11	3.50	2.93
σ	1.45	2.34	1.41	2.87	1.30

TABLE B-21

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-45

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.01373	-.06164	.01022	.04702	.00869
PA	-.05414	.03984	.00458	.03293	.00270
MA	-.02748	.01619	-.02202	-.02322	.03175
ELI	.01329	-.00354	.01193	.01371	-.03750
GIT	.03199	.08516	-.00931	-.09161	-.07998
CI	.01594	-.05682	-.01226	.04215	-.00960
ARC	.01341	-.00185	-.00657	-.01722	.00364
ED	-.13302	.31794	-.01873	.01829	.42851
A	4.71833	-2.16672	5.14545	2.07959	4.64698
Multiple	.43 NS	.64 NS	.41 NS	.50 NS	.56 NS
$\bar{x}$	3.65	3.45	2.45	2.91	2.34
σ	1.92	1.95	0.93	2.36	1.54

TABLE B-22

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-35

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	-.06164	-.09332	-.04080	.08101	.04101
PA	.04147	-.06667	.02713	-.00369	.01666
MA	-.00576	-.00158	-.03857	-.03262	.03668
ELI	-.02827	-.00522	.01722	-.00638	.00534
GIT	.06435	.10933	.01384	-.03675	-.16320
CI	-.03864	-.03896	-.00687	.05828	.02367
ARC	-.01770	-.02979	.00853	-.05087	-.00120
ED	.14385	.48705	-.22666	.00998	.08941
A	7.34420	12.49910	9.36607	1.25507	6.16174
Multiple	.50 NS	.78 NS	.50 NS	.58 NS	.66 NS
$\bar{x}$	3.85	3.82	3.41	3.23	3.69
σ	2.20	1.94	1.93	2.40	2.14

TABLE B-23

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-40

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.01124	-.02013	-.01051	.04913	-.02119
PA	-.02407	-.02618	-.01191	.00088	-.00326
MA	.01012	-.02402	.01280	-.02190	.01305
ELI	.00722	.00698	-.00055	.01901	.00940
GIT	-.00750	.06254	.00148	-.02094	-.04284
CI	-.01066	-.00950	.01243	.02731	.02736
ARC	.00504	-.03727	-.01389	-.00977	.00902
ED	.02625	.23301	-.26024	.00400	-.02476
A	2.53335	5.24520	6.90432	-3.29745	3.41370
Multiple	.24 NS	.39 NS	.54 NS	.49 NS	.72 NS
$\bar{x}$	2.05	2.27	1.86	1.92	1.86
σ	1.39	1.75	1.45	1.32	0.92

TABLE B-24

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-44

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.01304	.04835	-.00109	-.01356	-.02908
PA	-.06262	-.03217	-.00394	-.00557	-.02279
MA	-.01259	-.04737	.01163	.00685	-.01296
ELI	.02760	.02836	-.00154	.01694	-.00743
GIT	.00607	-.02022	.02827	-.01680	.05920
CI	-.00647	-.03954	.00046	.00042	-.00466
ARC	.01619	.00156	.00490	-.00625	-.01195
ED	-.04192	-.02607	-.10064	-.15782	-.29280
A	4.16760	9.80919	-0.60452	6.67696	10.02398
Multiple	.51 NS	.55 NS	.28 NS	.30 NS	.64 NS
$\bar{x}$	1.54	2.59	2.20	2.26	2.06
σ	1.33	1.89	1.72	1.85	1.42

TABLE B-25

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-39

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.00668	-.28050	.04971	-.00341	.05211
PA	-.00167	.04354	.00336	.02404	-.05162
MA	-.00912	-.27465	.02868	.01293	.03121
ELI	.00541	.15394	.01338	.01233	-.05336
GIT	-.00647	.10652	.01755	-.01103	.03487
CI	-.00563	.03263	.00750	.01382	-.00254
ARC	.00091	.06250	-.01955	-.01203	-.05115
ED	.18312	.03745	-.51485	-.20185	-.91106
A	0.86717	28.80997	0.61789	1.21157	23.94389
Multiple	.40 NS	.61 NS	.60 NS	.43 NS	.52 NS
$\bar{x}$	2.25	8.68	5.26	2.35	6.70
σ	1.05	6.77	2.09	1.44	4.14

TABLE B-26

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-41

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.00922	.01384	-.02368	.01630	.03552
PA	.00810	.11194	.00357	-.02229	.03485
MA	.00790	-.02908	.00782	-.00920	.04232
ELI	.01717	-.00151	.00983	.01380	-.03346
GIT	-.02020	-.04459	.00744	-.02438	-.01347
CI	-.01100	-.00893	-.00686	.02655	.00801
ARC	-.01486	.06974	.00064	.00426	-.03095
ED	-.13133	-.76441	-.02488	.09883	.24830
A	3.48817	0.09284	2.06483	-0.48567	-7.34943
Multiple	.52 NS	.74 NS	.62 NS	.46 NS	.62 NS
$\bar{x}$	1.48	2.59	1.23	1.34	1.70
σ	1.05	2.20	0.59	0.89	1.65

TABLE B-27

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable 12-43

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	-.01305	.01561	-.02766	.09057	.03878
PA	-.01686	.01705	-.00567	-.03173	-.00396
MA	.00956	-.00011	.01593	.02021	-.00988
ELI	.01075	.02997	.01127	-.01199	-.00009
GIT	-.01000	-.14182	.01423	-.03960	.01875
CI	-.01843	.02223	-.03480	.05552	.00279
ARC	-.00958	.01795	-.00373	-.03088	-.01045
ED	.14942	-.32975	.05917	.29241	-.22336
A	4.99499	10.59948	5.46360	-7.77122	0.91977
Multiple	.50 NS	.62 NS	.77*	.44 NS	.56 NS
$\bar{x}$	1.60	2.64	2.55	3.15	1.94
σ	1.06	2.06	1.07	2.12	0.83

*Significant at the $p<.05$ level.

TABLE B-28

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable EOC TEST

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	.01195	-.16753	.07086	-.35824	.05097
PA	-.04771	-.05409	-.01537	.19400	-.00344
MA	.01591	-.05717	-.08661	.21138	.01082
ELI	.00079	.23118	.00539	.04017	.01742
GIT	-.06620	-.24472	.00511	.08996	-.04768
CI	-.03816	.02996	-.00335	-.22392	-.00147
ARC	-.00775	-.02417	-.03550	-.02055	.00243
ED	.19326	1.19227	-.78357	-.88693	-.24040
A	19.13179	28.19420	27.67995	35.24789	8.75281
Multiple	.45 NS	.50 NS	.49 NS	.57 NS	.41 NS
$\bar{x}$	7.32	12.45	10.85	13.36	9.02
σ	3.10	7.97	3.80	7.44	1.66

TABLE B-29

Regression Coefficients and Multiple Correlations

MOS 71 H 20 - Variable SUM C + CT

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	-.01206	-.76855	.02258	.04890	.27787
PA	-.08795	-.25239	-.05558	.14147	.00918
MA	-.01716	-.60583	-.10984	-.08049	.28052
ELI	.00813	.32992	.08878	.01967	-.19692
GIT	.03827	.62163	.09801	-.27666	-.36910
CI	-.14837	-.21006	-.03208	.30567	-.02285
ARC	-.04945	.04974	-.12299	-.14469	-.02385
ED	.60204	.32527	-2.21911	.47122	-.51761
A	58.97391	160.09612	89.73032	36.92235	51.84641
Multiple	.40 NS	.64 NS	.52 NS	.40 NS	.70 NS
$\bar{x}$	37.60	59.41	45.63	44.16	43.54
σ	8.82	18.50	10.72	13.91	7.01

TABLE B-30

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable SUM RETAKE

Predictors	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	0	-.05657	.00339	-.12946	-.09293
PA	0	-.03674	.01551	.15107	-.02376
MA	0	.01064	-.01419	.10347	-.02183
ELI	0	.11046	-.01621	-.00877	.04020
GIT	0	-.22677	.00314	.05681	.04840
CI	0	-.01768	-.00165	-.14955	.02489
ARC	0	.05870	.00497	-.03976	-.00068
ED	0	.07847	-.31407	-1.38993	-.07072
A	0	17.65405	5.27958	25.79257	6.09339
Multiple	0	.60 NS	.74*	.52 NS	.59 NS
$\bar{x}$	0	2.27	0.43	4.47	0.99
σ	0	4.42	0.93	5.20	2.06

*Significant at $p<.05$ level.

TABLE B-31

Regression Coefficients and Multiple Correlations

MOS 71 H 20 -- Variable FIRST RETAKE

Predictor	KNOX (N=42)	JACKSON (N=22)	WOOD (N=28)	DIX (N=32)	POLK (N=25)
VE	0	.13268	.13433	.03621	.09554
PA	0	-.05033	.04354	.15696	-.10032
MA	0	.01191	-.10412	.09493	-.02684
ELI	0	.09576	-.05492	-.06925	.12954
GIT	0	-.25163	.01583	.05956	-.07085
CI	0	.05231	-.02391	-.13360	.03740
ARC	0	-.00020	-.00491	-.08429	-.09976
ED	0	-.58338	-2.10745	-.42341	.22778
A	0	10.34527	29.49654	0.57483	2.75935
Multiple	0	.50 NS	.73*	.58 NS	.68 NS
$\bar{x}$	0	2.82	2.64	3.94	2.48
σ	0	4.32	5.31	5.03	4.66

*Significant at the $p < .05$ level.

TABLE B-32

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable 12-27

Predictors	ALL POSTS COMBINED (N=51)
VE	-.01538
PA	-.01161
MA	.01024
ELI	.02353
GIT	-.01507
CI	-.00167
ARC	-.01034
ED	.01149
A	4.50296
Multiple	.30 NS
$\bar{x}$	2.20
σ	1.56

TABLE B-33

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable 12-32

Predictors	ALL POSTS COMBINED (N=51)
VE	-.02264
PA	-.00938
MA	.00296
ELI	-.00771
GIT	.02283
CI	-.00523
ARC	.00231
ED	.03130
A	3.00340
Multiple	.26 NS
$\bar{x}$	1.34
σ	1.76

TABLE B-34

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable 12-38

Predictors	ALL POSTS COMBINED (N=51)
VE	-.01938
PA	.00649
MA	-.00595
ELI	-.00207
GIT	.01840
CI	-.00564
ARC	.00328
ED	.05994
A	2.42771
Multiple	.19 NS
$\bar{x}$	2.45
σ	1.58

TABLE B-35

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable 12-30

Predictors	ALL POSTS COMBINED (N=51)
VE	-.00200
PA	-.01077
MA	.01692
ELI	.03107
GIT	-.02981
CI	-.00323
ARC	-.01182
ED	-.03158
A	5.38897
Multiple	.26 NS
$\bar{x}$	3.84
σ	2.17

TABLE B-36

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable 12-31

Predictors	ALL POSTS COMBINED (N=51)
VE	.00002
PA	-.01285
MA	-.00352
ELI	-.00618
GIT	.03417
CI	-.00914
ARC	-.01238
ED	-.06167
A	2.95080
Multiple	.37 NS
$\bar{x}$	1.08
σ	1.51

TABLE B-37

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable 12-35

Predictors	ALL POSTS COMBINED (N=51)
VE	.00280
PA	-.02961
MA	-.02088
ELI	-.00327
GIT	.02869
CI	-.00889
ARC	-.02112
ED	.17416
A	7.93952
Multiple	.46 NS
$\bar{x}$	4.55
σ	2.35

TABLE B-38

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable 12-33

Predictors	ALL POSTS COMBINED (N=51)
VE	-.00895
PA	-.01794
MA	.04058
ELI	.00499
GIT	-.04153
CI	.00710
ARC	.00631
ED	.05515
A	3.10980
Multiple	.33 NS
$\bar{x}$	2.78
σ	1.55

TABLE B-39

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable EOC TEST

Predictors	ALL POSTS COMBINED (N=51)
VE	-.00686
PA	.02463
MA	-.06735
ELI	.01446
GIT	.03877
CI	.01505
ARC	-.05461
ED	-.55246
A	17.70786
Multiple	.56 NS
$\bar{x}$	6.35
σ	3.12

TABLE B-40

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable SUM C+CT

Predictors	ALL POSTS COMBINED (N=51)
VE	-.12077
PA	-.06716
MA	.01091
ELI	.04017
GIT	.08152
CI	-.02298
ARC	-.07501
ED	-.00165
A	42.07471
Multiple	.36 NS
$\bar{x}$	23.88
σ	8.85

TABLE B-41

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable SUM RETAKE

Predictors	ALL POSTS COMBINED (N=51)
VE	.04586
PA	.00097
MA	-.04294
ELI	.01850
GIT	-.02248
CI	.01671
ARC	-.02468
ED	-.28480
A	4.81208
Multiple	.49 NS
$\bar{x}$	0.58
σ	1.93

TABLE B-42

Regression Coefficients and Multiple Correlations

MOS 71 B 20/30 -- Variable FIRST RETAKE

Predictors	ALL POSTS COMBINED (N=51)
VE	.02594
PA	.00049
MA	-.05533
ELI	-.01336
GIT	.02685
CI	.00514
ARC	-.01976
ED	-.12809
A	5.73334
Multiple	.35 NS
$\bar{x}$	1.06
σ	2.63

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This report describes a project to determine the extent of differences in course material completion time at Army Training Centers, and to identify ways to predict course completion times. Analyses of variance were run on both predictor and dependent variables, and results are presented here. Appendices contain tables that display data on: (1) correlations among predictor variables, and between predictor variables and dependent variables; and (2) regression coefficients and multiple correlations between predictors and dependent variables.

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