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EVALUATION OF A PROPOSED COMBAT PISTOL QUALIFICATION TRAINING P-ETC(U)
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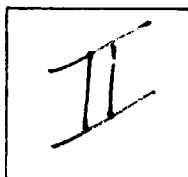
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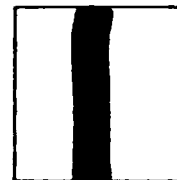
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Alexandria, Virginia 22314

Consulting Report
EVALUATION OF A PROPOSED COMBAT
PISTOL QUALIFICATION TRAINING PROGRAM

by

William L. Wernick
John D. Engel

September 1970

This Consulting Report was prepared to describe the results of an Army evaluation of a proposed Combat Pistol Qualification Training Program. It has been issued by the Director of HumRRO Division No. 2, Fort Knox, Kentucky. It has not been reviewed by nor does it necessarily represent official opinion or policy of the President, Human Resources Research Organization or the Department of the Army.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report compares the quick-fire method of pistol training to the standard aimed-fire method to evaluate their relative effectiveness. The two methods were tested on Tables II and III of the Standard Firing Course and Tables I through V of the Combat Pistol Qualification Course. Information obtained provides a basis for evaluating the effectiveness of the quick-fire method and for conducting continuing research.		

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PREFACE

Recently, the Army has adapted the principles of quick-fire to pistol firing. This action led to the development of a new Army training method for teaching pistol shooting, and a new type of firing proficiency course called the Combat Pistol Qualification Course (CPQC).

The present evaluation was an attempt to compare the new, quick-fire method and the standard aimed fire method of pistol shooting in terms of effectiveness. The criterion firing course on which the two methods were evaluated was Tables II and III of the Standard Firing Course and Tables I through V of the newly developed CPQC. The information obtained during the effectiveness test should provide a basis for evaluating the effectiveness of the quick-fire method of pistol firing and for facilitating research.

HumRRO Division No. 2 provided the Arms Division, the Weapons Department, and the Doctrine Development, Literature and Plans Directorate of the US Army Armor School with technical advisory service which included technical help in designing the experimental training and testing programs and analyzing the data. The Weapons Department of the Armor School supervised the conduct of training and testing, and the US Army Training Center, Armor provided troop support. A coordinated test group was established, consisting of representatives from all the agencies mentioned above.

The work was carried out under the guidance of Dr. Donald F. Haggard, Director, HumRRO Division No. 2, Fort Knox, Kentucky. Military support was provided by the US Army Armor Human Research Unit, LTC John A. Hutchins, Unit Chief.

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TABLE OF CONTENTS

3	Background
4	Problem
4	Method
4	Subjects
4	Training Personnel
5	Training Procedure
5	Testing Procedures
6	Results
6	Total Pistol Scores and Firing Methods
7	Standard Firing Course Pistol Scores and Training Methods
7	CPQC Firing Course Pistol Scores and Training Methods
8	Responses to Caliber .45 Pistol Questionnaire
11	Discussion and Summary
12	Summary of Results and Discussion
13	Appendices
15	Appendix A: Mechanical Training, Marksmanship and Qualification Firing, Pistol Caliber .45
33	Appendix B: Instructional Unit: Preliminary Marksmanship Instruction Cal .45 Pistol and Cal .45 SMG
43	Appendix C: Score Card for Standard Pistol Firing
44	Appendix D: Combat Pistol Qualification Course Scorecard
45	Appendix E: Percentages of Responses to Questions in the Caliber .45 Pistol Training Questionnaire

EVALUATION OF A PROPOSED COMBAT
PISTOL QUALIFICATION TRAINING PROGRAM

BACKGROUND

The Infantry AIF Conference of 1965 established a requirement for a new pistol qualification course. CONARC and representatives of the Director, Weapons Department, US Army Infantry School recommended certain guidelines for inclusion in a new program of pistol training for the pistol. One of the seven items for consideration was the application of Quick-Fire techniques to pistol training.

The Special Purpose Weapons Team (SPWT), Small Arms Committee, Weapons Department, of the US Army Infantry School was made responsible for test planning, execution and reporting on the new pistol training program. The resulting test consisted of three phases: (a) Phase I: construction of a test site and development of instructional material; (b) Phase II: development of Quick-Fire teaching techniques and the introduction of CO₂-powered pistols as a training aid; (c) Phase III: final testing at the Combat Pistol Qualification Course (CPQC). The results of Phase III established the following: (a) the program of instruction for the CPQC; (b) qualification standards; (c) the desirability of superimposing the method of instruction on the Phase I Course (IPC) on the CPQC; (d) the use of the CO₂-powered pistols as a training aid in teaching fundamentals of marksmanship; (e) Quick-Fire techniques which properly applied to the use of the CO₂ target ranges quickly and accurately; and (f) continuation of training courses as necessary to train the men on the CPQC when instruction is limited to eight hours. In regard to this last item, it was felt that because of possible malfunction of target devices and target deterioration, training lanes should be considered.

The results of the feasibility study indicated that a pistol range should be constructed and tested, that the training program outlined in the study should be used as a basis for conducting the CPQC, and that CO₂-powered pistols should be tested and adopted as a training aid for pistol. Preliminary Marksmanship Instruction (PMI).

An outline of the new course was printed on a draft training circular and forwarded to the Armor School for review and comment. At the same time the Infantry School requested authority from CG, CONARC to test the proposed course at Fort Gordon, Georgia. The Armor School reviewed the course, indicated the desirability of including a quick-fire pistol course, and agreed to include such a course in the planned revision to FM 23-37, Pistols and Revolvers.

The Armor School also requested authority to conduct the test at the US Army Armor Center to facilitate participation in the course and its inclusion in the revised manual. CONARC approved, and by letter requested the Armor School to conduct the test and to assume from the Infantry School the development of pistol quick-fire.

Letter, HQCONARC (AITE-T-PAY, 11 May 1968, to Commander, US Army Armor School, subject: "Combat Pistol Qualification Course."

PROBLEM

Since no realistic training objective existed in formal form for the purpose of conducting pistol training for the Army, the following assumptions were made concerning the training objectives for pistol training: (a) The pistol is a close defense weapon issued to soldiers to provide close-in (0-31 meters) protection against surprise targets (man-size). (b) The purpose of the training program for the pistol is to teach AIT soldiers how to use the pistol against this type of target, in the shortest time that will insure minimum qualification as a marksman. The following objective was therefore established: To compare standard and quick-fire approaches to pistol training in terms of the student's proficiency in obtaining hits on close-in surprise targets on the proposed Combat Pistol Qualification Course (CPQC).

METHOD

Subjects

Four AIT companies (MOS 11E10) from (GA) A were utilized as subjects in the study. Table 1 lists the number of men and the number of Category IV personnel in each company.

Table 1
Number of Enlisted Men and Category IV Personnel in Each Company

<u>Company</u>	<u>Number of EM</u>	<u>Number of Category IV EM</u>
E	133	13
A	133	15
D, 2d Bn	121	17
D, 3d Bn	120	13
Total	507	58

Training Personnel

Cadre personnel from each company who would normally serve as instructors, assistant instructors, and range personnel were given a course of instruction in the quick-fire method. Each also participated in range firing--using the B-B pistol and .45 pistol and following the same procedures as the men whom they were to train. The course of instruction was presented by personnel of the Arms Division, Weapons Department, of the Armor School.

The cadre were briefed on the purposes of the evaluation, informed as to how the evaluation would be conducted, and cautioned on the need for the elimination of any subjective comments on the relative merits of the two methods of pistol training being evaluated. Each cadre

member received a complete packet of instructions and materials for the quick-fire training course or instruction. (See Appendix A.)

Training Procedure

The standard amount of training time (eleven hours plus one day range firing) that the companies would use during their normal pistol training was adhered to in the evaluation. Each company was divided into two groups by a random division and the groups were identified as Group A (Standard, N=260), and Group B (Quick-Fire, N=260). Neither group received any specific information concerning the conduct of the test. Group A (Standard Group), received pistol training, less range firing, as currently outlined in FM 23-25 (Standard Training) and as conducted by USAFCA. (See Appendix B.) Group B (Quick-Fire Group), received training without range firing as outlined in the initial draft of the revised FM 23-25 (Quick-Fire). (See Appendix A.)

A ratio of five students to one instructor was considered adequate for purposes of evaluation. This is the usual student/instructor ratio available for duty during a normal training cycle. It was felt that training conditions for the evaluation should approximate those of a standard training cycle and not be increased beyond the capabilities that are normally present in a training situation.

Testing Procedures

After training, each group fired Standard Tables II and III (Appendix C) and the CPQC (Appendix D). Only Tables II and III from the Standard Pistol Course were fired because the required performance most closely approximates performance as defined by the training objectives.²

Below is the schedule of training and range firing which was followed in order to eliminate the possible effects of timing:

Group	Type of Training	Subgroup	Firing Course 1	Firing Course 2
A	Standard	I	Standard (Tables II & III)	CPQC
"	"	II	CPQC (Tables I - V)	Standard
B	Quick-Fire		Standard (Tables II & III)	CPQC
"	"		CPQC (Tables I - V)	Standard

In addition to the pistol firing, each subject was given a Corbin 145 Pistol Training Questionnaire after he completed his training and firing. The questionnaire was administered to determine: (a) the

(b) In the present study no attempt was made to determine the effect of the two training methods on the students' performance on the aim-fire portions of the Standard training course.

student's opinions about the training he received and (b) personnel history items such as experience with hand guns. (See Appendix E.)

RESULTS

The data were analyzed to provide answers to three basic questions, namely: (a) Is there a difference between the training methods in terms of total pistol hit scores? (b) Is there a difference between the training methods in terms of hit scores on the Standard firing course? (c) Is there a difference between the training methods in terms of hit scores on the CPQC firing course?

The performance of Category IV personnel did not differ significantly from that of the rest of the men; it was therefore decided not to conduct a separate analysis on the scores of Category IV personnel.

Total Pistol Scores and Training Methods

Table 2 presents measures of central value and variation for the Standard and Quick-Fire training groups on the Standard and CPQC firing courses.

The mean hit scores for the two training groups on Tables II and III (Standard) and Tables I - V (CPQC) combined were calculated, and the results of a statistical analysis of the difference between these means are shown in Table 3.

Table 2

Range, Mean, and Standard Deviation for the Standard Group and Quick-Fire Group Scores on Standard Tables II and III and the CPQC (Tables I-V) Combined

Group	Range	Mean	SD
Standard Group	19-50	38.07	6.57
Quick-Fire Group	16-50	35.98	6.95

Table 3

Results of "t" Test of the Significance of Difference Between Mean Hit Scores of the Standard and Quick-Fire Groups on Standard Tables II and III and the CPQC (Tables I-V) Combined

Group	Mean	"t"	df	P
Standard Group	38.07	3.36	498	.001
Quick-Fire Group	35.98			

The results in Table 3 show that the small difference, of approximately two hits, between the means of the two groups was statistically significant. This small two-hit difference is in favor of the Standard group.

Standard Firing Course Pistol Scores and Training Methods

Measures of central value and variation for the Standard and Quick-Fire training groups on the Standard firing course are presented in Table 4.

The mean hit scores for the two training groups on Tables II and III of the Standard firing course were calculated, and the results of a statistical analysis of the difference between the means are shown in Table 5.

Table 4

Range, Mean, and Standard Deviation for the Standard Group and Quick-Fire Group Scores on Standard Tables II and III

<u>Group</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>
Standard Group	3-20	15.04	3.48
Quick-Fire Group	3-20	13.87	3.98

Table 5

Results of "t" Test of the Significance of Difference Between Mean Hit Scores of the Standard and Quick-Fire Groups on Standard Tables II and III

<u>Group</u>	<u>Mean</u>	<u>"t"</u>	<u>df</u>	<u>P</u>
Standard Group	15.04	3.53	505	.001
Quick-Fire Group	13.87			

The results in Table 5 show that the small difference, of approximately one hit, between the means of the two groups was statistically significant. This small one-hit mean difference is in favor of the Standard group.

CPQC Firing Course Pistol Scores and Training Methods

Measures of central value and variation for the Standard and Quick-Fire training groups on the CPQC firing course are presented in Table 6.

The mean hit scores for the two training groups on the CPQC firing course were calculated, and the results of a statistical analysis of the difference between the means are shown in Table 7.

Table 6

Range, Mean, and Standard Deviation for the Standard Group
and Quick-Fire Group Scores on the CPQC (Tables I-V)

<u>Group</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>
Standard Group	10-30	23.03	4.49
Quick-Fire Group	5-30	22.11	4.92

Table 7

Results of "t" Test of the Significance of Difference Between Mean Hit
Scores of the Standard and Quick-Fire Groups on the CPQC (Tables I-V)

<u>Group</u>	<u>Mean</u>	<u>"t"</u>	<u>df</u>	<u>P</u>
Standard Group	23.03	2.19	505	.05
Quick-Fire Group	22.11			

The results in Table 7 show that the small difference, of approximately one hit, between the means of the two groups was statistically significant. This small one-hit mean difference is in favor of the Standard group.

Responses to Caliber .45 Pistol Questionnaire

The study was also concerned with the opinions of the men in the Quick-Fire and Standard groups about various aspects of the training situation.

Questions 1 and 2 dealt with experience with hand guns. About 25% of the students in each group said they had experience with the caliber .45 pistol and about 65% of each group said they had had experience with hand guns.

Questions 3 and 4 dealt with the overall feeling about the training course. About half of the students in each group rated their training as fair and about 94% of each group said they enjoyed the training, at least somewhat.

Question 5 dealt with the effectiveness of the training. About 50% of the students in each group said that the training prepared them to use the caliber .45 pistol. About 25% of each group were undecided and about 25% of each group said that the training did not prepare them to use the caliber .45 pistol.

Question 6 dealt with training time. About 1% of the students in each group said that too much time was devoted to training, about 44% of each group said that training time was adequate, and about 55% of each group said that too little time was devoted to training.

Questions 7 and 8 involved comparing the pistol firing courses and the demands of combat. About 14% of the Standard group and 18% of the Quick-Fire group said that the behaviors required in firing the Standard course were just about as realistic as those required in combat; about 41% of the Standard group and about 51% of the Quick-Fire group said that the behaviors required in firing the Standard course were a little less realistic than those required in combat; about 45% of the Standard and about 32% of the Quick-Fire group said that the behaviors required in firing the Standard course were a great deal less realistic than those required in combat.

About 24% of each group said that the behaviors required in firing the CPQC were just about as realistic as those required in combat; about 53% of each group said that the behaviors required in firing the CPQC were a little less realistic than those required in combat; about 22% of each group said that the behaviors required in firing the CPQC were a great deal less realistic than those required in combat.

Question 9 dealt with how effective the students felt the pistol was as a close-in protective weapon. 67% of each group said that the pistol was very effective, about 30% of each group said it was somewhat effective, and approximately 2% of each group said it was not effective.

Question 10 dealt with whether or not the students would advise other people to take the particular type of training program they received. About 90% of each group said that they would advise people to take the training course. About 9% of each group said that they would not recommend the course.

Question 11 asked the students if they would like to take other individual weapon courses, if the courses were structured like the pistol training course. Approximately 75% of each group said "Yes," and about 24% of each group said "No."

Question 12 provided a list of positive and negative descriptors from which the students were to choose those which best described their feelings toward the training. About 91% of each group responded positively toward the training and about 8% of each group responded negatively toward the training.

Question 13 asked the students to list the things they disliked most about the course of instruction. About 35% of each group said "they did not have enough time, practice and firing." Approximately 13% of each group said they did not like the instructional methods and techniques; about 17% of each group said there was a lack of organization in the training and range operations; about 67% of each group said they did not like the Standard course of pistol firing; about 16% said there was nothing they disliked, and about 10% responded to irrelevant items of dislike, e.g., "taking firing positions in the mud," "weather," "thought the whole thing was useless," etc.

Question 14 asked the students to list what they liked most about the course. About 38% of each group said they liked weapon handling and firing; about 37% of each group said they liked the Quick-Fire technique and CPQC firing course; about 11% of each group said they liked the pop-up targets and realism of the firing situation; about 4% of each group gave miscellaneous responses, e.g., "liked submachine gun firing," "interesting," "useful," etc.

Question 15 asked for recommendations to improve the training. About 49% of each group said they wanted more time for both practice and firing. About 9% of each group said the training methods and techniques could be improved, about 8% of each group said they wanted more realism and combat type firing; about 28% of each group responded in the "Nothing" category; about 5% of each group gave miscellaneous responses, e.g., "reliability of targets," "better organized," etc.

Question 16 dealt with whether or not the students used the B-B pistol as part of their training. 91% of the Quick-Fire group said "Yes," 8% said "No." 100% of the Standard group said "No."

Question 17 dealt with how the students felt about whether or not the use of the B-B pistols gave them a better feeling for handling the caliber .45 pistol. 58% of the Quick-Fire group said it did, 25% said it did not, and 15% were undecided.

Question 18 dealt with whether or not the students felt that B-B pistol training helped them in firing the course. 58% of the Quick-Fire group said it did; 28% said it did not; 13% were undecided.

Question 19 dealt with whether or not the students felt that B-B pistol training hindered them in firing the course. 80% of the Quick-Fire group said it did not; 8% said it did; 10% were undecided.

A Chi-Square analysis to test for the independence or association of the groups' responses to 12 of the 19 questions was conducted.³ This analysis indicated that, except on Item 7, the two groups gave essentially the same responses to all the questions. The results of the analysis for Item 7 are shown below.

Item 7: How realistic do you think the Standard pistol firing is as compared to what an actual combat situation might require?		
	Standard Group	Quick-Fire Group
Response :	(N = 228)	(N = 244)
Just about as realistic:	13.60%	17.62%
A little less realistic:	41.23	50.41
A great deal less realistic:	45.18	31.97

³Only the first twelve questions lent themselves to a meaningful Chi-Square analysis.

The Chi-Square obtained, 8.80, is significant, indicating that the training method and item response variables are associated. More men in the Standard group gave the "great deal less realistic" response than men in the Quick-Fire group. But more men in the Quick-Fire group gave the "a little less realistic" response than men in the Standard group. The reason is probably that the Quick-Fire group used a quick-fire technique in firing the standard tables, and that though this made it seem less realistic than combat, the feeling of a lack of reality was not as strong as that of the group that used the standard firing technique.

The results of the Chi-Square analysis for Items 1 - 12, and the complete questionnaire and results (in response percentages) may be found in Appendix E.

DISCUSSION AND SUMMARY

The purpose of Army pistol training is to teach soldiers how to use the pistol effectively against targets in the shortest time that will insure minimum qualification as a marksman. This training objective is based on the assumption that the pistol is a defense weapon issued to soldiers to provide close-in protection against surprise man-size targets. Given this information, the purpose of the present evaluation was to compare Standard and Quick-Fire approaches to pistol training in terms of the students' proficiency in obtaining hits on close-in surprise targets. The targets selected for end-of-course performance testing were the CPQC Tables I - V and Standard Tables II and III. The nature of these firing tables required the student to respond in a manner similar to the behavior defined by the training objective and the assumptions underlying it.

The results of the study indicate that there was a statistically significant difference on the test between the training methods in terms of (a) total hit scores, (b) hit scores on the Standard firing course, and (c) hit scores on the CPQC firing course. Considering that the difference between groups in mean hit scores on the total pistol course, i.e., the combined Standard and CPQC firing tables, was 2 of 50 (the number of total possible hits), it appears that the question of a practical difference rather than a statistically significant difference is important. A statistically significant difference does not necessarily mean a difference of practical impact. The difference in the hits obtained by the two groups, firing under optimal conditions, is very small. Any differences in field performance, if any, that are associated with the type of previous pistol training might be of no practical significance.

Also, considering that the difference between the hits obtained by the two groups on the Standard firing tables was 1 of 20, and on the CPQC firing tables 1 of 30, it would seem that, here too, the question of practical rather than statistical significance is important.

The practical significance of the difference between mean hit scores must be evaluated in terms of: (a) the judgment of personnel who are experts in field use of the caliber .45 pistol as to whether the difference is substantial or negligible in relation to field performance; (b) ease of teaching each method; (c) cost of teaching each method; (d) motivational factors associated with each method; (e) ease of range operations associated with each method; (f) instructor preferences in regard to the two methods; (g) trainee preferences in regard to the two methods.

The results of a study conducted by HumRRO Division No. 4 suggest some motivational aspects of the Quick-Fire technique as applied to rifle training. The study provided comparisons between groups of BCT trainees that differed in terms of the presence or absence of Quick-Fire instruction in Basic Rifle Marksmanship (BRM) training. The results of the study include the following: "(1) All trainee groups gained significantly in confidence during BRM training. (2) Trainees who received Quick Kill training gained more confidence than trainees who did not receive this training. The difference in favor of Quick Kill is statistically significant. (3) For most aspects of BRM, Quick Kill trainees showed more favorable attitudes than trainees who did not receive Quick Kill, and reported they found the various phases of BRM less difficult. (4) Trainees who received Quick Kill training reported that they did not find it especially difficult and that they enjoyed the training."⁴

SUMMARY OF RESULTS AND DISCUSSION

1. There was a two-hit difference between the mean hit scores of the Standard and Quick-Fire groups on the total pistol firing course. This difference was in favor of the Standard group and was statistically significant.

2. There were one-hit differences between the mean hit scores of the Standard and Quick-Fire groups on the Standard and the CPQC firing courses. These differences were in favor of the Standard group and were statistically significant.

3. The practical significance of the small differences between mean hit scores must be evaluated in terms of: (a) the judgment of personnel who are experts in the field use of the caliber .45 pistol as to whether the differences in hit scores obtained at the end of training are substantial or negligible in relation to field performance; (b) ease of teaching each method; (c) relative cost of the two teaching methods; (d) motivational factors associated with each method; (e) ease of range operations associated with each method; (f) instructor preferences for the two methods; and (g) trainee preferences for the two methods.

⁴Joseph A. Olmstead, "The Effects of 'Quick Kill' Upon Trainee Confidence and Attitudes," Technical Report 68-15 (HumRRO, Alexandria, Va., December 1968).

APPENDICES

Appendix A

WEAPONS DEPARTMENT
US ARMY ARMOR SCHOOL
Fort Knox, Kentucky

MECHANICAL TRAINING, MARKSMANSHIP AND QUALIFICATION FIRING, PISTOL CALIBER .45

Lesson Plan

TYPE

Conference, demonstration, and practical exercise.

TIME ALLOTTED

Eight hours.

COURSES PRESENTED TO

As prescribed.

TOOLS, EQUIPMENT, AND MATERIALS

Annex A.

PERSONNEL

- a. Primary instructor.
- b. 1 instructor per 6 students.
- c. NCOIC.
- d. Supply NCO.
- e. 1 2-1/2 ton truck driver.
- f. 5 EM detail.
- g. 1 ambulance driver.
- h. 1 aidman.
- i. 1 1/4 ton truck driver.
- j. Safety officer.
- k. PA set operator.

INSTRUCTIONAL AIDS

Annex A.

REFERENCES

- a. FM 23-35 Proposed (tower commands).
1. Post Range Regulations.

TRAINING OBJECTIVES

Given a caliber .45 pistol and a supply of ammunition, the student must be able to list and explain its characteristics and general data. He must be capable of loading the weapon, firing it accurately and clearing it. Additionally, he must be able to perform immediate action, disassemble and assemble the weapon for care and cleaning, and perform the four operational tests prior to firing. The student must also complete the practice and record fire exercises successfully.

Notes. 1. Allow 10 minutes for travel to Garvin Range if class is to be conducted there.

2. Annex C - Instructor Duties.

1. INTRODUCTION (20 minutes)

a. Reasons.

- (1) The pistol is an individual weapon intended for your use in close combat.
- (2) You will be responsible for training men to use and maintain the pistol.

b. Objectives.

At the conclusion of this class, you must be able to:

- (1) List characteristics and general data.
- (2) Disassemble and assemble the weapon.
- (3) Perform the four operational tests.
- (4) Load, fire, clear and perform immediate action.
- (5) Complete the practice and record fire exercise successfully.

c. Procedure.

- (1) In the first four hours of this eight hour class you will receive instruction on the characteristics and general data of the Cal .45 pistol. You will also receive instruction on mechanical training, and pistol marksmanship. During the last hour you will practice marksmanship with the CO2 pistol.
 - (a) You will use the pistol at your setup. Do not handle the pistol until told to do so.
 - (b) As you are told, clear the weapon, disassemble it, and name the parts to yourself.
 - (c) Each time you assemble the weapon, make the test for correct assembly.
 - (d) Perform the operational tests.
 - (e) Practice clearing and immediate action procedures.
 - (f) Ask the instructor for help when you need it.
- (2) In the last four hours of this class you will practice fire and record fire the Cal .45 pistol.

d. General History.

- (1) Cal .45 was adopted during the Phillipine Insurrection.
- (2) Other pistols were ineffective in fighting Moros.
- (3) Cal .45 was successful because of knock-down power.

2. EXPLANATION, DEMONSTRATION, AND PRACTICAL EXERCISE (170 minutes)

a. Mechanical Training.

Note. Primary instructor will explain characteristics and general data and then assign students to setups.

(1) Characteristics.

- (a) Hand weapon.
- (b) Magazine fed.
- (c) Semi-automatic. The pistol fires one round each time the trigger is squeezed.
- (d) Recoil operated. The energy needed to operate the pistol for each round after the first comes from the rearward force of expanding powder gases of the previous round fired.

(2) Data.

- (a) Caliber .45.
- (b) Weight, fully loaded, 3 lbs approx.

- (c) Maximum range, 1,500 meters.
 - (d) Maximum effective range, 50 meters.
 - (3) Disassembly, assembly, functioning, loading, clearing, operational checks and immediate action will be taught by instructors per annex B.
- Note. Primary instructor presents marksmanship and practice firing after instruction per annex B.

b. Pistol Marksmanship.

- (1) Fundamentals. The primary use of the pistol is to engage an enemy at close range with quick, accurate fire. Accurate shooting is the result of knowing and correctly applying the important elements of marksmanship. Preparatory marksmanship training must precede any range firing and must be given to all individuals expected to fire, in order to establish and correct shooting habits. The elements of marksmanship are the fundamentals of quick-kill (rapid, accurate, unaimed fire). These are: hand and eye coordination, grip, positions, trigger control, and target engagement.

Note. Use the venetian blind strips to introduce and describe the five elements of preparatory marksmanship. Use an assistant to demonstrate each fundamental as it is covered.

- (a) Hand and eye coordination. Everyone has the natural ability or instinct to point at an object. Pointing the forefinger at an object and extending the pistol toward a target are the same. The combination of the two is natural. Instinctively, human eyes focus initially on the center of any object observed. After the object is sighted, unless a concentrated effort is made, the eyes will instinctively re-focus on the most outstanding feature on the object; i.e., a shiny object, color or movement. The majority of crippling or killing hits result from maintaining the focus on the center of mass. THE EYES MUST REMAIN FIXED ON SOME PART OF THE TARGET THROUGHOUT THE PROCESS OF FIRING. When an individual points he instinctively points at the feature on the object on which his eyes are focused. This instinct is used by the soldier to engage a target or targets in a rapid and accurate manner. This instinct is called hand and eye coordination. Your success using the quick kill technique depends entirely on hand and eye coordination.

(b) Grip.

- 1. The pistol must act as an extension of the hand and arm. Instinctively it takes the place of the finger in pointing toward an object. To accomplish this, a firm, uniform grip must be applied to the pistol. To obtain the proper grip:
 - a. Hold the pistol in the nonfiring hand with the fingers wrapped around the slide, sights up, and the muzzle pointing up and down range.
 - b. Form a V with the thumb and forefinger of the shooting hand.

- c. Place the grip safety into the V. Ensure that an imaginary line drawn from the front sight back through the rear sight and parallel to the forearm would bisect the upper arm as closely as possible. Place the mainspring housing against the heel of the hand.
 - d. Wrap the lower three fingers around the pistol grip with the middle finger just under the trigger guard. Press with these fingers straight back through the wrist and forearm. Do not press with the finger tips.
 - e. Place the thumb high along the safety lock. Do not press on the weapon.
 - f. Place the trigger finger on the trigger so the trigger can be pulled straight to the rear.
2. The pistol is gripped as tightly as possible until the hand begins to shake. The grip is then relaxed until the tremor stops.
 3. The entire grip must be re-applied anytime the firer moves or relaxes one of the lower three fingers or shifts the weapon in his hand. Practice makes the grip automatic.
 4. The pressure used in gripping the weapon helps to maintain a locked wrist. If the wrist is held in a loose manner, the natural alinement of pointing the weapon will not be accomplished.

Note. If the grip is correct, another man should be able to grasp the muzzle and move it up, down, right, or left while the firer's forearm, hand and weapon move as one solid unit.

(c) Positions.

1. Ready position. The pistol is held in the one-hand grip. The upper arm is held close to the body, and the forearm is in a horizontal position. The pistol is pointed toward the target area as the firer moves forward. This position is used when anticipating the engagement of surprise targets.
2. Crouch position. The body is in a boxer's stance with the knees bent slightly and trunk bent forward from the hips. The feet are placed naturally in a position that will allow another step. The action of extending the pistol toward the target is done simultaneously with the crouch position. It has to be executed properly, smoothly and fluidly. It is accomplished as follows:
 - a. Once the target is observed and the firer begins to assume the crouch position, the firing arm, held in the ready position, starts to straighten. The shoulder remains immobile until the arm is completely straight and the elbow is locked, making the pistol, hand, wrist, forearm, upper arm, and shoulder one solid unit.
 - b. The solid arm unit is then moved up into line with the target feature on which the vision is focused.

- (d) Trigger Control. As soon as the brain impulse stops the smooth, fluid movement of the solid arm control, the weapon must be fired. If there is any hesitation, the firer will attempt to establish a relationship between the sights and the target. The simultaneous action of assuming the crouch position, extending the pistol, hand, arm, and then firing should require less than a second. The trigger must be pulled straight to the rear, evenly and firmly, with independent trigger-finger action, causing the hammer to fall without disturbing the alignment of the pistol. The rearward movement of the trigger finger starts as soon as the arm begins to straighten. The pistol fires as soon as the movement ceases. After practice this becomes automatic and is not a conscious effort.
- (e) Target Engagement.
1. Single target engagement. The firer applies the technique discussed in the previous steps.
 2. Multiple target engagement. The closer of the multiple targets is engaged first. Regardless of a hit or miss, the firer then shifts on the balls of his feet, the eyes focus on the second target and it is engaged without hesitation. Solid arm control is maintained during all of the engagements. After the second target has been fired upon. The firer, if he has missed the first target, shifts back to the first and re-engages it.
- (2) CO2 Practice Pistol - The CO2 powered BB pistol is a training device to teach the technique of quick kill. It increases confidence, and afford more practice time. Due to light recoil and little noise, it is easier to concentrate on fundamentals. The CO2 powered pistol should receive the same respect as any firearm.
- (a) Characteristics.
1. Semi-automatic.
 2. Blow-back operated.
 3. Hand held.
 4. Magazine (integral) fed.
- (b) General Data.
1. Weight: 2 lbs 10 ozs w/cyl.
 2. Magazine capacity: 15 shots.
 3. Shots per cylinder: 45 approx.
 4. Muzzle velocity: 340 fps.
 5. Maximum range: 100m variable.
 6. Maximum effective range: 15m variable.
- (c) Nomenclature. (Muzzle to grip)
1. Knurled tube cap.
 2. Feed arm.
 3. Cocking slide.
 4. Safety lever.
 5. BB follower locking slot.
 6. BB follower.
 7. BB load opening.
 8. BB indicating aperture.

- (d) Charging. Cock pistol manually by moving slide to rear. Return slide to forward position. Place pistol on safe by moving safety lever up. Retract follower to rear and lock in slot. Remove BB's from magazine through load opening. MAKE SURE ALL BB'S ARE REMOVED FROM MAGAZINE AND FEED ARM. BB's in feed arm can be seen through indicating aperture. Unscrew and remove knurled cap (if unable to turn by hand indicates gas not expended). Hold muzzle end down and used power cylinder will fall out. Insert new cylinder with neck toward open end. Replace cap and screw firmly in place, back off 1/8 turn, push toward cylinder. Release safety and pull trigger to determine if cylinder is properly pierced.
- (e) Loading. Put pistol on safe. Push follower to rear and lock in slot. Insert BB's in load opening. Release follower.
- (f) Clearing. Put on safe. Remove BB's from magazine and feed arm. Exhaust gas from gun by pulling trigger repeatedly. Remove empty cylinder.
- (g) Safety. If shooting is stopped before magazine is empty place safety lever in safe position.
- (3) Practice Exercise (Description).
 - (a) Quick Kill target training device.

Note. Display one QTTD and explain how it functions.
 - (b) Using the QTTD with CO₂ pistol. To practice the fundamentals of quick kill during the next hour of instruction, the QTTD is used in the following phases:
 1. Phase 1. From 10 feet, 5 shots at a 20-foot miniature E silhouette. After firing each shot, the firer and coach discuss the results and make corrections.
 2. Phase 2. From 15 feet, 5 shots at a 20-foot miniature silhouette. Same instructions apply.
 3. Phase 3. From 20 feet, 5 shots at a 20-foot miniature silhouette. Same instructions apply.
 4. Phase 4. From 15 feet, 5 shots, at two 20-foot miniature silhouettes. The targets on the QTTD are held in the up position. The firer initially engages the 20-foot miniature silhouette on the extreme right. He then shifts his body as a unit, engages the same target on the extreme left. The firer again shifts back to re-engage the first target. The shooter fires this exercise twice, firing three shots each time. Prior to firing the second time, the coach and firer should briefly discuss the errors made during the first exercise.
 5. Phase 5. Seven shots fired from 20, 15, and 10 feet respectively at miniature E silhouettes. The firer starts this exercise 30 feet from the QTTD. The command MOVE OUT is given, and the firer steps out at a normal pace with the pistol held in the ready position. Upon the command FIRE (given at the 20 foot line) the firer assumes the crouch position and engages the 20-foot miniature E silhouette on the extreme right of the QTTD. He then shifts his body, as

a unit, engages the same type target on the extreme left, and shifts back to the first target. If the target is still up he engages it. The firer then assumes the standing position and returns the pistol to the ready position. The coach then makes the corrections. On the command MOVE OUT the firer again steps off at a normal pace. Upon the command FIRE (given at the 15 foot line) he engages the 15 foot targets on QTTD. The same sequence of fire distribution is followed. The firer moves forward, on command, until he reaches the 10-foot line. At the command FIRE the firer engages the 10-foot miniature E silhouette in the center of the QTTD.

(4) Instructional Practice Firing (Practical Exercise).

Note. See annex F for conduct. See above for description of exercise

3. APPLICATION (180 minutes)

After completion of the first 4 hours of instruction as outlined above the students will move to the pistol range under the supervision of the primary instructor. For the last 4 hours of instruction, practice and record firing of the Caliber .45 pistol will be conducted per annex D.

4. REVIEW AND CRITIQUE (20 minutes)

Notes. 1. Review and critique will be conducted at the end of the 8 hour block of instruction.

2. Allow 15 minutes for travel.

a. Student Questions.

b. Review Main Points.

- (1) Disassembly and assembly.
- (2) Operational tests.
- (3) Immediate action.
- (4) Common stoppages.
- (5) Preliminary marksmanship.

c. Critique of firing exercise.

d. Closing Statement. The information you have learned today, has given you a basic knowledge of the pistol and will enable you to use and maintain it. You also completed your record firing. If you are not satisfied with your score, you should analyze your mistakes and rectify them before firing again.

Annexes:

- A--Instructional Aids
- B--Assistant Instructor's Guide for Practical Exercise, Mechanical Training
- C--Instructor's Duties
- D--Record Firing, Pistol, Caliber .45
- E--Instructor's Guide to Practical Exercise

MECHANICAL TRAINING, MARKSMANSHIP, AND RECORD FIRING PISTOL, CAL .45

Annex A to Lesson Plan

TOOLS, EQUIPMENT, MATERIALS, AND INSTRUCTIONAL AIDS

1. INSTRUCTIONAL AIDS FOR CLASSROOM:
 - a. Venetian blind strips, preliminary marksmanship.
 - b. Range layout.
 - c. QTTD for aid.
2. TOOLS, EQUIPMENT, AND MATERIALS FOR CLASSROOM
 - a. 1 - pistol cal .45 per student.
 - b. 1 - pistol CO₂ per 2 students.
 - c. 1 - Cal .45 magazine per student.
 - d. 3 - Dummy rounds per student.
 - e. 10 - Short pointers.
 - f. 1 - Long pointer.
 - g. Rags.
 - h. Overhead projector and screen.
3. VEHICLES
 - a. 1 - 2-1/2 ton truck.
 - b. 1 - 1/4 ton PA truck.
4. EQUIPMENT REQUIRED FOR FIRING LINE
 - a. Practice firing:
 - (1) 1 - CO₂ pistol per 2 students.
 - (2) 100 - EP's per student.
 - (3) 3 - CO₂ cylinder per student.
 - (4) 1 - QTTD per 2 students.
 - b. Live practice and record firing:
 - (1) 1 - Pistol cal .45 and 6 magazines per point.
 - (2) 60 - Cal .45 rounds per student.
 - (3) 2 - Pistol score sheets per student.
5. RANGE EQUIPMENT AND MATERIAL
 - a. 1 - Range flag.
 - b. 1 - Red signal flag.
 - c. 1 - Stop watch.
 - d. 2 - Water containers.
 - e. Cleaning material.
 - f. Sight tape.
 - g. Paper cups.
 - h. Toilet paper.
 - i. Ice.
 - j. Salt tablets.

MECHANICAL TRAINING, MARKSMANSHIP, AND RECORD FIRING PISTOL, CAL .45

Annex B to Lesson Plan

INSTRUCTOR'S GUIDE FOR PRACTICAL EXERCISE, MECHANICAL TRAINING

1. TYPE OF EXERCISE
Conference, demonstration, and practical exercise.
2. TIME ALLOTTED
70 minutes.
3. EQUIPMENT REQUIREMENTS
One each:
 - a. Pistol and magazine per student and 3 dummy rounds.
 - b. Pistol, magazine, and 5 dummy rounds per instructor.
4. INSTRUCTOR'S DUTIES
 - a. Clearing the Weapons.
Note. Instructor will explain and demonstrate clearing the weapon and then have student clear their weapons.
 - (1) Press the magazine catch and remove the magazine.
 - (2) Pull the slide to the rear and lock it to the rear with the slide stop.
 - (3) Look and feel in the chamber to ensure that no ammunition remains in the weapon.
 - b. Outside Nomenclature.
Note. Point to part, then tell students the name of part and have them locate it on their pistol.
 - (1) Recoil spring plug.
 - (2) Barrel bushing.
 - (3) Front sight.
 - (4) Slide stop.
 - (5) Disassembly notch.
 - (6) Rear sight.
 - (7) Grip safety.
 - (8) Safety lock.
 - (9) Magazine catch.
 - (10) Trigger and trigger guard.
 - c. General Disassembly.
Note. First, show students how to disassemble pistol and then supervise them in a step-by-step explanation. Have students lay the parts out in the order of their removal. Name parts as they are removed from the weapon, and point out barrel link, fixed ejector, extractor, and disconnecter. Point out that they will be discussed during functioning.
 - (1) Clear weapon.
 - (2) Remove:
 - (a) Recoil spring plug. Press down on the recoil spring plug and turn the barrel bushing 1/4-turn clockwise. Allow the recoil spring to expand slowly under control, to prevent injury or loss of the part. Turn the recoil spring plug counterclockwise and remove it from the recoil spring.

- (b) Slide stop and slide stop pin. Press the safety lock downward to the FIRE position. Push the slide to the rear until the disassembly notch is aligned with the rear projection on the slide stop. Press the protruding end of the slide stop pin with the right forefinger and pull out the slide stop.
- (c) Slide. Pull the receiver rearward to separate it from the slide.
- (d) Recoil spring and recoil spring guide. Remove the recoil spring guide and recoil spring from the slide group. Separate the two parts with a twisting action.
- (e) Barrel bushing. Remove the barrel bushing by turning it counterclockwise and pulling it from the slide.
- (f) Barrel. Push the barrel link forward and remove the barrel from the front end of the slide.

d. Functioning of the Pistol. Cycle of operation. Each time a cartridge is fired, the parts inside the pistol work in a given order. This cycle of operation is divided into 8 steps; however, more than 1 step may be occurring at the same time.

- (1) Feeding--placing a cartridge in the receiver, approximately in rear of the barrel, ready for chambering.
- (2) Chambering--moving the cartridge from the magazine into the chamber.
- (3) Locking--sealing the cartridge in the chamber and blocking the breech end of the barrel.
- (4) Firing--igniting the primer and firing the cartridge.
- (5) Unlocking--unsealing the breech end of the barrel.
- (6) Extracting--removing the cartridge case from the chamber.
- (7) Ejecting--removing the cartridge case from the weapon.
- (8) Cocking--returning the firing mechanism to the cocked position ready to fire another cartridge.

e. General Assembly.

Note. Explain that the parts are assembled in reverse order of disassembly. Supervise students in step-by-step assembly.

f. Test for Correct Assembly.

- (1) Pull slide to the rear and release it; the hammer should remain cocked.
- (2) Hold pistol in a normal firing grip and squeeze the trigger; the hammer should fall.

g. Safety Devices. The pistol has three safety devices, the grip safety, the safety lock, and the half-cocked notch on the hammer. The safeties must be tested often, and always before the pistol is fired. The disconnecter is not considered a positive safety, as are the three safeties mentioned above, since it is designed to cause the pistol to fire semiautomatic fire and cannot be controlled by the firer.

h. Operational Tests Before Firing.

Note. Explain, demonstrate, and lead students through tests step by step.

Warning. Before making the following tests, inspect to ensure that the magazine is removed and the chamber is empty.

- (1) Safety lock. Cock the hammer and press the safety lock up into the SAFE position. Grasp the stock so that the grip safety is depressed, and squeeze the trigger 3 or 4 times. If the hammer falls, the safety lock is not safe and must be replaced.
- (2) Grip safety. Cock the hammer and, being careful not to depress the grip safety, point the pistol down, and squeeze the trigger 3 or 4 times. If the hammer falls, the grip safety or sear spring must be replaced.
- (3) Half-cocked notch. Pull the hammer rearward until the sear engages the half-cocked notch and squeeze the trigger. If the hammer falls, the hammer or sear must be replaced. Pull the hammer rearward nearly to the full-cocked notch and let it fall. It should fall only to the half-cocked notch.
- (4) Disconnecter. Cock the hammer and push the slide 1/4-inch to the rear; hold the slide in that position and squeeze the trigger. Let the slide go forward, maintaining the pressure on the trigger. If the hammer falls, the disconnecter is worn and must be replaced. Pull the slide all the way to the rear, squeeze the trigger, and release the slide; the hammer should not fall. Release the pressure on the trigger, squeeze it, and the hammer should fall. The disconnecter prevents the release of the hammer until the slide and barrel are fully forward and locked. If the hammer falls upon release of the slide, the disconnecter should be replaced.

i. Loading and Unloading the Weapon.

Note. Explain, demonstrate, and lead students through procedures.

- (1) Loading with slide forward.
 - (a) Insert loaded magazine.
 - (b) Grasp the slide with the left thumb and forefinger.
 - (c) Pull the slide fully to the rear, release, letting the slide move forward on its own power, and press the safety lock up to the SAFE position with the left forefinger.
- (2) Loading with the slide to the rear.
 - (a) Insert a loaded magazine.
 - (b) Press down on the slide stop letting the slide move forward.
 - (c) Press the safety lock up to the SAFE position.
- (3) Unloading is the same as clearing the weapon.

j. Immediate Action.

- (1) Immediate action is the prompt action taken by the firer to reduce a stoppage. The procedure for applying immediate action should become instinctive for the soldier armed with the pistol. If a stoppage occurs, immediate action is applied automatically in an effort to reduce the stoppage without attempting to discover the cause at that time.
- (2) In the event the slide is fully forward, the hammer falls, and the pistol fails to fire, apply immediate action as follows:

- (a) Manually cock the hammer, without opening the chamber, and make one additional attempt to fire. If the pistol still fails to fire, wait 10 seconds, and then come to the position of raise pistol. Grasp the slide with the thumb and first finger of the left hand, keeping the thumb on the right side of the slide. Pull the slide rearward rapidly to its full extent. Rotate the pistol to the right allowing the unfired round to drop out; release the slide and allow it to return to the forward position, chambering a new cartridge.
Caution. Keep the weapon pointed downrange during this operation.
- (b) Aim and attempt to fire.
- (3) In the event the slide is not fully forward, remove the trigger finger from the trigger guard and with the nonfiring hand attempt to push the slide fully forward. If the slide will not move forward, proceed as follows:
 - (a) Bring the weapon to raise pistol.
 - (b) Remove the magazine.
 - (c) Grasp the slide with the left hand as in inspection arms, pull the slide to the rear, and lock it with the slide stop.
 - (d) Inspect the chamber. Remove any obstructions.
 - (e) Insert another loaded magazine into the pistol.
 - (f) Release the slide.
 - (g) Aim and attempt to fire.
- (4) If the weapon does not fire after application of immediate action as outlined above, a detailed inspection should be made to determine the cause of the stoppage.
- k. Practical Exercise.
 - (1) Students practice loading, clearing, operational tests, and immediate action at their own speed.
 - (2) During this exercise, each student is checked on the above items by the instructor.

MECHANICAL TRAINING, MARKSMANSHIP, AND RECORD FIRING, PISTOL, CALIBER .45

Annex C to Lesson Plan

INSTRUCTOR'S DUTIES

1. DIRECTIONS TO PRIMARY INSTRUCTOR
 - a. Explain to the class the purpose and procedures to be followed.
 - b. Explain characteristics and general data.
 - c. Divide the class and assign to setups.
 - d. Be sure that each student has a pistol and place to work.
 - e. Circulate among groups and answer student questions.
 - f. Have instructors carefully supervise the practical work.
 - g. Assemble students in classroom for marksmanship training.
 - h. Divide students into orders and supervise practice firing (CO₂).
 - i. Supervise live practice and record firing (annex D).
2. DIRECTION TO INSTRUCTOR
Annex B.

MECHANICAL TRAINING, MARKSMANSHIP AND RECORD FIRING, PISTOL CALIBER .45

Annex D to Lesson Plan

INSTRUCTIONAL PRACTICE FIRING AND RECORD FIRING, PISTOL, CAL .45

1. TYPE
Practical exercise.
2. TIME ALLOTTED
180 minutes.
3. EQUIPMENT REQUIREMENTS
 - a. Pistol, cal .45 and 6 magazines per point.
 - b. 2 - Pistol score cards per student.
 - c. 80 - Cal .45 rounds per student.
4. PERSONNEL
 - a. Officer in charge.
 - b. Safety officer.
 - c. One instructor per five points.
 - d. NCOIC.
 - e. Supply NCO.
5. INSTRUCTOR'S DUTIES
 - Notes.
 1. Allow 15 minutes travel time to range.
 2. Assemble class in bleachers.
 3. Primary instructor will give an explanation of the firing exercise, explain scoring, and give a safety briefing.
 4. Primary instructor will conduct the firing exercise.
 - a. Explanation of Firing Exercise.
 - Note. Issue each student 2 score cards, then have them complete the heading. "PRACTICE" should be marked at the top center of one score card and Tables III, and IV crossed off
 - (1) Instructional Practice Firing, Table I, II, and V.
 - (a) Table I. One magazine--7 rounds. 5 targets exposed for 3 seconds each. The standing position is assumed at the firing line with pistol at the ready. Only single targets are exposed. Target sequence at discretion of tower operator. Targets in all tables will vary in range and position.
 - (b) Table II. One magazine--1 round, one magazine 7 rounds. 6 targets exposed. The firer assumes the same position on the firing line as in Table I. There will be 4 single targets exposed for 3 seconds each and 1 set of multiple targets exposed for 5 seconds. Target sequence is at the tower operator's discretion. Initially, the 1 round magazine is loaded. One target is exposed for 3 seconds, if not, struck it is lowered and 3 seconds are allowed to replace the magazine by the tower operator before the next target appears. No command is issued to replace the magazine.

- (c) Table V. One magazine--1 round, 1 magazine--7 rounds, 1 magazine--5 rounds. 10 targets exposed. Target sequence is left to the discretion of the tower operator. The firer begins 10 meters behind the firing line in the middle of the trail. Initially, the magazine containing 7 rounds is placed in the firer's belt. The 1 round magazine is loaded into the weapon. The 5 round magazine is held by the scorer and given to the firer during the controlled magazine change. When the firer reaches the firing line, a single target is exposed for 2 seconds, then lowered if not hit. The 7 round magazine is loaded automatically by the firer during an 8 second delay. The second single target is then exposed for 2 seconds, a miss is scored if firer did not engage the target because he had not reloaded. When the tower operator is sure all firers have reloaded, the command MOVE OUT is given, and the remaining targets are given in sequence.

Note. After the last targets are hit or lowered the weapon is cleared. The firer, holding the pistol in the raised pistol position, with the slide to the rear, returns to the starting point. The next order moves to the firing point.

- (2) Record Firing, Tables I, II, III, IV, and V.

- (a) Table I. Same as instructional practice firing.
(b) Table II. Same as instructional practice firing.
(c) Table III. One magazine--7 rounds, 5 targets exposed. Fired following rotation to another firing point. The firer assumes the same position on the firing line as in Table I-II. Three single targets are exposed for 3 seconds each and 1 set of multiple targets is exposed for 5 seconds. Target sequence is left to the discretion of the tower operator.
(d) Table IV. One magazine--5 rounds. 4 targets exposed. Start same as Table I and II. Two single targets are exposed for 2 seconds each and 1 set of multiple targets exposed for 4 seconds. Target sequence is left to the discretion of the tower operator.
(e) Table V. Same as instructional practice firing.

b. Scoring.

- (1) Score cards.
(a) Heading.
(b) Practice fire Table I, II and V.
(c) Record fire Tables I through V.
(2) Procedure. Each time a target is hit or killed, an X is placed in the column labeled HITS. The value of a hit is 10 points. Upon completion of firing the scorer will total and sign the score card.
(3) Qualification. Standards are listed on the bottom right corner of the score card. They are:
(a) Expert..... 260-300.
(b) Sharpshooter.... 210-250.
(c) Marksman..... 160-200.
(d) Unqualified....below 160.

- c. Range Safety. Do not
 - (1) Place a loaded magazine in the pistol until the command to load is given.
 - (2) Remove the magazine and clear the pistol before leaving the firing point.
 - (3) Hold the loaded pistol at the position of raise or ready, except while firing or as otherwise instructed.
 - (4) If one or more cartridges remain unfired at the end of firing, remove the magazine and clear the weapon.
- d. Practical Exercise (160 minutes).
 - (1) Directions to students.
 - (a) Move from the bleachers to your assigned point.
 - (b) Check your stand to see that you have a pistol, 3 magazines and 70 rounds of ammunition.
 - (c) You will apply the four operational checks. If your pistol is defective, notify the assistant instructor and he will replace it.
 - (d) Coaches will score during the practice firing.
 - (e) There will be no coaching during the record firing.
 - (2) Directions to principle instructor.
 - (a) Review safety precautions on pistol range.
 - (b) Conduct instructional practice firing.
 - (c) Inform students when instructional practice firing is over and record firing will begin. There will be no coaching during record firing.
 - (d) Scoring:
 - 1. During practice firing, coach will score the firer.
 - 2. For record firing, have the second order score the first order.
 - 3. If there is only one order, instructors will score the student.
 - 4. Place assistant instructor in charge of five points.
 - (3) Directions to instructors.
 - (a) Each AI will have five points.
 - (b) Check to see that each student has the proper equipment.
 - (c) Observe closely for improper safety procedure and correct them on the spot.
 - (d) Repeat orders from the twer if necessary and ensure that the students understand them.
 - (e) Collect score cards at conclusion of class and check for completeness.
 - (f) Be prepared to explain and demonstrate:
 - 1. Loading and clearing.
 - 2. Operational tests.
 - 3. Grip.
 - 4. Immediate action.

MECHANICAL TRAINING, MARKSMANSHIP, AND RECORD FIRING, PISTOL CAL .45

Annex E to Lesson Plan

INSTRUCTOR'S GUIDE FOR PRACTICAL EXERCISE, MARKSMANSHIP

1. TYPE
Practical exercise.
2. TIME ALLOTTED
50 minutes.
3. EQUIPMENT REQUIREMENTS
 - a. 1 - CO2 pistol per 2 students.
 - b. 3 - Cylinders per student.
 - c. 100 - BB's per student.
 - d. 1 - QTTD per 2 students.
 - e. PA set.
4. PERSONNEL
 - a. OIC, Primary instructor.
 - b. NCOIC.
 - c. Supply NCO.
5. INSTRUCTOR'S DUTIES
 - a. Supervise placement of QTTD's on range.
 - b. Brief students on range and safety.
 - c. Divide students into 2 orders; firers and coaches.
 - d. Conduct the practice exercise as follows: Phase I, II, III, IV, and V, respectively, as per lesson plan description.
 - e. Supervise clearing of weapons.
 - f. Rotate student orders.

Summary
SCHEDULE OF INSTRUCTION
Standard Pistol Training

<u>Subject</u>	<u>Hours</u>
Mechanical Training: Disassembly and Assembly, Safety, Maintenance, etc.	3 (Classroom)
Preliminary Marksmanship Instruction: Firing Positions, Grip, Sight Alignment, Trigger Squeeze, Coaching, Safety, Explanation of Firing Tables, etc.	1 (Classroom)
Practical Exercise: Firing Positions, Aiming, Triangulation Exercise, etc.	
Note: No live firing was conducted; only dry firing exercises.	4 (Training Area)
Range Firing: Practice and Record Firing of Standard Tables II and III and CPQC Tables I-V. Firing of Submachine Gun for Familiarization.	3 (Firing Range)
Note: During a normal training cycle the total time allotted for pistol training is eleven hours. The range firing time for the study was extended beyond the three hours as designated above due to the requirement to fire both Standard Tables and CPQC Tables on the same day. The firing conditions were the same for both the Standard group and Quick-Fire group.	

Appendix B

DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING CENTER, ARMOR
Fort Knox, Kentucky 40121

AREATO-GTT
ATA-A SUBJ SCD 17-131
LESSON PLAN 41A
Period 4

3 February 1970

LESSON PLAN

INSTRUCTIONAL UNIT: PRELIMINARY MARKSMANSHIP INSTRUCTION CAL .45 PISTOL AND
CAL .45 SMG

ESSENTIAL INFORMATION

TYPE:	Conference, Demonstration and Practical Application
TIME ALLOTTED:	Four (4) Hours
CLASSES PRESENTED TO:	ATA Trainees
TOOLS, EQUIPMENT, AND MATERIALS:	(See Annex C)
LOCATION OF CLASS:	PMI conducted one (1) hour in classroom; three (3) hours in designated training area
PERSONNEL:	One (1) Primary Instructor and all available cadre
TRAINING AIDS:	(See Annex C)
REFERENCES:	FM 23-35, FM 23-41
STUDY ASSIGNMENT:	N/A
STUDENT UNIFORM AND EQUIPMENT:	T
TROOP REQUIREMENTS:	N/A
TRANSPORTATION REQUIREMENTS:	Organic
INCLEMENT WEATHER ALTERNATIVE:	Move to classroom
STATE OF TRAINING:	Previous Instruction
SPLIT SCHEDULE:	See Training Schedule
SAFETY:	USATCA Reg 350-1
INTEGRATED SUBJECTS:	Safety, Care and Cleaning of Weapons

ANNEX A

LESSON OUTLINE

1. PRESENTATION (200 Minutes)

a. Introduction (5 Minutes)

(1) Objective: To teach the trainee the principles of pistol marksmanship.

(2) Reasons: The primary use of the pistol is to engage an enemy at close range. Accurate shooting is the result of knowing and correctly applying the important elements of marksmanship which are, aiming the pistol, firing positions, and trigger squeeze.

(3) Procedures:

(a) The Primary Instructor, from Battalion Instructor Committee, will explain and demonstrate the main teaching points of the class. Units will conduct application stage in accordance with Annex B of this Lesson Plan.

(b) Trainees will perform practical application outlined in Annex B of this Lesson Plan.

b. Explanation and Demonstration (45 Minutes)

(1) Aiming the Pistol:

- (a) Sight alignment
- (b) Sight picture
- (c) Calling the shots

(2) Proper Pistol Grip:

- (a) One Hand Grip
- (b) Two Hand Grip
- (c) One hand modified two hand grip

(3) Firing Positions:

- (a) Standing position
- (b) Prone position
- (c) Kneeling position
- (d) Crouch position

LP 41A
Pd 4 Annex A (cont'd)

NOTE: SUBMACHINEGUN POSITIONS WILL ALSO BE DEMONSTRATED AT THIS TIME.

(4) Trigger Squeeze

- (a) Flinching
- (b) Jerking trigger
- (c) Heeling
- (d) Position of trigger finger
- (e) Correct breathing (BRASS)
- (f) Explain and demonstrate pencil triangulation

(5) Duties of the Coach:

- (a) Corrects errors
- (b) Checks firing position
- (c) Observes safety precautions
- (d) Checks pistol clearance
- (e) Checks to see if sights are blackened
- (f) Checks firer on loading and trigger squeeze
- (g) Has the firer call each shot
- (h) Checks weapon after firing

(6) (6) Safety Devices on the Pistol

- (a) Safety lock
- (b) Grip safety
- (c) Half cock
- (d) Disconnect

NOTE: THE DISCONNECTOR IS NOT CONSIDERED A POSITIVE SAFETY SINCE IT IS DESIGNED TO CAUSE THE PISTOL TO FIRE SEMIAUTOMATIC FIRE AND CANNOT BE CONTROLLED BY THE FIRER.

NOTE: SAFETY DEVICE ON SUBMACHINEGUN WILL ALSO BE DISCUSSED.

LP 41A
Pd 4 Annex A (cont'd)

(7) Slow Fire - Table I

- (a) 10 rounds, 15 meter line, standing position, no time limit.
- (b) 10 rounds, 25 meter line, standing position, no time limit.

* (8) Rapid Fire - Table II

- (a) 5 rounds, 25 meter line, prone position, 12 seconds.
- (b) 5 rounds, 25 meter line, kneeling position, 12 seconds.

* (9) Quick Fire - Table III

- (a) 4 rounds, 25 meter line, standing to prone, 15 seconds.
- (b) 4 rounds, 15 meter line, standing to kneeling, 15 seconds.
- (c) 2 rounds, 10 meter line, crouch position, 6 seconds.

2. APPLICATION: To be conducted in accordance with Annex B. (145 Minutes)

3. REVIEW, SUMMARY, AND CRITIQUE (5 Minutes)

a. Clarify any points not understood by the class.

b. Review main teaching points:

- (1) Aiming the pistol
- (2) Proper pistol grip
- (3) Firing position
- (4) Trigger squeeze
- (5) Duties of the Coach
- (6) Safety devices on the pistol
- (7) Slow Fire - Table I
- (8) Rapid Fire - Table II
- (9) Quick Fire - Table III

c. Closing Statement: We have discussed the basic fundamentals of marksmanship. Adherence to these fundamentals and development of good shooting habits will enable you to become a good pistol shooter. Accuracy and speed are essential. Employment of what you have learned will develop the confidence and ability to utilize the Cal .45 Pistol as it was intended.

LP 41A
Pd 4

ANNEX B

STATIONS

1. ORGANIZATION

a. Trainees will be broken down into three (3) equal groups. Stations will be situated so as not to interfere with the other stations. Groups will be rotated in sequence after each group has completed a station.

b. Groups will rotate every hour.

2. PRACTICAL EXERCISE

a. Station #1:

(1) Aiming: Using the triangulation exercise, the trainee is required to make a shot group.

(2) Positions

(3) Trigger squeeze

(4) Sight alignment

(5) Breathe (BRASS)

b. Station #2: Each trainee will demonstrate each of the four positions and perform rapid and quick fire exercises.

(1) Standing

(2) Crouch

(3) Kneeling

(4) Prone

(5) Rapid Fire

(6) Quick Fire

c. Station #3:

(1) Pistol

(a) Safety

(b) Range Safety

(c) Loading and Unloading

LP 41A
Pd 4 Annex B (cont'd)

LP 41A
Pd 4 Annex B (cont'd)

- (d) Firing Positions (using trainees as demonstrators)
 - (e) Manual of Arms (Pistol)
 - (f) Immediate Action
- (2) Submachinegun:
- (a) Safety
 - (b) Range Safety
 - (c) Loading and Unloading
 - (d) Firing Positions
 - (e) Manual of Arms (Submachinegun)
 - (f) Immediate Action

LP 41A
Pd 4 Annex B (cont'd)

LP 41A
Pd 4

ANNEX C

UNIT TRAINING AIDS

1. One (1) Pistol, magazine and holster per trainee.
2. Fifty (50) pencils with tape
3. Seasonal equipment as required
4. One (1) SMG per two (2) trainees
5. One (1) lesson plan (LP 41A Pd 4) for each station
6. Ten (10) each firing point stands
7. Ten (10) each "E" type targets
8. Triangulation exercise (Annex D); nine (9) Assistant Instructors for the stations.

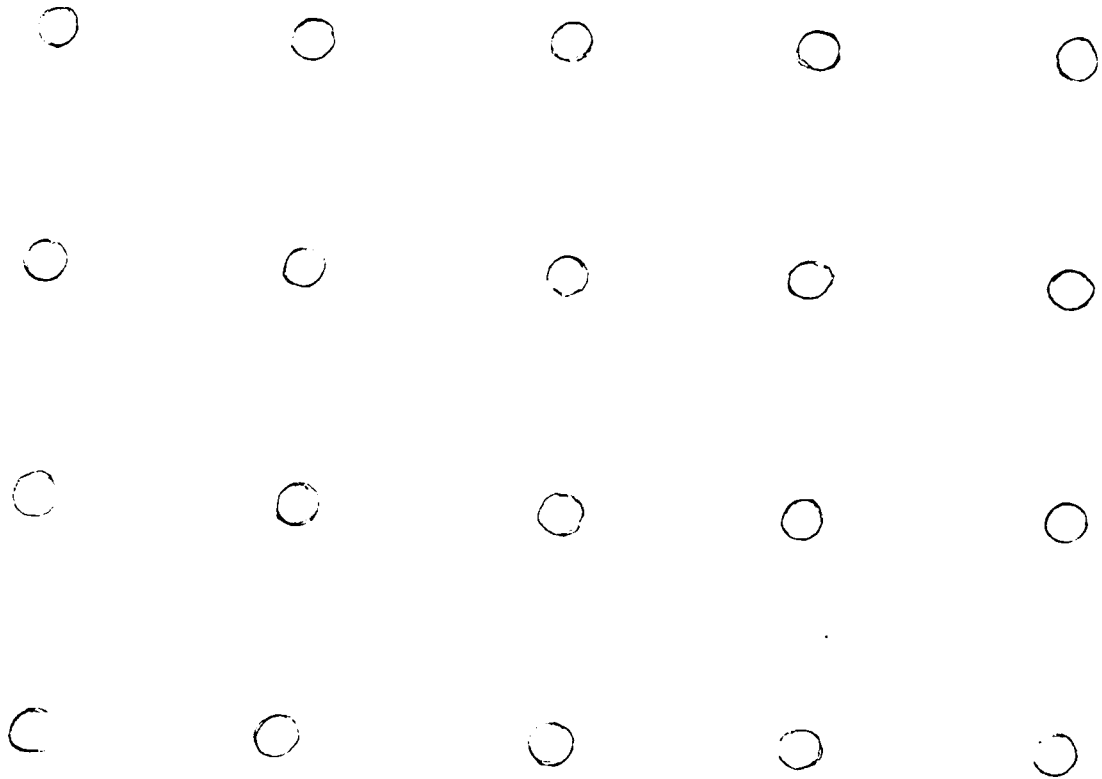
BN COMMITTEE TRAINING AIDS

1. One (1) podium with proper strips
2. One (1) Annex D per trainee

LP 41A
Pd 4

ANNEX D

TRIANGULATION EXERCISE



Summary
SCHEDULE OF INSTRUCTION
Quick-Fire Training

<u>Subject</u>	<u>Hours</u>
Mechanical Training: Disassembly and Assembly, Safety Maintenance, etc.	3 (Classroom)
Preliminary Marksmanship Instruction: Grip, Quick-Fire Firing Techniques, Explanation of Firing Tables.	1 (Classroom)
Practical Exercise: Firing Techniques for Quick- Fire Using the B-B Pistols and Training Devices.	4 (Indoor Firing Range)
Range Firing: Practice and Record Firing of Standard Tables II and III and CPQC Tables I-V. Firing of Submachine Gun for Familiarization.	3

APPENDIX C: SCORE CARD FOR STANDARD PISTOL FIRING

INSTRUCTION PRACTICE FIRING				INDIVIDUAL SCORE CARD CALIBER .45 PISTOL AND CALIBER .38 REVOLVER RECORD FIRING				DATE		
				FOR USE OF THIS FORM, SEE FM 23-35; PROPOHENT AGENCY IS USCONARC.						
				LAST NAME - FIRST NAME - MIDDLE INITIAL				GRADE		
				ORGANIZATION						
TABLE I - SLOW FIRE (Possible: 200)										
RANGE (Meters)	POSITION	TIME LIMIT	SCORE							
15	Standing	10 shots No time limit								
25	Standing	10 shots No time limit								
			TOTAL							
TABLE II - RAPID FIRE (Possible: 100)										
RANGE (Meters)	POSITION	TIME LIMIT	SCORE							
25	Prone	5 shots in 12 seconds								
25	Kneeling	5 shots in 12 seconds								
			TOTAL							
TABLE III - QUICK FIRE (Possible: 100)										
RANGE (Meters)	POSITION	TIME LIMIT	SCORE							
25	Standing to prone	4 shots in 15 seconds								
15	Standing to kneeling	4 shots in 15 seconds								
10	Crouch	2 shots in 6 seconds								
			TOTAL							
			TOTAL PRACTICE SCORE							
				TOTAL RECORD SCORE						
				SCOREN'S SIGNATURE						
				FIRER'S SIGNATURE						
				SIGNATURE OF OFFICER						
				POSSIBLE SCORE: 400 EXPERT - 320 SHARPSHOOTER - 320 MARKSMAN - 200						

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PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

APPENDIX D

Lane No.		COMBAT PISTOL QUALIFICATION COURSE SCORECARD		Date	
Order	Group			Unit	
Name _____					
(Last)		(First)	(MI)	(SN)	

TABLE I
1 magazine 7 rds.

TIME	TGT	HITS
3 Seconds	1	
3 Seconds	2	
3 Seconds	3	
3 Seconds	4	
3 Seconds	5	
TOTAL		

TABLE IV
1 magazine 5 rds.

TIME	TGT	HITS
2 Seconds	1	
2 Seconds	2	
4 Seconds	3	
	4	
TOTAL		

TABLE II
1 magazine 1 rd.
8 second delay for magazine change.
1 magazine 7 rds.

TIME	TGT	HITS
5 Seconds	1	
3 Seconds	2	
5 Seconds	3	
	4	
3 Seconds	5	
3 Seconds	6	
TOTAL		

TABLE V
1 magazine 1 rd.
8 second delay for magazine change.
1 magazine 7 rds.
Controlled magazine
change 1 magazine 5 rds.

TIME	TGT	HITS
2 Seconds	1	
2 Seconds	2	
4 Seconds	3	
	4	
4 Seconds	5	
	6	
2 Seconds	7	
2 Seconds	8	
4 Seconds	9	
	10	
TOTAL		

TABLE III
1 magazine 7 rds.

TIME	TGT	HITS
3 Seconds	1	
3 Seconds	2	
3 Seconds	3	
5 Seconds	4	
	5	
TOTAL		

QUALIFICATION

Expert	260
Sharpshooter	210
Marksman	160

TOTAL HITS _____

TOTAL SCORE _____

Scorer's Signature _____

Officer's Signature _____

Notes: 1. When the revolver is being fired, firers are issued number of rounds required to fire a specific table. Officer in charge of firing establishes procedure for loading and reloading. All reloading is controlled; however, time allowed for target engagement is not changed.

2. Tables 1, 2, 5 are fired for familiarization and instructional firing.

DA FORM 88 (Date) (PROPOSED)

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APPENDIX E: Percentages of Responses to Questions in the Caliber .45
Pistol Training Questionnaire

Question:	Response and Response Percentage:		Chi-Square
	Standard Group	Quick-Fire Group	

1. Have you had previous experience with a caliber .45 pistol?

	(N = 232)	(N = 243)	
Yes	21.55	24.19	
No	78.45	75.81	.47

2. Have you had previous experience with any kind of hand gun?

	(N = 232)	(N = 243)	
Yes	62.50	61.69	
No	37.50	38.31	.003

3. How would you rate the total training you received on the caliber .45 pistol?

	(N = 231)	(N = 252)	
Good	32.47	37.70	
Fair	55.41	54.76	
Poor	12.12	7.54	.53

4. Did you enjoy the training you received?

	(N = 231)	(N = 248)	
Very Little	6.06	6.45	
Somewhat	45.89	47.18	
Very Much	48.05	46.37	.14

5. Do you feel that the training you received prepared you for using the caliber .45 pistol in a combat situation?

	(N = 231)	(N = 248)	
Yes	42.86	47.58	
Undecided	27.27	27.82	
No	29.87	24.60	1.82

6. How do you feel about the amount of time spent on caliber .45 pistol training?

	(N = 230)	(N = 245)	
Too Much	.87	1.63	
Adequate	43.04	45.71	
Too Little	56.09	52.65	.99

Question:	Response and Response Percentage:		
	Standard Group	Quick-Fire Group	Chi-Square

7. How realistic do you think the standard pistol firing is as compared to what an actual combat situation might require?

	(N = 228)	(N = 244)	
Just about as realistic	13.60	17.62	
A little less realistic	41.23	50.41	
A great deal less realistic	45.18	31.97	8.80

8. How realistic do you think the Combat Pistol Qualification Course is as compared to what an actual combat situation might require?

	(N = 229)	(N = 241)	
A great deal less realistic	20.52	24.07	
A little less realistic	57.21	48.55	
Just about as realistic	22.27	27.38	3.55

9. How effective do you feel your pistol is as a close-in weapon?

	(N = 230)	(N = 243)	
Very effective	66.09	69.55	
Somewhat effective	31.30	29.22	
Not effective	2.61	1.24	1.60

10. Would you advise other people to take this course if they had the choice?

	(N = 232)	(N = 242)	
Yes	91.81	90.08	
No	8.19	9.92	.43

11. Would you like to take other individual weapons courses if they were taught in the same way as the caliber .45 pistol course?

	(N = 230)	(N = 247)	
Yes	76.52	74.09	
No	23.48	25.91	.38

12. Circle only those words which help describe your feelings toward the caliber .45 pistol training you received. NOTE: The following list of descriptions was provided for each individual to choose from. For analysis purposes, the list was broken down into positive or negative type responses concerning the individual's attitude toward the training he had received. The number of responses made by the Standard Group totaled 713 and the Quick-Fire responses totaled 711 for Question 12.

fun exciting boring worthless worthwhile interesting
dull no good useful great lousy not important

Positive		Negative		Chi-Square
Standard	Quick-Fire	Standard	Quick-Fire	
(N = 713)	(N = 711)	(N = 713)	(N = 711)	
91.73	91.56%	8.27	8.44%	.01%

13. What did you dislike most about the course? (NOTE: In the Standard Group there were a total of 223 responses to this question, and 215 responses in the Quick-Fire Group.)

	Standard	Quick-Fire	Combined
a. Not enough time, practice and firing.			
	36 32%	34 42%	35 39%
b. Instructional methods and techniques.			
	10 31%	16 74%	13.47%
c. Lack of organization in training and range operations.			
	19.28%	15.35%	17 35%
d. Didn't like the Standard Course of Instruction firing.			
	8.07%	5.58%	6.85%
e. Nothing.			
	15.25	18.60%	16.89%
f. Miscellaneous Category (NOTE: Responses in this category were usually no more than two and usually only one for any particular item mentioned).			
	10 76	9.30%	10.05%

14. What did you like most about the course? (NOTE: In the Standard Group there were a total of 223 responses to this question and 232 responses for the Quick-Fire Group.)

	<u>Standard</u>	<u>Quick-Fire</u>	<u>Combined</u>
a. Weapon handling and firing.			
	40.36%	37.50%	38.90%
b. Quick-Fire technique and CPQC range.			
	38.56%	37.07%	37.80%
c. Pop-up targets and review of the firing situation.			
	11.65%	12.07%	11.87%
d. Nothing.			
	3.14%	5.17%	4.18%
e. Miscellaneous Category (NOTE: Responses in this category were usually two or less, usually only one, for any item mentioned.)			
	6.28%	8.19%	7.25%

15. What would you do to improve the training, if anything? (If nothing, state "Nothing.") (NOTE: The Standard Group made 239 responses to this question, and the Quick-Fire Group 263.)

a. More time, practice, and firing.			
	50.63%	47.53%	49.00%
b. Improve the methods and techniques.			
	6.69%	11.79%	9.36%
c. More realism and combat type firing.			
	7.53%	8.74%	8.17%
d. Nothing.			
	29.71%	27.38%	28.49%
e. Miscellaneous Category (NOTE: Responses in this category were usually no more than two and usually only one for any particular item mentioned.)			
	5.86%	4.56%	5.18%

16. Did you use the B-B pistol as part of your training?

<u>Response</u>	<u>Standard</u>	<u>Quick-Fire</u>
	(N = 227)	(N = 246)
Yes	0%	91.87%
No	100%	8.13%

(Note: Questions 17 through 19 were answered only by the group receiving Quick-Fire training.)

17. Do you think that the merit and general feel of the B-B pistol gave you a better feeling for the caliber .45 pistol?

<u>Response</u>	<u>Quick-Fire</u>
	(N = 227)
Yes	58.15%
Undecided	15.86%
No	25.99%

18. Do you feel that using the B-B pistol in training helped you in firing the course?

	(N = 228)
Yes	58.33%
Undecided	13.60%
No	28.07%

19. Do you feel that using the B-B pistol in training hindered you in firing the course?

	(N = 226)
Yes	8.41%
Undecided	10.62%
No	80.97%