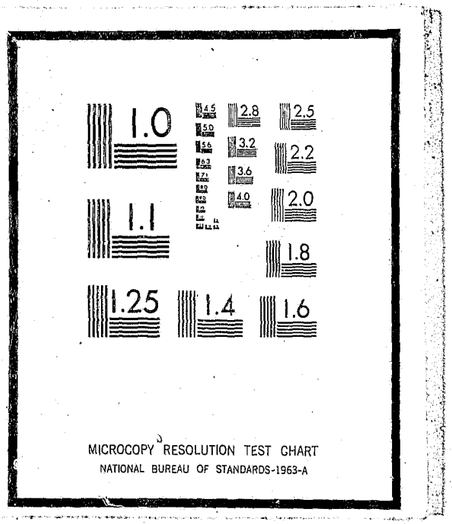

AN EVALUATION OF THE

ADVANCED INDIVIDUAL TRAINING (AIT) PROGRAM

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San Jose Police Department
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CHAPTER 1

EXECUTIVE SUMMARY

The Advanced Individual Training (AIT) Program was developed out of a need to meet State mandated requirements for providing Advanced Officers training to all sworn personnel on the one hand, and to upgrade officer skills to meet the Department's standards related to the issue of the use of force. The program was developed as an in-service eighty-hour training program for all sworn personnel from the ranks of Police Officer to Captain, a total of 702 individuals.

The program consists of seven curriculum components. Each curriculum area was designed to satisfy either departmental needs or a State mandated requirement. The program has been accredited by the Commission on Peace Officers Standards and Training (POST) as meeting the requirements for forty hours of an Advanced Officer course. The Emergency Care component, which requires 12 hours, also satisfies POST requirements for emergency first aid and cardiopulmonary resuscitation (CPR) training.

The other six curriculum components, Defensive Tactics (22 hours), Driver Training (20 hours), Firearms (12 hours), Conflict Management (5 hours), Chemical Agents (2 hours), and Law Technology (5 hours) are designed to meet departmental standards. The number of hours of training in each of these areas reflects a combination of the relative

importance of each area and the minimum amount of time needed to provide effective training.

By the end of 1975, 280 sworn personnel have completed the AIT Program, which represents 40 percent of the target population.

To determine whether the AIT Program is "worth" the cost of providing in-service training within the Department, a summative evaluation was commissioned by the Department Administration, and was assigned to the Planning and Evaluation Unit of the Research and Development Division. To determine the worth of the program a "payoff" approach was taken which focused upon the effects of training upon both immediate and long term performance of trainees; "worth" was generally defined as the benefits to the Department which override the costs to the Department.

To evaluate the immediate effects of AIT, an experimental design was developed to measure before-training and after-training (that is, pretest and posttest) performance of trainees. The performance of trainees in the Experimental Group were compared against a group of officers who were tested at the same time, but who had not received training (a Control Group).

The pretest and posttest measures were based upon the specific training objectives and standards for each component. A written examination was developed to test for knowledge-oriented objectives; Performance Tests examined officer proficiency in demonstrating driving skills, emergency care skills and firing a duty pistol under stress.

Long-term performance measures were operationally defined, and a system for collecting and monitoring these measures was designed to be conducted during Calendar Year 1976. While the long-term effects of training remain an open question, preliminary results will be available by April, 1976.

The evaluation found that the program is highly successful in attaining its program goals, but at a relatively high cost to the Department. AIT exceeds POST requirements for Advanced Officer training, and has no "equal" in other programs in the State, at least in hours and content of training.

The results of analyses of performance measures indicated statistically significant differences between the Experimental and Control Groups in all areas tested except one; results of the Firearms test barely missed significance, but showed a strong trend toward improvement in discharging a duty weapon under stress conditions.

The summary conclusion drawn from the analyses is that the AIT Program has a significant effect upon the cognitive and skill-performance achievement of trainees: (1) as tested immediately following their 80-hour training experience, (2) as compared against officers who have not received training, and (3) as measured by the tests developed in this study. Although not all AIT training objectives were tested in the evaluation, objectives considered essential for successful completion of AIT were examined, and, on the basis of the test results, were found to be effectively met.

Although it was not possible to precisely determine the extent to which the AIT staff has contributed to the success of the program, they are to be commended for their work in defining instructional objectives, for designing an action-oriented curriculum, and for providing high-quality instruction. Most officers who have completed AIT have spoken highly of the instructors and of their teaching effectiveness.

The costs to the Department of AIT are relatively high. The largest cost factor is salaries of training staff who are sworn officers assigned to the Personnel and Training Division.

The largest non-fiscal cost to the Department is the loss of service of about two percent of the sworn personnel for each AIT class. This loss of service availability also becomes a fiscal cost factor if the difference between trainee salaries and salary reimbursement received from POST are computed.

In the final assessment, the adage that "you pay for quality" is certainly true: the AIT Program is costly, but it produces immediate results. As an integrated, in-house training program, AIT appears to effectively respond to Department, City Council and community concerns about improving police performance and service, at least on the basis of immediate test results. Whether the Department is capable of continuing to upgrade the general level of training and officer performance is an extremely complex issue. Economic, political and social factors enter into the decision making process, and all alternatives are constrained by these factors.

Finally, the purpose of this evaluation has <u>not</u> been to prove, but rather to improve; accordingly, several recommendations for improving the fiscal base of the program, as well as its content and structure are summarized below.

1. *The structure of the program should be reconfigured to reduce costs, but at the same time maintaining its overall high quality.*

   The major cost factor is instructors' salaries borne by the Department. Two alternatives for reducing these costs, are (1) to reduce the number of hours of instruction in certain areas, or (2) to reduce the number of instructors. Although neither of these alternatives are palatable, they require further study, and should only be implemented if the quality of training is not threatened.

2. *The number of hours of the Firearms component should be expanded to provide more time for practice and feedback.* Skill in firing a service weapon is largely a matter of practice and feedback, i.e., training. Although the performance of the sample of officers who completed twelve hours of Firearms training did not differ significantly from the performance of officers who had no practice, there was a trend toward improvement. Since effectively discharging a weapon under stress is a critical part of a police officer's job, it is strongly recommended that this

component be expanded and supported by Department management.

3. *A driver training instructor should be hired by the San Jose City College District so that the costs for two instructors may be eliminated.*

   The implication of this recommendation is not that the present instructors are not qualified or effective; they appear to be quite effective, based upon feedback from trainees and from test results. This recommendation, and the next one as well, points out an alternative which may reduce departmental costs for implementing AIT. With regard to reducing driver training costs, an alternative is described in Chapter 7 which may result in a cost savings to the Department.

4. *Given the present structure of AIT, and the hard cost of instructors' salaries borne by the Department, the San Jose City College District and the Department should share, on an equitable basis, the net income generated through the Average Daily Attendance (ADA).*

   The single largest cost to the Department is instructor salaries. At the same time, the San Jose City College District receives ADA-generated income through attendance by officers enrolled in AIT. It would appear that a more equitable distribution of funding can be arranged, an arrangement which would allow the Department and the SJCCD to share in the net profit resulting from ADA-generated income minus overhead.

5. *The curriculum should be made more adaptable to address specific needs of individuals or subgroups.*

   AIT was designed as a refresher course and to satisfy State requirements for Advanced Officer training. There is some question, however, of whether the training needs for Police Officers are the same as for Lieutenants and Captains. As more sworn personnel from these higher ranks are assigned to attend AIT, the curriculum may need to be adapted to more closely fit their needs. Two alternatives for identifying how parts of the program may be adapted to meet individual needs are described in Chapter 7.

6. *A diagnostic assessment system should be developed for all sworn personnel so that records of assessed training needs, level of proficiency, and completed training can be kept for individual personnel.*

   The recommendation points to the need to develop a means for assessing and monitoring the professional development of sworn personnel. Such a system can yield useful information for planning training modules for AIT, for other types of in-house training, or for the need for off-site, specialized training.

7. *Every effort should be made by the Department to upgrade its training facilities.*

   Unlike other large police agencies, the Department does not have its own training facilities, and facilities that are

either provided by the Santa Clara Valley Criminal Justice Training Center, or those that are rented, are not adequate. If the Department is to continue to upgrade and improve its training capabilities, it would be economically feasible (in the long run) for the Department to own and operate its own driver training, range, classroom, and media facilities.

CHAPTER 2

OBJECTIVES OF THE EVALUATION

Evaluation is above all the systematic collection and analysis of information to determine the worth of a thing. Just as Hannibal elected to march elephants across the Pyrenees because he had determined their worth to him both as beasts of burden as well as instruments of war, so the decision to continue or terminate a program should be based on a determination of the worth of that program.

This report, directed to Department administrators, Program staff, and the City's decision makers, is an attempt to provide information about the worth of the Advanced Individual Training (AIT) Program.

The purpose of this study was to determine the worth of the AIT Program by (1) comparing the performance of officers after completing the program against the performance of officers who had not completed the program, and (2) assessing the degree to which officers attained the behavioral objectives of the program.

Specifically, the evaluation problem was to determine the measurable effects of AIT training components on performance and attitudes of officers. This suggested a "payoff" evaluation approach which focused on trainee outcomes as a result of completing the 80-hour program, and required the following questions be answered in the course of the evaluation study:

1. Are the AIT Program goals and objectives being met?
2. What benefits does the Department gain relative to the costs of the program?
3. How can the AIT Program be improved?

These evaluation questions provided a base for establishing objectives that the evaluation attempted to achieve. Four basic evaluation objectives to be met in this study were to:

1. Describe the AIT Program as it is presently configured and and implemented.
2. Assess the immediate effects of training as measured by written examinations and performance tests.
3. Analyze the costs of the program per officer, by class, by year, and in comparison with other similar programs.
4. Design and initiate monitoring and assessment of long term effects of training.

Evaluations are rarely conducted in a social or political vacuum. To provide a fair and objective foundation for making decisions about the effects of training, decision-makers need to know what the program was like, and what kind of training took place to produce such results. For example, it may be important for some readers to know about the educational philosophy behind the program; about the subject matter covered by the program; about what the program is intended to achieve (e.g., the program objectives, or behavioral objectives); about the training and instructional procedures used by the staff; about the

trainees who attended the training sessions; and about standards, some of the bases used for judging quality.

The purpose of Chapter 3, therefore, is to provide a comprehensive specification of the AIT Program so that the reader may be more fully informed when decisions about the program need to be made.

Chapter 4 describes the evaluation design developed to meet the objectives of this study. Since the evaluation was not conducted in a vacuum, it was limited at the outset by certain organizational constraints which are described in some detail. This chapter also describes the experimental design employed to determine whether there were significant, valid, and reliable differences in trainees' knowledge and performance. An experimental-control, pre-posttest design, utilizing a multiple matrix sampling procedure, is described in detail in this chapter.

In addition, an attempt was made to identify long-term effects which could be attributed to training, and to design data collection procedures which may be helpful in assessing long-term payoff to the Department. Because of its relatively short time frame, this evaluation study cannot adequately assess long-term improvements in performance, cost savings due to reductions in accidents, injuries, and the like; but it can provide some suggestions about potential follow-up data which may be useful in monitoring the retention of learning by officers once back in service. Recommendations are made about potentially useful data which can be monitored over the next year.

The effects of AIT are described in Chapter 5. The core of Chapter 5 is the presentation of empirical data about student gains, about what the trainees actually learned from their training experience.

The costs of providing the 80-hour program are presented in Chapter 6. The analysis includes the cost to train each officer, the cost of a class, AIT costs for Fiscal Year 1975-76, and a cost comparison between AIT and similar programs.

Chapter 7 attempts to integrate, summarize and evaluate the outcomes presented in Chapters 5 and 6. The purpose of this chapter is to discuss the relationships between what was intended and what actually resulted, to speculate what training input caused what results, and to evaluate the relationships between costs and outcomes. The relevance of the program objectives to the Department's needs, in the light of the degree to which these objectives were met, are also discussed. The chapter concludes with an evaluation of the evaluation itself: of its usefulness to Department administrators in making decisions. This "self evaluation" applies the criteria of timeliness, relevance, credibility, validity, and reliability as the measure of usefulness.

CHAPTER 3

THE ADVANCED INDIVIDUAL TRAINING PROGRAM

Historical Notes

The training of police officers, until recently, has been either non-existent or without demonstrated effectiveness. Prior to 1972, the San Jose Police Department was faced with a dilemma confronting other police departments in the country. On the one hand, the Department was deeply affected by the nationwide awareness (probably caused by the violence of the sixties) of the need to improve existing programs for training law enforcement personnel. The press, the public, the President's Commission on Crime, and the courts all put the need for effective training on the line. On the other hand, the San Jose Police Department, like other departments throughout the nation found that its training efforts were disjointed, uncoordinated, and characterized by critics and supporters alike as a "shotgun approach."

During this period, the State Legislature and the Commission on Peace Officer Standards and Training (POST) were beginning to recommend and require more education and training for law enforcement personnel. Funding for the development of "training system" became available through POST, the Office of Criminal Justice Planning (formerly the California Council on Criminal Justice), and the Law Enforcement Assistance Administration (LEAA); police agencies were quick to respond.

In May, 1972, a series of events began to form the foundation for the development of an in-service, advanced officer training program for the Department. The first event was a survey of officer morale and job satisfaction conducted by a Special Planning Committee.[1] The results of this survey, completed by 82 percent of the Department's sworn personnel, found among other things, that the general level of morale was low, that "training is seen as both insufficient and inadequate by most officers,"[2] and that the command level leadership is not responsive to change. Several recommendations were made by the Committee, recommendations which had an impact on later events.

The recommendations in 1972 for improved in-service training by the Special Planning Committee pointed to a particular need: training to help officers to more effectively handle service calls regarding domestic complaints. The Crisis Intervention Training (CIT) program began development in the spring of 1973. In December, 1973, the program had been fully developed, trainers had been trained, and the CIT program began training officers. By February, 1975, approximately 400 officers had received training and the program became the first compresive and most well-received in-service training program ever attempted by the Department.

A second, independent series of events was also initiated in 1972 by the San Jose City Council, who directed an Ad Hoc Committee on Law

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[1]San Jose Police Department Survey (Unpublished Report, 1972).

[2]Ibid, p. 4.

Enforcement to prepare a comprehensive report on the Department's present and future plans in the areas of recruitment and training and the use of deadly force by officers.[3] The Ad Hoc Committee report clearly defined the need for a policy on the use of force by police officers, and for training officers in the reasonable use of deadly force.

The Department prepared a "Use of Force Policy,"[4] which not only provided clear definitions of force and the conditions which permit the use of force, but it also specified a design for a training curriculum for officers.

The Department's Use of Force Policy, along with the recommended training curriculum, was submitted to the City Manager and Council. The Policy and the proposal for training was endorsed by the Council, who approved the allocation of funds to develop and implement such a training program.

The "Use of Force" training program was developed in 1974, and was implemented in February, 1975. The definitions and implications of the policy were presented in a series of roll-call training sessions to sworn personnel in the Patrol Watch Divisions. Succeeding the completion of the program, however, the Police Officer's Association

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[3]Final Report of the Ad Hoc Committee on the Policies and Procedures of the Police Department in the City of San Jose (unpublished Report, May 18, 1972).

[4]San Jose Police Department, September, 1974.

March 7, 1975, obtained injunctive relief in Superior Court[5] against the City to discontinue the policy because they charged it was in violation of the "Meet and Confer" policy.[6] Subsequently, the Chief of Police rescinded the policy.

These apparently independent events became synthesized sometime during 1974, and the concept of an advanced training program was born.

This synthesis became apparent when the Personnel and Training Unit was charged with developing a proposal for a single course which would satisfy recently mandated requirements for periodic training in first aid and cardiopulmonary resuscitation, advanced officer training, and training required by changes in the laws, as well as other departmental training needs.

Building upon the commitment to the need for training by the City Council who had acted upon the use of force policy, and upon the success of the Crisis Intervention Program, the development of the AIT Program began in September, 1974. By March, 1975, the first AIT class began an eighty-hour training schedule. It was projected that by April, 1976, all sworn personnel from the ranks of Police Officer to Captain would receive training.

The AIT Philosophy

Although there is no explicit statement of an AIT "philosophy," it is possible to infer from events leading to the development of AIT, an

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[5]San Jose Police Officers' Association v. City of San Jose, No. 325818, Santa Clara County Superior Court.

[6]Meyers, Milias, and Brown, 1968.

examination of the training design, and from personal observation, an emerging philosophy of training for the Department's sworn personnel. Inasmuch as a "philosophy" can be thought of as covering the general principles of a field knowledge, the principles underlying the AIT Program appear to be: (1) A high value is placed upon experiential learning, (2) in which police officers are provided with training experiences that focus upon what is expected of them and upon how they are supposed to perform in the field, and (3) within a training environment free from the pressures of the beat or work schedules.

This emerging philosophy is reflected in the program's goals and objectives, in the structure of the curriculum, and in the instructional processes employed by the training staff. Each of these elements are described below.

AIT Program Goals, Objectives and Standards

Program Goals for AIT were originally included as part of the Use of Force Policy report presented to the City Manager's Office in August, 1974.[7] The goals were then adopted for the development of AIT, and are summarized below:

1. To provide an accredited training program which satisfies State requirements for "refresher courses."
2. To provide an 80-hour program that will maintain and reinforce previously learned skills, and provide new skills in

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[7]San Jose Police Department "Use of Force Policy and Advanced Individual Training Program," (Unpublished Report submitted to the City Manager, September, 1974), p. 33.

the following areas: chemical agents, conflict management, defensive tactics, driver training, emergency care, firearms, and law technology.

3. To provide training which will have a significant impact on the reduction of injuries to officers, vehicle accidents, assaults against officers and complaints against officers.
4. To improve the overall morale of sworn personnel.

The AIT curriculum has already received accreditation from POST as satisfying their requirements for a 40-hour Advanced Officer course, and from the State of California Department of Public Health for the Emergency Care (and cardiopulmonary resuscitation) training component.

In addition to meeting these State requirements, all sworn personnel were expected to meet minimum standards in each of the proposed curriculum areas. Although deleted from the edited version of the Use of Force Policy (August, 1974), the earlier version which had been approved by the City Council stated that the minimum standard will include:

> . (1) maintaining an acceptable physical condition, (2) demonstrating accuracy with a firearm on a practical police pistol course, and (3) demonstrating an ability to use techniques of (a) psychological manipulation, (b) arrest and self defense with hands, feet, baton, and chemical agents, (c) defensive and pursuit driving, (d) reaction firing, (d) emergency care, and (f) tactical problem solving, reaction and decision making under stress. The exact parameters of the minimum standard shall be established within two years based upon empirical data from experimental study and validation tests.[8]

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[8]"Use of Force Policy," September, 1974, Section 3111.7, p. 9; italics added.

The exact parameters of the minimum standard referred to above were a primary focus of this evaluation, and were defined on the basis of analyses of behaviorally stated training objectives for each course component.

The specific training objectives were developed for each course component, and formed the foundation for course development. The objectives presented in Appendix I represent an edited version of the objectives originally developed. The rationale underlying each course and its objectives are described below.

Chemical Agents. Police Officers are required by law to be certified in the use of chemical agents upon completion of the Basic Academy. A two-hour training block was developed to provide a refresher course in identifying and using four types of chemical agents used by the Department.

Conflict Management. The Use of Force Policy focused on the officer's ability to control conflict situations, by the use of either verbal or physical skills. A five-hour block of training was recommended by Department administrators for the purpose of presenting useful skills in "manipulative psychology," and "street courtesy" along with basic information on the psychology of conflict.

As this component has been taught, however, the focus has shifted from an emphasis on the control of conflict situations to an underlying element of conflict: stress. Consequently, this section of the AIT curriculum has evolved into an examination and exploration of the types

of stress that officers encounter in their jobs, and focuses upon identifying techniques for reducing stress, or sources of stress. The focus upon officer performance under stress appears to be an emerging theme in not only in this course, but in other AIT courses as well.

Defensive Tactics. Prior to the development of the Defensive Tactics portion of AIT, the training of officers in the use of force necessary to search, handcuff and transport suspects, as well as techniques of weaponless control and the use of the baton, was provided in the Basic Academy. Training in these areas was not standardized and officers typically developed their own "styles," which resulted in a lack of a standard of quality.

In keeping with the need for a standard in this area, 22 hours of training were developed in the basic principles and techniques of the "Koga Method." As noted by its originator:

> The Koga Method is the combination of known and practical principles of the physical arts applied to the specific problems you face every day as a lawman. It is made up of some elements of the martial arts, some knowledge of practical physiology and bits of elementary psychology boiled together with years of police knowledge and experience.[9]

The objectives and standards for this course are consistent with those advocated by the Police Self Defense Instructors Association (PSDIA), and minimum performance standards are judged by AIT instructors certified by PSDIA.

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[9]Koga, Robert K. and John G. Nelson, The Koga Method: Police Weaponless Control and Defense Techniques (Beverly Hills: Glencoe Press, 1967), p. 6.

Driver Training. The need for an AIT component on driver training was established on the basis of an increasing trend in the occurrences of accidents involving police vehicles:

1. There were 175 vehicle accidents in 1973, an 11 percent increase over 1972, and
2. in 1974, there were 206 vehicle accidents, a 15 percent increase over 1973.

Although the overall number of miles driven by sworn personnel has increased proportionately, the increasing accident rate has direct implications to the Department, most notably in its effects upon the Department's budget, the loss of personnel due to disabilities and injuries and the perception by the public of the competence of its officers.

As a result, a 20-hour block of time was designed for providing a driver training component that focused upon the development of driving skills, particularly skills required in pursuit situations. The The objectives of the course cover vehicle and driver limitations, roadway and traffic hazards, recognition of accident traps, "hands-on" practice of psychomotor skills, and decision making under stressful driving conditions. The course was adopted from the California Highway Patrol driver training course and a privately-run course (Horwitz), which AIT instructors were required to attend for the purposes of both certification (as instructors) and adaptation of these courses for AIT.

Emergency Care. Recent State requirements[10] have made it mandatory that police officers (and other public safety personnel) be provided training in administering first aid, including cardiopulmonary resuscitation (CPR). Training must be completed no later than one year after the date of employment, and completion of a refresher course approved by the State Department each year in CPR and in other first aid every three years.

The Emergency Care course was developed from the American National Red Cross Multi-Media System,[11] and the American Heart Association Cardiopulmonary Resuscitation training programs. The objectives prescribed for this twelve hour component reflect the objectives of these "packaged" programs, and focus heavily upon the demonstration of emergency care skills by trainees.

Firearms. At the core of the Use of Force Policy were guidelines in the use of deadly force with firearms; also at the core of this policy was the recognition by the Department of its obligation to provide training for officers to develop skills in using firearms properly.

The objectives of the firearms course were developed to focus upon the safe handling of firearms, the safe and accurate use of duty weapons (pistols and shotguns) under stress conditions, the officers' ability to make decisions based upon available facts on whether to fire or not

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[10] Health and Safety Code, Section 217.

[11] The American National Red Cross (Washington, 1969).

to fire, and the use of firearms during darkness. The course was designed to emphasize the development of skills through practice under physical and psychological stress.

Minimum standards for the scoring system used in the Firearms course were adopted from the California Combat Association Classification Standards (CCACS) for qualification in the Practical Pistol Course (PPC) using individual silhouette targets. The same standards were also applied for the Pistol Stress Course taught in the class.

Law Technology. Objectives for this five hour component were originally developed to provide a "refresher" in the laws of arrest and use of firearms (P.C. 832 requirements), the procedures required in accurate report writing, and recent changes in the laws related to armed robbery (P.C. 211). Recent classes have changed the focus from armed robbery to an emphasis on auto theft laws (P.C. 487.3 and V.C. 10851) investigative procedures; standards for this course are based upon demonstration of knowledge of the appropriate Penal Code and Vehicle Code sections.

AIT Design and Methods

The training design and methods implemented by the staff in the 12 classes completed by mid-November, 1975, have reflected the AIT philosophy of "learning by doing."

The design consists of a training schedule which emphasizes instruction, followed by practice, reinforcement and corrective feedback, and more practice.

As the program is currently designed, each course component is interspersed throughout the 80-hour training schedule (See Appendix II: AIT Course Syllabus). For example, the 20 hours of the driver training course is spread over four time blocks, while the 22 hours of the defensive tactics course are spread over seven time blocks.

Obviously, then, the success of this type of training design is highly dependent upon the ability of instructors to effectively convey information, and to employ a variety of training skills. The fact that individuals are skilled and competent in police work does not guarantee that they have the ability to transmit knowledge and work skills in a well organized dynamic, or meaningful manner.

The selection criteria for AIT instructors include demonstrated competence in the ability to effectively teach. Consequently, instructors are required to possess a State Teaching Credential to insure that they are aware of educational philosophy, methods and procedures.

Police Officers assigned to the Department's Training Unit serve as the program's instructors, and must be capable of instructing in at least two curriculum areas. To develop this dual expertise, officers are required to attend various specialized, outside training programs which will provide them with the necessary knowledge and skills to be proficient in a second area. They are additionally required to utilize team teaching methods in their presentations.

Each of the courses are team taught by two or more instructors. Typically, one instructor is assigned primary responsibility for

developing and teaching a course, while two or more other instructors are assigned secondary or backup roles in teaching a section of the course. In the classroom, team teaching is accomplished when an instructor performs his primary function, and another instructor performs supplementary functions, such as providing additional information, operating equipment, demonstrating skills, or giving feedback to students. In fact, explicit in the design is a de-emphasis upon the amount of time devoted to lecture. Where the transmission of information is required, this function is accomplished largely through the use of media: video-tapes, films, flipcharts and programmed instruction booklets.

Facilities and Equipment

The AIT Program is being conducted in four different locations. Most classroom and laboratory work is conducted at the Santa Clara Valley Administration of Justice Academy in Agnew. The program uses two classrooms, one for regular classroom activities, the other is equipped for defensive tactics training. Since the Department does not operate its own driver training track, Driver Training activities are are held at the Fremont Race Track for skill development, commentary driving and limited work in high speed driving. Driver Training exercises in skill development and pursuit driving are also held at the Alameda County Fairgrounds. The Department uses a privately owned firearms range in Milpitas for AIT and qualification firing.

These rented facilities have both advantages and disadvantages. A major advantage is that the Department (and the City) has rental

agreements with the property owners to use the facilities, which releases the Department from maintenance and fiscal expenditures (such as taxes) on these facilities. This results in a considerable cost-savings to the Department.

On the other hand, a major disadvantage is that the Department's Training Unit has no control over the quality of these training environments. For example, a persistent and aggravating problem at the Academy is that it is in the flight pattern of airplanes arriving and leaving the San Jose Municipal Airport. This situation is debilitating since instruction is at times interrupted every three to five minutes by the deafening roar overhead of jet planes taking off or landing. Another disadvantage in the other locations is time lost commuting to the sites, especially in the case of the Pleasanton facility. The firearms range has an additional disadvantage in that grazing cows often knock over target stands, and leave large messes that need to be shoveled off the range before class can begin.

CHAPTER 4

EVALUATION METHODOLOGY

Evaluation is the art of asking good questions.[12] Good questions are those which an administrator asks that provide him with useful information for making decisions about a program. Useful information is information that is not only valid and reliable, but that is also relevant, credible and timely.

Having asked good questions about a program, the evaluator's job then becomes one of conducting a systematic empirical inquiry to gather data that will yield useful information which meets the above criteria.

An evaluation design was developed which provided the "plan" for conducting the study. Given the evaluation questions posed in Chapter 2 (p. 10), the design was developed within certain constraints imposed upon the investigation.

The first constraint imposed upon this study was the relatively short time frame in which to gather and analyze data, a total of five months. All evaluation tasks were initiated and completed, although problems in scheduling officers and facilities for testing purposes created considerable delays in data collection.

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[12] Cronback, L. J., Course Improvement Through Evaluation. Teachers College Record, 1963, Vol. 64, pp. 672-683.

Another time constraint which limited the scope of this study was the inadequate length of time available in which to collect data on the long term effects of training, such as vehicle accidents per million miles driven, duty-related injuries per officer, and the like. This study was successful in defining relevant long-term measures, however, but was only able to collect preliminary data on most of the measures.

A second type of constraint upon the design of this study was one felt by every unit in the Department: staff and budget shortages. Although two persons comprise the evaluation of unit staff, the implementation of the evaluation design required collaboration of several R&D personnel as well as staff from the Training Unit.[13] It was fortunate that these staff members were able to be temporarily assigned in time of need. The budget for implementation of the evaluation design was minimal (see Chapter 5), and reflected similar fiscal constraints felt by other units in the Department.

A third type of constraint upon the evaluation design wad administrative decisions which affected not only the design of the study, but its implementation as well.

The most significant administrative decision which had an impact on the experimental design of the study was the decision to include

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[13]The R&D and Training staffs provided invaluable time and effort throughout several critical phases of the project; their service is gratefully acknowledged.

a large proportion of Field Training Officers (FTOs) in the AIT program during the period of data collection. The administrative purpose of this decision (by the Deputy Chief of Field Operations) was to provide "refresher" training for FTOs so that they could be better prepared to train recruit officers who were scheduled to graduate from the Basic Academy in October. It was thought that it would be advantageous for the FTOs to have completed the AIT Program, and that, with a recent training experience, they would be able to reinforce the basic training received by the recruits.

The effect of this decision upon the experimental design of the study was major. Instead of having AIT trainees randomly distributed throughout the four classes identified as Experimental and Control Groups, three classes were disproportionately "loaded" with up to 50 percent representation by FTOs. This resulted in a non-random and unbalanced assignment of FTOs to the four classes under observation. This defect was corrected by randomly assigning the FTOs evenly over the four classes, but still left the problem of a higher representation of FTOs in the AIT classes than exist in the Department as a whole. The effect of this constraint was that the findings of the evaluation would necessarily be qualified by the inclusion of a high proportion of FTOs (35 percent) in the AIT evaluation samples.

Evaluation Task Analysis

The constraints described above defined the limits within which the evaluation study was conducted. Within these constraints, the first

step in designing the evaluation work plan involved defining the tasks that needed to be completed, tasks which would provide data to answer the questions asked in this evaluation. Several initial tasks were essential to the design of the study and are described below.

The Training Unit staff is to be commended for their work in defining instructional objectives for each component of the AIT Program (see Chapter 3). For the most part, the objectives were in behavioral terms including specific statements of expected change in trainee performance as a result of training; approximately 10 to 15 percent of the objectives did not meet the criteria suggested by Mager.[14] All of the AIT objectives were edited into a standard format, and are presented in Appendix I.

The major shortcoming of the AIT objectives was that there were few standards which defined quality, or specific performance improvement required of the trainee. The greatest effort in clarifying the objectives was therefore in defining realistic and attainable standards, and in developing measurement methods that would permit a valid test of whether a particular objective was met. The results of this tasks provided the basis for developing testing instruments which were given to trainees prior to and following their AIT experience.

The clarified objectives were divided into two categories. The first category was defined as cognitive objectives which required the trainee to exhibit knowledge of certain aspects of the AIT curriculum.

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[14]Mager, R. F., Preparing Instructional Objectives, Belmont, CA: Fearon Publishers, 1969.

The second category of objectives was defined as performance objectives which required the trainee to demonstrate a skill relating to certain aspects of the curriculum.

AIT Quicky Tests. Cognitive objectives for each curriculum area were transformed into a number of test items, and were developed into an 80-item pool of test questions. The distribution of test items for each curriculum area is presented in Table 1. Note that the differing number of items in each curriculum area only reflect the number of objectives in each area, and do not necessarily reflect the number of hours of instruction.

The 80 items were then randomly selected to form eight 10-item subtests, called AIT Quicky Tests. The Quicky Tests were randomly assigned to a random sample of Experimental and Control Group subjects as described in the Experimental Design section.

AIT Performance Tests. The performance objectives were similarly transformed into a number of test items, and were developed into several subtests of items. These Performance Tests were developed from objectives which required the demonstration of a skill taught in the program. Performance Tests in four AIT curriculum areas were randomly assigned to a random sample of Experimental and Control Group subjects.

As Table 1 indicates, there were no performance items in the areas of Chemical Agents, Conflict Management or Law Technology.

In the Defensive Tactics area, subjects were required to demonstrate three basic skills taught in the course: the Standing Modified

Table 1

DISTRIBUTION OF ACHIEVEMENT TEST ITEMS
FOR EACH AIT CURRICULUM AREA

AIT Curriculum Area	Cognitive			Performance
	Multiple Choice	True-False	List	Demonstration
Chemical Agents	8	0	0	0
Conflict Mgt.	6	4	0	0
Defensive Tactics	4	5	0	3
Driver Training	4	4	0	2
Emergency Care	8	9	1	8
Firearms	0	8	0	2
Law Technology	19	0	0	0
SUBTOTAL	49	30	1	15
TOTAL	80			15

Search and Cuffing Technique, the Carotid Choke and the Two-Count Baton Strike.[15] This subtest was administered to a random sample of Experimental and Control Group subjects.

Two Driver Training performance subtests were developed from several objectives. The first subtest was the Skill Development test, and the second was the Pursuit Development test. The Skill Development test involves the use of eight types of skills, and is designed to test the vehicle dynamics in low speed maneuvers. These skills require both forward and backward motions in tight maneuvering areas. The tasks require throttle and steering control with major emphasis upon moving the vehicle prior to entering a turn.

The Pursuit Development test measures the officer's smoothness and coordination of throttle, steering and weight shift control of the vehicle. In addition, it evaluates his ability to properly execute turns, including proper entering and exiting positions, as well as appropriate speed. Officers are also measured on their ability to properly utilize the vehicle's brake and the two-way communications during a pursuit.

In the area of Emergency Care, a random sample of ten subjects were randomly assigned one of eight problems which required demonstrations of the appropriate emergency care response. Three problems required a demonstration of the proper treatment for laceration wounds;

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[15]Koga, Robert K. and John G. Nelson, The Koga Method: Police Weaponless Control and Defense Techniques (Beverly Hills: Glencoe Press, 1967).

three items required appropriate artificial respiration techniques for an adult, an infant and an adult with a windpipe obstruction; and two problems required a demonstration of treatment for shock, and shock when there is a back injury. Each problem was scored on the number of points received for demonstrating the correct techniques in each problem.

In the Firearms area, the Pistol Stress test was used, and which required the subject to run a total of 600 yards and to shoot a total of 60 rounds, with shooting and running interspersed with one another.

Experimental Design

Subjects. At the outset of the study, assurances were given that assumptions of random assignment of officers to four "target" classes would be maintained. It was thus possible to define two classes as the Experimental Group, and two classes as the Control Group, and to utilize a true pre- and post-training Experimental Design.[16] The Experimental Group classes of 20 officers each were designated to receive extensive testing prior to training (the pre-training condition), followed by 80-hours of AIT, and then by extensive post-training testing. The Control Group classes were tested on the pre-training measures, and on the post-training measures, but did not complete the AIT Program until after they had been tested twice.

Demographic information for each class is presented in Table 2. As can be seen, the average ages of the participants in each class are

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[16] Campbell, D. T. and J. C. Stanley, Experimental and Quasi-experimental Designs for Research. (Chicago: Rand-McNally, 1966).

similar, with an overall average age of 31.6 years. The average length of service in each class ranges from 4.1 to 7.0 years, with an overall average of 6.1 years of service. Note that, in these four classes, the greater majority of participants were Police Officers (76.5 percent) from the Bureau of Field Operations (71.6 percent).

When the classes were combined to form the Experimental and Control Groups, the demographic breakdown (shown in Table 3) indicates that, since the standard deviations of the figures for age overlap, the average ages of participants in both groups were comparable (33.0 to 30.1 years), although the Control Group participants were slightly younger.

The average length of service for both groups are also similar: 7.1 and 5.5 years. The breakdown of Rank and Bureau Assignment also indicates that, for purposes of this study, the two groups were equivalent.

Table 4 presents the distribution of Field Training Officers (FTOs) in the four target classes. As was pointed out in Chapter 2, an administrative decision was made to provide AIT training for FTOs at the outset of the study, and the consequences were that the proportion of FTOs in the program would be greater than in the Department as a whole. Arrangements were made to balance out the proportion of presently assigned FTOs in each class, and they were randomly distributed into each class.

The percentages of present FTOs to former FTOs and non-FTOs in each class are roughly the same, although present FTOs make up 35 percent of the Experimental Group, and 30 percent of the Control Group. As a result, test outcomes cannot be generalized to the entire Department: since the

Table 2

Distributions of Age, Rank, Length of Service
and Bureau Assignment for Each Class

Class	Age		Length of Service		Rank			Bureau Assignment				
	Mean	S.D.	Mean	S.D.	PO	Sgt	Lt	BFO	BI	BA	BTS	COP
75-9	33.9	±6.8	6.6	±5.1	17	3	0	13	5	1	1	0
75-10	33.9	±6.4	6.6	±5.3	13	7	0	13	4	1	1	1
75-11	30.0	±4.0	4.1	±2.4	18	2	0	17	3	0	0	0
75-12	31.2	±5.4	6.8	±5.2	14	6	1	15	5	0	0	0
ALL CLASSES	31.6	±5.9	6.1	±4.9	62	18	1	58	17	2	2	1

Table 3

Distribution of Age, Rank, Length of Service and
Bureau Assignment for the Experimental and Control Groups

Group	Age		Length of Service		Rank			Bureau Assignment				
	Mean	S.D.	Mean	S.D.	PO	Sgt	Lt	BFO	BI	BA	BTS	COP
"Experimental" (Classes 9&10)	33.0	±	7.1	7.6	30	10	0	26	9	2	2	1
"Control" (Classes 11&12)	30.1	±4.8	5.5	4.2	32	8	1	32	8	0	0	0

Table 4

Distribution of Field Training Officers
In Each AIT Class

Class	Present FTO	Former FTO	Non-FTO
75-9	7	3	10
75-10	7	2	11
75-11	7	0	13
75-12	5	0	15
All Classes	26	5	49

percentages of FTOs in each group are higher than for the total Department, outcomes are applicable to the Experimental and Control Groups only, and the findings of this study must be interpreted in the light of this high proportion of FTOs in the program.

Dependent Variables

In this study, the independent, or treatment, variables was attendance in the AIT Program. There were a number of dependent variables which purported to measure the outcomes, or effects, of the program. Two sets of dependent variables were developed in the hope that relevant measures of the effects of the program could be used in the assessment of the worth of the program.

The first set of dependent measures was developed to measure immediate effects of training upon the trainees. The AIT Quicky Tests and the Performance Tests (described above) were administered to the Experimental Group trainees both prior to participation in the AIT Program and upon completion of their two-week training experience. These measures were also administered twice to the Control Group trainees prior to their participation in the program. As noted above, these tests measured knowledge and performance levels of the two groups in relation to the objectives of the program. In short, analyses of trainee responses on these measures provided at least a partial answer to the evaluative question: Are the AIT Program objectives being met?

The second set of dependent variables were designed to provide partial information to the evaluative question: What benefits does the

Department gain relative to the costs of the program? These variables were intended to provide preliminary information on the potential long-term effects of the AIT Program.

Since the AIT Program was developed out of the need for training described in the "Use of Force Policy" (see Chapter 3), several long-term measures were defined relating to the reduction of injuries to officers, vehicle accidents (both injury and non-injury types), assaults against officers and complaints against officers. Note that these variables are measures of negative performance, or the cost (in dollars) to the Department; a reduction in the incidence of injuries, for example, would be realized as improvement, a cost-savings to the Department.

One method for assessing the potential long-term effects of the AIT Program is to define and monitor (over an appropriate period of time) several indicators of reductions in injuries to officers, vehicle accidents, assaults on officers and sustained complaints against officers. Previous research and experience indicate increasing trends in these areas, and these trends are not expected to change unless some major event, or series of events, intervenes to change the emerging patterns.

An important hypothesis examined in this evaluation is that the long-term effects of the AIT Program upon the performance of all sworn personnel from Police Officer to Captain will, in fact, significantly affect these trends. If, over the next year, the occurrences of injuries, accidents, assaults or complaints decrease, then it may be reasonable to interpret any reductions in these areas as being due to the effects of the AIT Programs all else being equal.

TABLE 5

Long Term Performance Measures: Injuries

A. Injuries to Officers as a Result of Encounters with Arrested Suspects.

1. Formula: $I_a = \frac{\text{Number of reported injuries}^{a,c,d}}{\text{Total number of sworn personnel making arrests}^{b}}$ Quarter

2. Data Collection Decision Rules:

   a. Select cases of reported injuries on the basis of service calls, probable cause of warrant arrests.

   b. Select the "Total number of sworn personnel" on the basis of personnel who affected service call, probable cause or warrant arrests.

   c. Exclude injury incidents which resulted in a sustained complaint against an officer.

   d. Exclude injury incidents which involve police vehicle accidents.

3. Data Sources:

   a. Reported Injuries - Use Form JUS713, Bureau of Criminal Statistics; total over the Fiscal Quarter.

   b. Total Number of Sworn Personnel Making Arrests - Use Form 202-9, Arrest Sheet; total over the Fiscal Quarter.

   c. To exclude cases, use Form _____, Internal Investigations, for comparison of sustained complaint and injury incidents; total over the Fiscal Quarter.

   d. To exclude injury incidents involving a police vehicle accident, use Form _____.

B. Other On-Duty Injuries not a Result of an Arrest Incident:

1. Formula: $I_{na} = \frac{\text{Number of reported injuries}^{a,c}}{\text{Total number of sworn personnel}^{b}}$ Quarter

2. Decision Rules:

   a. Select cases of reported injuries which resulted in man-days lost from duty over a Fiscal Quarter.

   b. Use total number of sworn personnel.

(Continued)

(Continued)

B. Other On-Duty Injuries not a Result of an Arrest Incident:

2. Decision Rules:
(Continued)

c. Exclude injury incidents which resulted in a sustained complaint against an officer.

3. Data Sources:

a. Reported Injuries:

b. Use total number of actual sworn positions _____.

c. Use Internal Investigations Form _____.

C. Direct Costs of Reported (Non-Vehicle) Accident-Injuries that Result in Manhours Lost:

1. Formula: $DC = \frac{E(\text{Salary Per Day}^a)}{\text{Total Number of Injury Incidents}^b}$ / Quarter

2. Decision Rules:

a. For cases resulting in manhours lost, sum the number of manhours lost for each sworn rank and multiply by the hourly rate for each; sum across ranks.

b. Sum the number of injury-incidents resulting in manhours lost.

3. Data Sources:

D. Total Costs of Reported (Non-Vehicle) Accident-Injuries that Result in Manhours Lost:

1. Formula: $TC = \frac{E(\text{Workers' Compensation}^{a,d} + \text{Medical Costs}^b)}{\text{Total Number of Injury-Incidents}^c}$ / Quarter

2. Decision Rules:

a. For cases where disability time is less than one year, Workers' Compensation equals salary: therefore, use salary as the compensation element.

(Continued)

TABLE 5

(Continued)

D. Total Costs of Reported (Non-Vehicle) Accident-Injuries that Result in Manhours Lost:

2. Decision Rules: (Continued)

b. Use data on actual costs for medical services only.

c. Sum the number of injury-incidents resulting in manhours lost.

d. Exclude disability claims of one year or more; these extreme cases can be analyzed separately.

3. Data Sources:

a. Use Disability Log printout from Personnel Department, Workers' Compensation records.

b. Use Form 190-615, Personnel Department.

c. Use Disability Leave forms filled out by injured officers.

E. Manhours Lost Due to (Non-Vehicle) Accident Injuries:

1. Formula: $\frac{\text{Total Manhours Lost}^{a}}{\text{Total Number of Injury-Incidents}^{b}}$ / Quarter

2. Decision Rules:

a. Sum the number of manhours lost due to injuries resulting from arrest-incidents and non-arrest incidents over a Fiscal Quarter.

b. Sum the number of arrest- and non-arrest injury incidents over a Fiscal Quarter.

TABLE 6

Long Term Performance Measures: Vehicle Accidents

A. Non-Injury Police Vehicle Accidents.

1. Formula: $\frac{\text{Number of Non-Injury Accidents}}{\frac{\text{Number of Drivers}^a}{\text{Quarter}}}$

2. Decision Rules:

   a. Select number of persons authorized to drive, or assigned to Patrol, Traffic, unmarked and motorcycle vehicles.

   b. Exclude personnel who are not assigned/expected to drive as part of their job responsibility.

   c. Exclude vehicle accidents occurring during a Code 3.

3. Data Sources:

   a. Use Form _____, Vehicle Accident Report.

B. Police vehicle accidents resulting in injury to the officer:

1. Formula: $\frac{\text{Number of Injury Accidents}}{\frac{\text{Number of Drivers}^a}{\text{Quarter}}}$

2. Decision Rules:

   a. Same as A.2.a above.

   b. Same as above.

3. Data sources:

   a. Same as above.

C. Accidents occurring during Code 3 or pursuit:

1. Formula: $\frac{\text{Number of Accidents}^a}{\frac{\text{Number of Drivers}^b}{\text{Quarter}}}$

2. Decision Rules:

   a. Select cases involved in pursuit or Code 3.

   b. Same as A.2.a. above.

   c. Select and analyze cases that involve injury and non-injury accidents separately and combined.

3. Data Sources:

D. Other possible analyses of vehicle accidents which depend on: (1) availability of data sources, and (2) data analysis capabilities.

1. Each formula computed by shift.

2. Each formula computed by beat (for Patrol Watch Division data).

3. Other?

E. Direct Costs of Injuries Due To Vehicle Accidents:

1. Formula: $DC = \frac{(\text{Salary Per Day}^a)}{\frac{\text{Total Number of Injury Incidents}^b}{\text{Quarter}}}$

2. Decision Rules:

   a. For cases resulting in manhours lost, sum the number of manhours lost for each sworn rank and multiply by the hourly rate for each; sum across ranks.

   b. Sum the number of injury-incidents resulting in manhours lost.

3. Data Sources:

F. Total Costs of Reported Vehicle Accident-Injuries that Result in Disability Claims:

1. Formula: $TC = \frac{(\text{Workers' Compensation}^{a,d} + \text{Medical Costs}^b)}{\frac{\text{Total Number of Injury-Incidents}^c}{\text{Quarter}}}$

2. Decision Rules:

   a. Sum the number of manhours lost due to injuries resulting from

CONTINUED

1 OF 3

arrest-incidents and non-arrest incidents over a Fiscal Quarter.

b. Sum the number of arrest- and non-arrest injury incidents over a Fiscal Quarter.

H. Repair Costs Due to Vehicle Damage.

1. Formula: $\frac{\text{Cost for Repairs}^{a,b}}{\text{Number of Damaged Vehicles}}$ per Quarter

2. Decision Rules:

a. Sum noncollectable costs for marked, unmarked and motorcycles.

b. Exclude vehicles that are "totalled."

3. Data Sources:

a. Use accident report forms.

TABLE 7

Long Term Performance Measures: Verbal and Physical Abuse Complaints

A. Sustained Verbal and Physical Abuse Complaints Against Officers.

1. Formula: $\frac{\text{Number of Complaints}}{\text{Number of Sworn Personnel}^{b}}$ / Quarter

2. Decision Rules:

   a. Select cases of sustained complaints.

   b. Use number of sworn personnel in BFO and B of I.

   c. Analyze verbal and physical complaints separately and combined.

3. Data Sources:

   a. Statistics available from Internal Investigations.

TABLE 8

Long Term Performance Measures: Assaults Against Officers

A. Arrests for P.C. 243.

1. Formula: $\frac{\text{Number of 243 Arrests}}{\text{Number of Sworn Personnel}^{a}}$ / Quarter

2. Decision Rules:

   a. Sum of sworn personnel in BFO and B of I.

3. Data Sources:

   a. Use Form JUS 713.

The immediate task of the evaluation, therefore, was first to operationally define reliable and valid measures in these areas, and second, to initiate collection and analyses of baseline data for future comparisons.

The formulas presented in Tables 5 through 8 are an attempt to accomplish the first tasks.

Multiple Matrix Sampling Design

The measurement of the immediate outcomes of training was implemented within a true experimental design and which was supplanted by the use of a Multiple Matrix Sampling procedure (MMS). MMS is a recently developed, innovative sampling procedure which has shown promise as an evaluation tool. David M. Shoemaker, one of the major contributors to the development of MMS has succinctly described the procedure:

> Multiple matrix sampling is a psychometric procedure in which a set of test items is subdivided randomly into subtests of items with each subtest administered to different subgroups of examinees selected at random the examinee population. Although each examinee receives only a proportion of the complete set of items, the statistical model employed permits the researcher to estimate the mean, variance and frequency distribution of test scores which would have been obtained by testing all examinees on all items.[17]

In other words, the AIT Quicky Tests and the Performance Tests were randomly distributed to subgroups of trainees in the Experimental and Control Groups. Each trainee received only a part of the total set of

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[17] Principles and Procedures of Multiple Matrix Sampling (Unpublished Report, Southwest Regional Laboratory, Technical Report 34, August 1971), p. 1

written and performance items. It was thus possible to estimate the means, variances and frequency distributions of test scores without having to test all trainees on all items. Although the major advantage in using this technique is the reduction of the statistical errors (specifically, the standard error of estimating the mean test score), another significant advantage was in the saving of time and effort in not having to test each trainee on all test items.

Administration of Pretests and Posttests

The administration of pretests and posttests was a major undertaking which required a great amount of cooperation between the staffs of the Research and Development Division, the Training Unit and the Bureaus which had assigned personnel to the AIT Program. The fact that there was a return rate of completed tests of approximately 90 percent is a measure of productive cooperation between the personnel involved in the testing program.

The procedure for administering Quicky Tests and Performance Tests to the eighty officers in the target groups (Classes 75-9 through 75-12) was implemented in two phases. The first phase consisted of administering pretests to officer scheduled to take training. Subgroups of officers were tested over a one-month period in the following manner:

1. Subjects were informed via memo that they were randomly selected to take a written test and a performance test.
2. On the scheduled testing day (determined by availability of facilities, proctors and judges), subgroups were first given the Quicky Test they had been (randomly) assigned to complete.

3. Upon completion of the written test, individuals were then given a Performance Test to complete, or were deployed to the facility where they would take a Performance Test.

It was not always possible to administer the tests as scheduled, for a variety of reasons. There were no Performance Pretests collected from the first class (75-9) due to several scheduling problems, including the inability of the evaluation team to determine the names of officers who were to be scheduled to participate in this class prior to the day of the first test (a final class roster was not available), the unavailability of facilities suitable for testing (e.g., the driver training range), and the unavailability of judges to observe and rate the performance of officers.

It should be noted that AIT instructors were utilized as judges. Although the potential existed for biased judging to take place, the instructors' judgments were considered acceptable for several reasons: (1) they were each certified and credentialed as competent instructors in their respective disciplines, (2) the evaluation budget did not permit outside "experts" to be hired as judges, (3) observations of their behavior in judging performance substantiated assumptions regarding competence, objectivity and reliability, and (4) empirical estimates of their reliability were acceptable (see Chapter 5).

CHAPTER 5

PROGRAM OUTCOMES

Introduction

The immediate effects of the AIT Program were measured by written examinations (the AIT Quicky Tests) and Performance Tests which were administered both prior to training and immediately following training. A pre- and post-test Experimental and Control Group design was used in the analysis of the written examination, the AIT Quicky Tests (described in Chapter 4). Because performance measures were not developed by the time the first experimental class (Class 75-9) had begun, a posttest only design was used in the measurement and analysis of Performance Tests.

The purpose of this chapter is to present the results of data analyses conducted on the various test scores. The general null hypothesis tested was that the immediate effects of the training program, as measured by the Quicky and Performance Tests, did not make a difference in the performance of officers on these measures. The results are presented below.

AIT Quicky Tests: Pretests

As described in Chapter 4, an 80-item test pool, derived from the instructional objectives, were divided into eight subtests, and were randomly administered to officers in both groups prior to and following

their participation in the program. The resulting multiple matrix sampling and analysis procedures yielded pooled estimates of mean (i.e., average) scores and pooled variances for the Experimental and Control Groups. The means were then used as input data for an SPSS one-way analysis of variance (ANOVA); the variances were used in a test of the homogeneity of variances of the two groups.

The ANOVA was first computed to determine if there were any differences in the performance of officers in each of the four classes on the Quicky Tests. Differences in pre-training performance of the groups would mean that statistical adjustments would have to be made to take the differences into account (by means of an analysis of covariance). The results of this analysis are presented in Table 9.

Source	df	ss	ms	F-Ratio	F-Prob.
Between Groups	1	144.94	144.94	0.30	0.58
Within Groups	72	34389.19	477.63		
Total	73	34435.13			

Table 9. One-Way Analysis of Variance for Mean Scores Estimated by Multiple Matrix Sampling on the Posttests (AIT Quicky Tests).

The resulting F value of 0.30, with a df of 1 and 72, is not significant (p=0.58). This result indicates that there were no significant differences between mean Pretest scores achieved by the Experimental and Control Groups on the AIT Quicky Tests.

AIT Quicky Tests: Posttests

The eight subtests were administered a second time to both groups, to the Experimental Group immediately following completion of their participation in AIT (within one week), and to the Control Group one to four weeks from the time of the first test administration. The subtests were again randomly distributed among subjects. The results are presented in Table 10.

Source	df	ss	ms	F-Ratio	F-Prob.
Between Groups	1	3623.31	3623.31	6.90	0.01
Within Groups	72	37799.44	524.99		
Total	73	41422.75			

Table 10. One-Way Analysis of Variance for Mean Scores Estimated by Multiple Matrix Sampling on the Posttests (AIT Quicky Tests).

Since the F value of 6.90, with df of 1 and 72, would occur by chance less than once in one hundred times, it is concluded that participation in the AIT Program significantly affects officer performance on the written examinations which cover each of the curriculum areas.

AIT Performance Tests

Although the significant results of the AIT Quicky Tests were encouraging, it was believed that a more valid measure of the effects of the AIT Program would be found in measures of performance, of the extent to which officers improved in their performance of skills taught in AIT. As described in Chapter 4, Performance Tests were developed

in the areas of Driver Training, Defensive Tactics, Emergency Care and Firearms. The results of the analyses of these tests are presented below. Posttest mean scores and standard deviations for each Performance Test are presented in Table 11.

Performance Test	Experimental Group		Control Group	
	Mean	S.D.	Mean	S.D.
PT1 - Driver Skill Development Test	21.600	3.893	13.400	3.596
PT2 - High Speed Skill Test	55.900	10.181	33.600	6.947
PT31 - Defensive Tactics: Searching	77.000	10.593	53.200	17.669
PT32 - Defensive Tactics: Cuffing	74.500	13.218	52.200	21.893
PT33 - Defensive Tactics: Chokes	77.000	12.737	48.100	19.846
PT4 - Emergency Care	72.200	19.349	59.200	17.281
PT5 - Firearms	512.700	33.049	504.100	31.370

Table 11. Posttest Mean Scores and Standard Deviations on AIT Performance Tests.

Driver Skill Development Test. This test was a slow speed skill development course in which trainees were scored on their ability to maneuver the police vehicle in and through various pylon configurations. Ten randomly selected Experimental Group trainees were tested immediately following training and practice; ten randomly selected Control Group subjects were tested prior to training with one practice run prior to scoring.

The results of the ANOVA presented in Table 12 indicate that the F value of 23.94 (df=1,18) would occur by chance less than once in one thousand times. It is therefore concluded that driver skill development training significantly affects officer performance in an immediate posttest situation as compared against a group who had not received training.

Source of Variation	Sum of Squares	df	Mean Square	F-Ratio	F-Prob.
Between Groups	336.20	1	336.20	23.94	0.001
Within Groups	252.80	18	14.04		
Total	589.00	19			

Table 12. One-Way Analysis of Variance for Mean Scores on the Driver Skill Development Test.

High Speed Skill Test. In this test, officers were required to pursue a "rabbit car" around a track simulating a city street grid. An instructor rode along with the driver of the pursuit car, and scored the driver's skill in effectively maintaining the pursuit. Two groups of ten Experimental and Control Group subjects each were randomly selected.

The results of the ANOVA presented in Table 13 indicate that the F value of 32.73 (df=1,18) would occur by chance was less than once in one thousand times. It is concluded that training in high speed

Source of Variation	Sum of Square	df	Mean Square	F-Ratio	F-Prob.
Between Groups	2486.44	1	2486.44	32.73	0.001
Within Groups	1367.31	18	75.96		
Total	3853.75	19			

Table 13. One-Way Analysis of Variance for Mean Scores on High Speed Skill Test.

pursuit techniques significantly affects trainee performance in an immediate posttest situation as compared against a group who had not received training.

Defensive Tactics: Searching. Three tests were administered to Experimental and Control Groups subjects in defensive tactics. The first test required the subjects to demonstrate the standing modified search as taught in the program using control of the suspect and officer safety as the major criteria.

The results of the ANOVA presented in Table 14 indicate that the F value of 13.35 (df=1,18) would occur by chance less than two out of one thousand times. The conclusion drawn from this outcome is that training in searching techniques significantly affects trainee performance in an immediate posttest situation as compared against the Control Group.

Source of Variation	Sum of Squares	df	Mean Square	F-Ratio	F-Prob.
Between Groups	2832.19	1	2832.19	13.35	0.002
Within Groups	3819.63	18	212.20		
Total	6651.81	19			

Table 14. One-Way Analysis of Variance for Mean Scores on Defensive Tactics: Searching.

Defensive Tactics: Handcuffing. The second test in defensive tactics was a demonstration of skill in handcuffing a suspect while

maintaining control and safety. Again, ten randomly selected subjects from both groups were tested and scored by two instructors and the evaluator.[18]

The results, in Table 15 indicate that the F value of 7.604 (df=1,18) would occur twelve out of one thousand times. It is concluded that training in handcuffing techniques significantly affects trainee performance in an immediate posttest situation as compared against the Control Group.

Source of Variation	Sum of Squares	df	Mean Square	F-Ratio	F-Prob.
Between Groups	2486.44	1	2486.44	7.604	0.012
Within Groups	5886.13	18	327.01		
Total	8372.56	19			

Table 15. One-Way Analysis of Variance for Mean Scores on Defensive Tactics: Handcuffing.

Defensive Tactics: Carotid Choke. The third test in defensive tactics was a demonstration of skill in applying a carotid choke hold on a suspect and a verbal report by the officer regarding his knowledge of the proper technique and the subsequent effects of the choke hold. Ten randomly selected subjects in each group were examined.[18]

[18]There were too few observations per rater to compute an estimate of inter-rater agreement; the difference in scores (using a 100 point interval scale) between two raters scoring the same subject (during practice runs) was a maximum of 15 points, with most scores between raters differing by an average of 10 points.

Source of Variation	Sum of Squares	df	Mean Square	F-Ratio	F-Prob.
Between Groups	4176.06	1	4176.06	15.02	0.001
Within Groups	5004.94	18	278.05		
Total	9181.00	19			

Table 16. One-Way Analysis of Variance for Mean Scores on Defensive Tactics: Carotid Choke.

The results presented in Table 16 indicate that the F value of 15.019 (df=1,18) would occur by chance less than once in one thousand times. It is concluded that training in the techniques of applying a carotid choke hold significantly affects performance in a posttest situation as compared against the Control Group.

Emergency Care. As indicated by Table 1, eight problems were developed to test skill in administering emergency care (see p. 33 for a description of the problems). Since total possible scores for each problem differed, the obtained interval scores were transformed by dividing by the total possible score and multiplied by 100. Performance of the subjects were scored by the instructor and the evaluator.

The results of the ANOVA presented in Table 17 indicate that the F value of 11.144 (df=1,18) would occur by chance four out of one thousand times. It is concluded that training in aspects of emergency care significantly affects performance on these measures in a post-test situation.

Source of Variation	Sum of Squares	df	Mean Square	F-Ratio	F-Prob.
Between Groups	8836.78	1	8836.781	.18	0.004
Within Groups	14216.90	18	789.83		
Total	23055.68	19			

Table 17. One-Way Analysis of Variance for Mean Scores on Emergency Care.

Firearms. The Firearms Test consisted of the Pistol Stress Test described in Chapter 4. The Shotgun Stress Test scores were not analyzed because there were too many missing data. Pistol Stress Test scores consisted of points received as a result of hitting different scoring zones. A criterion of 450 out of 600 points was considered the minimal passing score.

Two officers who had been randomly assigned to the Control Group were members of the Department's Pistol Team, and had recorded scores of 571 and 535 on this test. They, in fact, had demonstrated a high degree of skill due to prior training and practice. Since the assumption of no prior training (in the sense of extraordinary prior training) was violated by the fact of these two extreme scores, these scores were deleted to account for the extreme scores; two scores were also deleted from the Experimental Group, selected at random.

With this reduced number of observations (N=16), Table 18 shows that one-way ANOVA F-value of 0.083 (df=1,14) barely missed significance at the P=0.05 level. It was therefore concluded that training in Firearms did not significantly affect performance in the posttest situation in which

extreme Control Group scores were deleted and two randomly selected Experimental Group scores were also deleted.

Source of Variation	Sum of Squares	df	Mean Square	F-Ratio	F-Prob.
Between Groups	3782.00	1	3782.00	3.414	0.083
Within Groups	15507.00	14	1107.64		
Total	19289.00	15			

Table 18. One-Way Analysis of Variance for Mean Scores on Firearms.

Long Term Performance Measures

Time constraints did not permit the collection of long-term performance data as described in Chapter 4. Arrangements have been made, however, for three officers to conduct this phase of the study. The officers, who are working on their own time to conduct a project for academic credit, will be supervised by R&D personnel to refine and conduct the necessary analyses. Their results will be available by April, 1976.

Summary of Data Analyses

Three measures of trainee achievement directly related to the AIT curriculum and objectives were analyzed for statistical significance. The null hypothesis tested was that there would be no significant differences between the Experimental and Control Groups on any of the measures following 80 hours of AIT. The null hypothesis was rejected in all analyses except one.

Significant statistical differences were found on the following posttest measures: (1) AIT Quicky Tests (written exam, p=0.01), (2) Driver Skill Development Test (p=0.0001), (3) High Speed Skill Test (p=0.001), (4) Defensive Tactics: Searching (p=0.002), (5) Defensive Tactics: Handcuffing (p=0.012), (6) Defensive Tactics: Carotid Choke (p=0.001), and (7) Emergency Care (p=0.004). The Firearms Test (Pistol Stress Test) barely missed significance at the 0.05 level of significance.

The summary conclusion drawn from these analyses indicate that, with one exception, the AIT Program has a significant affect upon the cognitive and skill-performance achievement of trainees: (1) as tested immediately following their 80-hour training experience, (2) as compared against officers who have not received training, and (3) as measured by the tests developed in this study.

Although these immediate achievement effects are very encouraging, the question of retention of knowledge and skills, and of how the program affects the incidence rates of injuries to officers, vehicle accidents, assaults and complaints against officers remains open. The collection of data and continual monitoring of these long-term performance measures is therefore vital to this large-scale, important program.

CHAPTER 6

PROGRAM COSTS

Introduction

The maintenance and upgrading of a large department through inservice training is considered by critics as a luxury, by proponents as a necessity. In any event, inservice training involves a cost to the department, city management, and ultimately the citizens. To decide whether or not a training program is "worth it" to any of these constituencies, the costs of the program must be determined. The purpose of this chapter is to describe the costs associated with the AIT Program.

Program costs are divided into four types of analyses: (1) The costs associated with the conducting of each program component (e.g., Driver Training, Defensive Tactics, etc.) assuming the attainment of all objectives in each component, (2) the cost of training for one 80 hour AIT class, (3) annual costs of providing training to all sworn personnel from Police Officers to Captains, and (4) a comparison of AIT costs against the costs of other alternative training (e.g., off-site, live-in training programs).

Costs in each of these categories are divided into Personnel Costs and Non-Personnel Costs. Formulas for computing costs were

provided by the Fiscal Officer and are presented in Table 19.

PERSONNEL COSTS

Trainers

Number of persons (X) $725 (X) 26 = Yearly Costs

Supervisors

Number of Supervisors (X) $828 (X) 26 (X) 50% = Yearly Costs

Trainees

Number of Trainees (X) $751 (X) 26 (X) = Yearly Costs

Fringe Benefits

Total Yearly Cost for above 3 items (X) 128.3%:

Calculation = Personnel Cost (X) 128.3% = Total Personnel Cost With Fringe

Fringe = Personnel Cost (X) 28.3% = Fringe Only

NON-PERSONNEL

Facilities - $29.50 per month used

Vehicle Use - 13 Vehicles (X) $161.78 (X) 12 = Vehicle Cost

Ammo - 200 Rounds per man per class (X) $124.75 per M

Misc. Cost - $75 per class

Table 19. Formulas for Computing Personnel and Non-Personnel AIT Costs.

Costs Per AIT Component

The AIT curriculum consists of seven components. Although each trainee receives 80 hours of instruction, the training staff actually provides a total of 104 hours of training. The discrepancy is accounted for by two instructors who provide 24 hours of training in the Firearms component, and by up to four instructors who provide a total of 32 hours of instruction in Driver Training. The cost breakdown for each component is given in Table 20, and is based upon an hourly rate for trainers of $11.62, including fringe benefits. The costs per trainee are based on a class of twenty officers.

AIT Components	Instructors	No. of Trainer Hours	Cost Per Class*	Cost Per Trainee
Chemical Agents	1	2	$ 23.00	$ 1.15
Conflict Management	1	6	70.00	3.50
Defensive Tactics	2	22	511.00	25.55
Driver Training	4	32	1,487.00	65.05
Emergency Care	1	12	139.00	6.95
Firearms	2	24	557.00	27.85
Law Technology	1	6	70.00	3.50
		104	$2,857.00	$120.00

Table 20. Costs Per AIT Component. * Indicates that cost is rounded off to the nearest dollar.

As can be seen, the cost per trainee is $120 per class, and the cost for providing 104 hours of trainer time spent is $2,857 per class. Note that the most costly component is Driver Training at $65 per trainee, or $1,487 for 32 hours of trainer time spent.

Costs Per Conducting an AIT Class

The costs for conducting one 80-hour class consists of two basic elements: hard and soft costs. In this analysis, a distinction is made between "hard" and "soft" costs. Hard costs are costs which are directly attributed to conducting the AIT Program, and which would not be paid if the program did not exist. Soft costs are costs which are incurred as a result of the program, but are expended with or without the program.

In assessing costs for one 80-hour class, Table 21 shows that hard costs (which include the trainer salaries, and Non-Personnel items) total to $9,042. Soft costs include trainee salaries and salaries for supervisors (at 50 percent, or half time devoted to AIT); these costs total to $19,665.

In terms of total costs for one class, the cumulative total cost for Training Staff salaries and Non-Personnel costs is $10,104.

If trainee salaries are added as a cost factor, the total cost for one class is $28,707. Whether trainee salaries should be included is debatable, especially since 60 percent of the trainees' salaries for 40 hours are reimbursed by POST (under Plan II).

Training Staff Salaries*	Costs	Cum. Totals
9 Trainers (Officers)	8,372.00	
2 Supervisors (Sergeants)	1,062.00	
	9,434.00	9,434.00
Non-Personnel		
Facilities	15.00	
Vehicles	81.00	
Ammunition	499.00	
Miscellaneous	75.00	
	670.00	10,104.00
20 Trainees (Salaries)	14,500.00	
Fringe Benefits	4,103.00	
	18,603.00	$28,707.00

* Includes 28.3% for fringe benefits.

Table 21. Costs Per Class.

Finally, if the Training Staff salaries and Non-Personnel costs are added together, and divided by 20 trainees per class, the resulting cost per trainee is $505. This cost per trainee is substantially higher than the figure of $120 per trainee given in the preceding section when only trainer time was considered; the difference is $385.

Annual Cost of AIT

There were five AIT classes conducted from March 10, 1975 to June 30, 1975. Twenty classes were expected to be completed by June 30, 1976. For purposes of this analysis, the five classes which were conducted in FY 1974-75 (from March to June 30, 1975) are separated from costs for FY 1975-76. The costs are presented in Table 22.

Dates	Number of Classes	Excluding Trainee Salaries	Including Trainee Salaries
FY 74-75 3/10-6/30/75	5	50,520.00	143,535.00
FY 75-76 7/1/75-6/30/75	20	202,080.00	574,140.00
All Classes from: 3/10/75-6/30/76	25	252,600.00	717,675.00

Table 22. Actual Annual Costs During Fiscal Years 74-75 and 75-76, Including and Excluding Trainee Salaries.

The costs for one class ($10,104) were multiplied by the number of classes in each time block to yield costs excluding trainee salaries, and costs including trainee salaries.

As in the preceding section, whether trainee salaries should be included in the analysis is not clear; both options are presented in Table 22. When trainee salaries are excluded, total costs for FY 74-75 (from March to June 30, 1975) were $50,520. The total costs

for FY 75-76 are $202,080. The grand total for all classes from March, 1975 to June 30, 1976 (that is, for 25 classes) is $252,600.

When trainee salaries are included, the totals are considerably increased for classes from March to June 30, 1975, the cost is $143,535. For FY 75-76, the cost is $574,140, and the grand total for 25 classes from March, 1975 to June 30, 1976 is $717,675.

Comparisons of Costs of Alternative Training

Although designed to meet local, departmental needs, the AIT Program has been accredited as meeting the requirements of the Advanced Officers' Course mandated by POST.[19] The program in fact exceeds the minimum of 20 hours required by POST, and includes other mandated topics (such as Emergency Care - CPR).

A review of POST accredited courses revealed that there are no other programs or courses in the State which may be compared to the AIT Program, either in hours or content of training. In spite of this difficulty, two POST accredited Advanced Officer courses offered by two criminal justice regional training centers are briefly described below, and costs per trainee are compared to AIT costs. It is strongly emphasized, however, that these comparisons are only nominal, and are used mainly to show differences in the programs rather than similarities.

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[19]Commission on Peace Officer Standards and Training, POST Administrative Manual, Section 1005(d); Commission Procedure D-2.

The Northern California Criminal Justice Training and Education System (NCCJTES) offers several Advanced Officer Courses[20] in four "Centers" to service the needs of 26 Northern California counties (Regions A through E). The 40 hour courses are accredited by POST and are purportedly "tailor fit" to the needs of the requesting agency. Presumably, they are able to provide training in a number of areas in addition to areas mandated by POST. They do not, however, currently offer an advanced course in defensive driving. The curriculum is designed and developed in collaboration between the requesting agencies and the Center staff (including instructors).

The costs to students, that is, costs borne by the agency which sends the officer, are nominal (ranging from $3.50 to $15.00 per course) due to the fiscal arrangements between the Centers and the community college districts. The community college districts receive reimbursement from the State on the basis of the Average Daily Attendance (ADA) of the Centers, and the college district in turn assumes costs for facilities, instructors' salaries, and other overhead costs. Thus, instructors and facilities are provided by the districts in which the four Centers reside. There are no arrangements for students to live in at the Centers.[21]

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[20]NCCJTES 1975-76 Course Schedule.

[21]Personel Communication: Mr. Jerry Bader, Law Enforcement Coordinator, NCCJTES, Santa Rosa Center, December 3, 1975.

Similar fiscal and administrative relationships exist at the Modesto Regional Criminal Justice Training Center (Region K). The training facility offers live-in (dormitory) arrangements at a cost of $9 per day, the only cost which must be borne by the student.

The Training Center has similar ADA arrangements with the Yosemite Junior College District: the District collects ADA generated income, and in turn pays all costs related to salaries, facilities and overhead.

The Advanced Officer Course curriculum consists of 40 hours in a variety of areas, and are presented in Table 23.[22] Note that although there is a wider range of topics offered than is offered in the AIT Program, the number of hours devoted to any one topic is less than for AIT.

Topic Areas	Number of Training Hours
Monday:	
Introduction	1
Diagnostic Laboratory	2
Officer Survival	2
Legal and Moral Aspects of Firearms	3
	8
Tuesday:	
Weapons	2
Criminal Law	2
Narcotics Investigation	2
Patrol Intelligence	2
	8

(Cont.)

[22]Personel Communication: Mr. Larry Roskens, Program Analyst, MRCJTC, December 3, 1975.

(Cont.)

Wednesday:

Patrol Intelligence	1
Practical Field Problems	2
Search and Seizure	2
Arrest and Control	3
	8

Thursday:

Field Problems	2
Ethics	2
Narcotics and Dangerous Drugs	2
Range and Special Weapons	3
	8

Friday:

Advanced Techniques of Investigation	2
Search and Seizure	2
Range	3
Examination and Critique	1
	8

Total: 40 Hours

Table 23. An Example of the Advanced Officers Course Offered at the Modesto Regional Criminal Justice Training Center.

Thus, in summary, the extremely large differences in costs per trainee between the AIT Program and the NCCJTES and MRCJTC programs are due primarily to the fact that the Department pays the instructors' salaries and Non-Personnel costs, whereas in the latter programs, nearly all costs are paid by the community college district.

CHAPTER 7

JUDGMENTS OF WORTH

Introduction

The goal of this evaluation has been to answer certain questions about the AIT Program. The questions, posed at the outset in Chapter 2, are reiterated below:

1. Are the AIT Program goals and objectives being met?
2. What benefits does the Department gain relative to the costs of the program?
3. How can the AIT Program be improved?

To answer these questions, the evaluation has systematically collected and analyzed information about the effects of the program upon the trainees who have completed the 80-hour course. This chapter attempts to synthesize the results of the various analyses, to evaluate the findings against available standards, and to render certain judgments about the "worth" or "value" of the AIT Program to the Department.

Each question is addressed in the following sections, and relevant information from previous chapters will be referenced as supporting evidence. All judgments about the value of the program are based on the information presented in this report.

Question: Are the AIT Program Goals and Objectives Being Met?

The AIT Program Goals, described in Chapter 3, represent the overall "mission" of AIT. The results of this investigation indicate that, for the most, the goals of the program are being met.

AIT Program, Goals, Objectives and Standards. AIT Program Goals were included as part of the Use of Force Policy report presented to the City Manager's Office in August, 1974. These goals are summarized below:

1. To provide an accredited training program which satisfies State requirements for "refresher courses."
2. To provide an 80-hour program that will maintain and reinforce previously learned skills, and provide new skills in the following areas: chemical agents, conflict management, defensive tactics, driver training, emergency care, firearms, and law technology.
3. To provide training which will have a significant impact on the reduction of injuries to officers, vehicle accidents, assaults against officers and complaints against officers.
4. To improve the overall morale of sworn personnel.

The Program's primary goals of providing an accredited training program which satisfies State requirements for refresher courses has been met by exceeding POST requirements for an Advanced Officer Course. POST has accredited the Program for forty hours of training under Plan II,

which results in a reimbursement to the Department for 60 percent of trainee's salaries for forty hours. In addition, officers who complete training receive academic credit from San Jose City College as well as certification by POST.

State mandated requirements for emergency care training, required every three years for recertification in first aid and annually for cardiopulmonary resuscitation (CPR) also have been met by officers who have successfully completed the Emergency Care component approved by the American Red Cross and the American Heart Association. Refresher course requirements for in-service training in the use of chemical agents are also being met, although this component has Department approval only.

To investigate whether the second Program Goal is being met, that is, whether AIT training does in fact "maintain and reinforce previously learned skills, and provide new skills" the approach taken in this study was to assess the "payoff" to trainees in terms of trainee outcomes on certain measures of achievement.

Results of the written examinations, which indicated significant improvements in cognitive skills, suggest that the training objectives are being met. The test items were derived as a result of a process of clarifying the behavioral objectives for each component, defining the standards by which achievement would be judged, and developing a pool of test-items.

A multiple matrix sampling procedure (described in Chapter 4) permitted an accurate and reliable estimate of the population means, upon

which the significance tests of differences between means were based.

Despite relatively high pre-training test scores for both the Experimental and Control Groups (there were no differences between the groups), there were statistically significant differences between the groups on the posttests. This finding indicated that a random sample of officers who completed training demonstrated significant increases in the mean test scores as compared to a random sample of officers who had not received training. The probability that the differences found between the groups on the posttest written examinations were due to chance occurrence was less than one in one hundred. It can be safely concluded, then, that the AIT training objectives are being met.

Five Performance Tests, developed from training objectives in four AIT curriculum areas (Defensive Tactics, Driver Training, Emergency Care and Firearms), also provide support for the finding that the AIT training objectives are being met.

The results of posttests administered to the Experimental and Control Groups indicated that skills presented and practiced during training resulted in significant differences between the groups in all areas except in Firearms.[23]

Differences in mean scores between the two groups on the Firearms Test (Pistol Stress Test) did not reach significance, although

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[23]Since it was not possible to administer pretest scores, it was not possible to positively differentiate the effects of prior experience from training interventions, or whether some selection bias had taken place.

the observed trends were in the predicted direction. The contamination of the Firearms posttest by the (random) inclusion of two pistol team members in the Control Group, which resulted in dropping their scores (and two scores, selected at random, from the Experimental Group) from the analysis, may have had some effect on the final outcome.

It may also be possible that the number of hours of training and practice required to reach some level of achievement in three areas was sufficient to produce significant changes in performance, whereas the number of hours devoted to training and practice in the Firearms area was not.

Although the explanation of the "whys of the outcomes" is not a primary concern of evaluation,[24] a few comments are necessary to avoid unwarranted interpretations of the immediate outcomes of training.

Unqualified inferences about what caused the significant differences in the test results cannot be attributed solely to the work of the AIT staff, although very favorable comments from trainees tend to support this argument. It may be, for example, that the opportunity to take time off without distractions of the job for reflection and study may have accounted for differences between the groups; or the mere fact the trainees were being "worked with" was enough of a

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[24]Scriven, Michael, "The Methodology of Evaluation" in Robert Tyler, Robert Gagne, and Michael Scriven, Perspectives of Curriculum Evaluation, (AERA Monograph 1) (Chicago: Rand McNally and Co., 1967), pp. 39-83.

motivator to improve performance; or that the program allowed trainees an opportunity to practice skills which may have been "dormant."

In spite of these plausible explanations, the reasons for the differences obtained are a moot issue: the evidence shows that for whatever reasons the objectives of the training program appear to be effectively met.

An Evaluation of AIT Training Objectives. Not all of the AIT training objectives were tested in the evaluation. Only those objectives which were considered as "essential" (by the instructor) for the successful completion of a particular component were selected for development as a test item. In fact, only those objectives listed in Appendix I which are starred (*) were studied: out of a total of 112 training objectives listed, 63 were selected by the instructors for test development.

Pretraining test results on the written examination showed that, with reference to these (starred) objectives, the level of skill prior to training in both groups was relatively high. This suggests that the training objectives may have been set too low, that is, the level of skill upon which training was developed may not have accurately reflected the level of skill already possessed by the average officer. This suggestion is only speculative, and could not be fully addressed without a full-scale study of the training needs of sworn personnel.

In any event, it is now possible to suggest that, upon completion of the first full cycle of AIT, the set of training objectives will have to be reassessed.

It is therefore recommended that at that time (or perhaps before) the training objectives be assessed and upgraded. It is also recommended that the assessment be empirical, and focus upon a diagnostic assessment of performance (i.e., what officers are expected and are able to do).

It is not presently possible to address the question of whether the third Program Goal is being met. It is too early to make an assessment of whether or not there have been any appreciable reductions in injuries, vehicle accidents, assaults or complaints. Since, at this time, only fourteen AIT classes have been conducted (representing forty percent of the total sworn personnel (out of 702)[25] who have completed the program), it is not unreasonable to expect that (1) there most likely would be some time lag before any changes would become evident in these rather gross performance measures, and (2) there may not be an appreciable number of officers who have completed AIT to make a difference in the overall rates.

There are some preliminary data with regard to the vehicle accident rates for this calendar year. Data on the number of vehicle accidents from January to October were tabulated by month, and is illustrated by the graph in Figure 1. The graph only includes the last three fiscal quarters (it excludes the two "wet" months in which higher accident rates usually occur), and data from 1974.

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[25]The figure 702 includes 35 new officers, and excludes 6 sworn administrators, and 15 APWs.

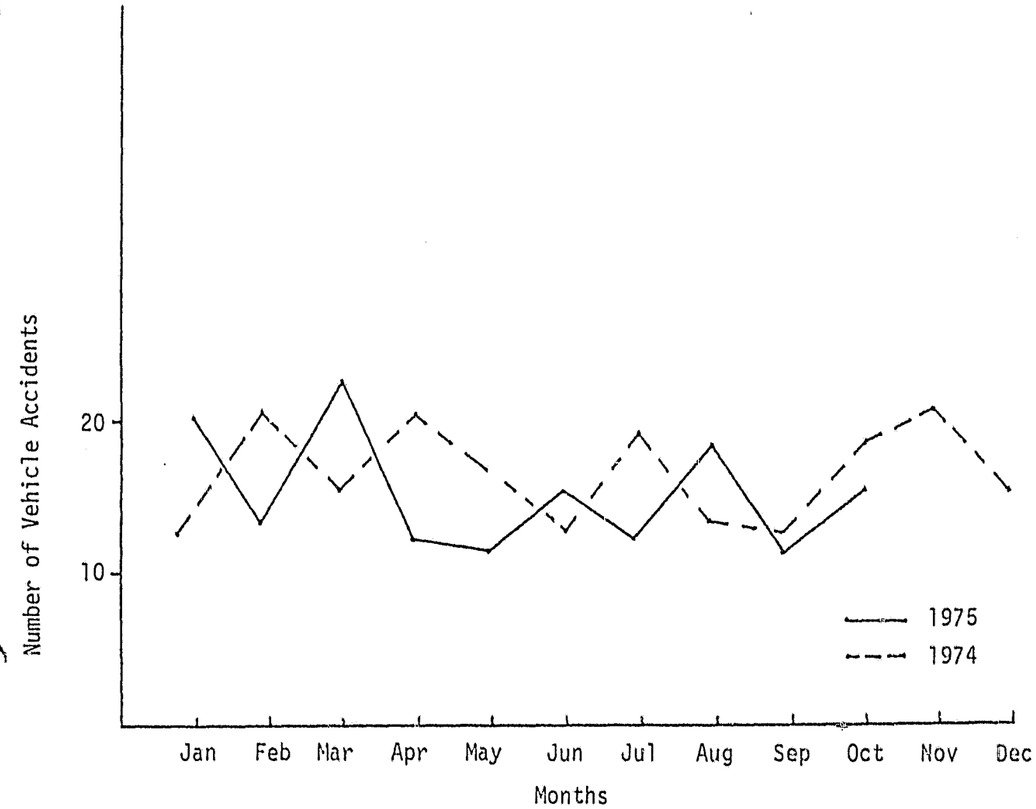

Figure 1. Vehicle Accident Rates in 1974 and 1975.

It is interesting to note that, since the beginning of the AIT Program in March, 1975, there appears to be a slight downward trend in the monthly rate of vehicle accidents. Notice also that the data are not much different from the previous year's rates. Although it is inappropriate to make any causal inferences about the apparent downward trend over the eight months, it may be feasible to entertain such inferences if and only if the downward trend continues at least through the remainder of the fiscal year. At that time, however, causal inferences will need to be assessed against other plausible explanations before any useful conclusions can be drawn.

There are no objective data which can address the fourth Program Goal, "To improve the overall morale of sworn personnel." Whether participation of officers in AIT will in fact improve overall morale goes beyond the scope of this evaluation, since (1) an adequate assessment can only be made after all (or nearly all) sworn personnel have completed the program, and (2) an appropriate method of assessing morale has yet to be developed.

Question: What Benefits Does the Department Gain Relative to the Costs of the Program?

The general finding of this evaluation is that the program has demonstrated a significant degree of success in attaining its immediate program goals and objectives, but at a relatively high cost to the Department. Part of this success is due to the generally high quality

of instruction provided by the instructors, i.e., Police Officers, who are certified to teach in their specialty areas, but who are also paid from Department funds.

The unique structure of the program, which emphasizes active participation by trainees appears to result in marked improvements in all areas of the curriculum. Although the number of hours of training in each area is considered minimal (by the staff) for effective instruction, practice and feedback, the total costs to the Department are high, particularly when instructor salaries are included in the computed costs.

In the short run, the adage that "you pay for quality" is certainly true: the AIT Program is costly, but it produces immediate results.

It is not possible at this time to assess the long-term benefits to the Department. Many of the skills taught in AIT are those which require continual practice and feedback for improvement to be maintained, and AIT was in fact designed to provide "refresher" training for officers to "brush up" on their skills.

Whether the majority of officers who have completed AIT will continue to maintain improvements in performance remains an open question.

Presumably, if immediate gains derived from AIT are maintained over time, these effects may show up in the long-term measures defined in Chapter 5. That is, long-term benefits can be measured in terms of reductions in on-duty injuries to officers, the number of accidents involving police vehicles, and the number of complaints and assaults against officers. It is the marked reduction in costs incurred by these

types of incidents that will determine the long-term "success" of the program.

Question: How Can the AIT Program Be Improved?

Since the purpose of evaluation is not to prove, but rather to improve, this question constitutes the crux of the evaluation study. Recommendations for improvement of the AIT Program center around possible revisions to the present content and structure of program, and possible alternatives for reducing costs of conducting the program.

It is first assumed that the AIT Program will complete its first goal of providing training to all sworn personnel, and that termination of the program, at least until then, is not a viable alternative.

The recommendations discussed below are intended, above all, to maintain or improve the high quality of training that already exists. Each recommendation is based upon the empirical and nonempirical findings of this study. Nonempirical findings include information gained through interviews about and observations of the program by the evaluator, and which includes information from AIT staff, Department administration. The recommendations are based upon sincere efforts to serve the Department, and to contribute to the maintenance and continuing upgrading of in-service training.

Recommendation No. 1

The structure of the program may be reconfigured to reduce costs, but at the same time maintaining its overall high quality.

The major recommendations of this study suggest alternatives for reducing costs of the program, while maintaining its overall quality. Since the largest cost factor is instructor salaries, an obvious alternative is either to reduce the number of hours of training, or to reduce the number of instructors. Neither of these alternatives are palatable, but nonetheless require exploration.

With regard to reducing the number of hours of training in AIT, it is not unreasonable to consider alternatives by which some areas of instruction may be offered as in-service training, but not as part of the AIT format. It may be feasible, for example, to offer the Chemical Agents refresher training (which currently requires two hours of AIT time) as part of roll-call training, or as a training component offered annually for those officers who, for one reason or another, have a special need for a refresher. Since a Chemical Agent course is required as part of the Basic Academy (Section P.C. 842), and no refresher training is mandated, this alternative could be implemented for those officers whose particular job assignments warrant such a refresher course.

Another AIT component which may be similarly considered is the Conflict Management component. Designed orginally to provide training in "manipulative psychology" and "street courtesy," the component has evolved over the past eight months toward a focus upon an in-class discussions of sources and types of stress that affect officer performance; in addition, alternative techniques for reducing stress are presented.

This component was developed out of a departmental need expressed by the Administration, and is not mandated by the State. There is

little doubt that awareness training in the area of officer stress has value to the Department, but its effectiveness has not been successfully examined in this study, due primarily to the difficulty in assessing (or even describing) the phenomenon of stress. In short, it remains questionable that five hours of awareness training in area of stress (which produce such pathologies as "nervous" disorders, heart attacks, divorces and drug or alcohol abuse among some percentage of officers) can have an appreciable effect in reducing the problems that stress produce. (It may even be argued that the Department seriously recognize "stress training" as a major in-service training effort in its own right.)

With regard to a possible reduction in the number of AIT instructors, there are currently nine instructors who, as the program is presently configured, are considered essential to the success of the program, but not without some cost. The fiscal costs, of course, are substantial, but there is also a nonfiscal cost which is "paid" by the instructors themselves: "instructor burnout." "Burnout" refers to the emotional and physical drain that occurs when instructors must teach a new class every two weeks over a long period of time. Two instructors have already left the program, and one or two more have requested transfers.

It may be possible (but difficult) that the program can operate with fewer instructors only if some major adjustments are also implemented. A few alternatives are suggested below.

There is one exception to general recommendation to reduce the number of training hours. The Firearms component currently consists of

twelve hours of training. The following recommendation suggests that it be expanded.

Recommendation No. 2

The number of hours of the Firearms component should be expanded to provide more time for practice and feedback.

The format for the Firearms component consists of ten activities. The Basic Qualification courses requires the trainees to fire 60 rounds from seven to fifty yards in a variety of shooting positions. The Stress Qualification course also requires 60 rounds, but running a set number of yards between sets of rounds are interspersed to simulate stress situations. Three separate shotgun courses are presented: Bird Shooting (10 rounds), Stress Shotgun Course at night (8 rounds), Turning Targets-Daylight (12 rounds) and Turning Targets-Night (12 rounds), Timed Relay (6 rounds), Shoot-No Shoot at Filmslide targets, and a videotape car stop (used for discussion). Trainees are allowed one practice trial for each activity.

The results of the Firearms posttest indicated that there were no statistical differences between the Experimental and Control Groups. The Experimental Group had received 12 hours of training, that is, one practice trial in each activity for each trainee, as opposed to no practice for the Control Group subjects.

The results, which barely missed statistical significance, suggests that if more time (for training and practice) were offered, proficiency

levels would increase and most likely result in significant differences between groups who had more practice and groups who had no practice.

Since proficiency in Firearms depends largely upon practice, it is therefore recommended that more time for training in Firearms be considered. Additionally, Department guidelines which require officers to qualify on a pistol shooting test should be more strictly enforced so that retention of proficiency can be actively encouraged.

Finally, it is also recommended that the Pistol Stress Qualification test, compared to the standard Practical Pistol course, the Stress Qualification course has the additional feature that it more adequately simulates actual shooting situations, since shooters are required to run between rounds (thus introducing stress, adrenalin flow and fatigue).

Recommendation No. 3

A driver training instructor should be hired by the San Jose City College District so that the costs for two instructors may be eliminated.

The two Driver Training instructors who, with the assistance of four additional instructors, currently offer 32 hours of trainer time per AIT Class may be reassigned if an "outside" instructor is employed by the San Jose City College District (SJCCD) to teach this component.

The present fiscal arrangement between the Department and SJCCD (through the Santa Clara Valley Criminal Justice Training Center) is that the Center provides the academic/administrative support for conferring academic credit for officers completing the program and the use

of its classrooms and incidental equipment; in return, SJCCD receives ADA (Average Daily Attendance) generated income for the trainees who attend AIT. The Department provides its own instructors and the AIT curriculum.

The advantage to the Department is the direct control over the content of the curriculum and the quality of instruction. The advantage to SJCCD is the income generated by ADA minus costs.

Now, the specific recommendation is that Mr. Glen Horwege, a private defensive driving instructor who holds a Junior College Teaching Credential and who enjoys a highly favorable reputation among law enforcement agencies, be hired by SJCCD to offer his own defensive driving program. According to Mr. Horwege, the program consists of 24 hours of instruction and training for up to 25 students. He conducts the program without assistants, but does require a flat blacktop area in which to construct a soap chip skid pan.

The cost to the Department most probably would be $25 per diem for three days, travel costs (from Sacramento) and $200 per class for soap chips, or an estimated $300. (Conceivably, these costs could be borne by SJCCD, along with his salary). The cost-saving to the Department would be ($1,487 minus $300) $1,187 per class. In addition, two full-time instructor positions could be reassigned, and the four additional instructors used in the "hands-on" portion of the component would not be necessary.

Recommendation No. 4

Given the present structure of AIT, and the hard cost of instructors' salaries borne by the Department, the San Jose City College District and the Department should share, on an equitable basis, the net income generated through the Average Daily Attendance.

Unless the District can show that the net "profit" received from ADA is not appreciably larger than the cost of its operational expenses related to the AIT Program, a more equitable distribution of the profit margin should be shared between the City and SJCCD, or perhaps as an "in-kind reimbursement" to the Department for its contribution of a sizable student body to the revenue-generating mechanism of the District.

Recommendation No. 5

The curriculum should be made more adaptable to address specific needs of individuals or subgroups.

As the curriculum is currently presented, the content areas are based upon the needs expressed by a sample of sworn personnel and administrators assessed over a year ago. Although these needs have not been validated, the issue implicit in this recommendation is that the curriculum is not "individualized" to fit the needs of individual officers or units. The curriculum is typically presented to an entire class, with individual help for trainees experiencing learning difficulties. However, as will soon be the case, the training needs of officers are not necessarily the same as for Lieutenants or Captains.

For example, as of Class 75-14, only five Lieutenants and no Captains have completed training. Further, it is not likely that any two persons, within the ranks of Police Officer or Sergeant, or between Officers and Captains, have the same training needs. In neither case is there a mechanism for modifying the curriculum, or for developing a training module, for the particular job-needs of the specific individual.

To provide this flexibility, and to provide a program which is more relevant to individual needs, it is recommended that such a mechanism be developed. Two alternatives may be feasible.

The first approach might be to develop a diagnostic assessment module which could be administered to a scheduled class of trainees prior to the beginning of a class. Test instruments, perhaps similar to the pre-post test measures developed in this evaluation, could be administered, scored and analyzed as a diagnostic tool to determine the areas of focus for the class, for subgroups or for individuals. Or it could be incorporated into the program on the first day of the training, much like the Field Problems Laboratory (Diagnostic) utilized by the Modesto Regional Criminal Justice Training Center.

The second approach is presented as a separate recommendation, mainly because its scope goes beyond the AIT Program

Recommendation No. 6

A diagnostic assessment system should be developed for all sworn personnel so that records of assessed training needs, level of

proficiency, and completed training can be kept for individual personnel.

This recommendation focuses on the need to develop a means for assessing and monitoring the professional development of sworn personnel, and is similar to the Training Assessment and Planning document published by POST.[25] The publication offers a system for assessing departmental training needs. Two techniques are designed to gather, aggregate and store information about individual training needs and experience. One technique is used to inventory existing individual training; the other is used to graphically display the current state of Department-wide training and experience. The approach and focus of this document is recommended for further study.

Regardless of the type of needs assessment technique used to assess training needs of officers, the procedure should focus upon identifying individual needs. This type of approach can yield useful information by which to plan training for individuals and for persons who have been identified as having similar needs.

Recommendation No. 7

Every effort should be made by the Department to upgrade its training facilities.

The Department does not have its own training facilities and must rent or lease facilities for classroom instruction, driver training

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[25]Commission on Peace Officer Standards and Training, State of California, September, 1975.

and Firearms (a Range); as illustrated below, these facilities are not adequate.

Classrooms are provided by the Santa Clara Valley Criminal Justice Training Center, located in the town of Agnew. The facility is not adequate because it is located in the flight landing and takeoff lanes of the San Jose Municipal Airport. The noise problem created by jet aircraft either taking off or landing is severe: during each morning session, classroom instruction is interrupted every three to five minutes by the deafening roar of planes flying at low altitudes directly over the facility (which used to be an elementary school before it was closed down due to noise pollution). Conversations are not possible during these interruptions.

Since the Department does not have a track for driver training, two sites are used for skill development and high speed training and practice. The Fremont Drag Strip in Milpitas and the Alameda County Fairgrounds parking lot in Livermore are rented for these purposes. Neither of these facilities are suitable for two major reasons. First, the instructors must lead a convoy of training vehicles to these sites, which requires twenty minutes and forty-five minutes of driving time to reach each site. Second, since these facilities are also used for other purposes, the training staff must set up and break down the driving courses for each class session, which requires approximately an hour of training time.

Finally, the Department rents a Range facility in Milpitas, which by comparison to other agencies, is an embarrassment to the Department.

The Range is located in what is essentially a cow pasture, and since it is a rented facility (at $70 per month), improvements are limited. Consequently, the instructors must continually cope with wandering cows, and the need to deploy a shovel brigade has become a common activity. Targets and other structures must be removed each day, since the bovines tend to use them for scratching posts; most target structures are destroyed if left out overnight.

The general recommendation, therefore, is that the Department seek ways of improving the quality of its training facilities. Specific recommendations cannot be made here, since the problems involved are complex and require further in-depth study.

CONTINUED

2 OF 3

Appendix I

AIT OBJECTIVES

CHEMICAL AGENTS (2 HOURS)

LEARNING GOAL:

1.0

Training Objectives: upon completion of two hours training, and under standardized testing conditions, the trainees will:

*1.1 demonstrate how to inspect, clean, and fit a gas mask.

1.2 identify the chemical agents used by this Department by type, characteristic and general usage.

1.3 identify* (by selecting) appropriate agents and weapons used in barricade situations and large crowds.

1.4 identify* the policies and procedures of the Department in the use of chemical agents.

1.5 identify* at least two tactical considerations to be made in the use of chemical agents in barricade situations, in crowds, and when hostages are involved.

AIT OBJECTIVES

CONFLICT MANAGEMENT (5 HOURS)

LEARNING GOAL:

1.0

TRAINING OBJECTIVES:

Upon completion of 5 hours of training, and under standardized testing conditions, the trainee will:

1.1 identify at least two examples each of both situational and chronic stress factors which affect police performance.

1.2 identify physiological effects of chronic stress on the performance of duties, home life, and physical well-being of officers.

1.3 identify the psychological effects of chronic stress on the performance of duties, home life and mental health of officers.

1.4 identify at least three characteristics of Type A behavior and how it affects the officer's performance style.

1.5 identify* at least three sources of stress the officer has experience in his/her work.

1.6 identify* at least three stress reduction techniques which help in reducing chronic stress.

1.7 identify* at least two sources of the escalation of conflict in any given situations.

1.8 identify* at least three signs of an escalation of conflict which leads to increased stress on an officer.

1.9 discuss (in class) at least two methods of reducing or "defusing" a conflict spiral.

1.10 discuss (in class with the Assistant Chief of Police) sources of stress in situations involving administrative stress.

DEFENSIVE TACTICS (22 HOURS)

LEARNING GOAL:

The student will possess the ability to effectively control, search and handcuff persons confronting him/her with the use of hands and police baton.

Training Objectives:

Upon completion of 22 hours of training, and under standardized testing conditions with a training officer as judge, trainees will:

*1.1 recognize and demonstrate the difference between excessive force and needed force.

*1.2 demonstrate how to maintain effective body balance under combat conditions while mindful of his gun exposure.

1.3 demonstrate the recognized method of moving a combative suspect physically while controlling same.

1.4. demonstrate the recognized wrist lock and cuffing procedure adopted by the San Jose Police Department.

1.5 demonstrate the standing modified search and handcuffing method while controlling the suspect.

1.6 explain the physiological process that takes place when a Carotid Choke Hold is applied on a subject.

*1.7 demonstrate the Carotid Choke Hold.

*1.8 explain whether or not utilization of the police baton would be appropriate and/or justified, in at least three hypothetical situations.

1.9 identify* the vital body points and bone edges recognized as good police baton "target" areas.

*1.10 demonstrate how to remove a resisting suspect from a location through the utilization of recognized baton techniques.

1.11 demonstrate the recognized baton techniques to be used in subduing an aggressive suspect.

AIT OBJECTIVES

DRIVER TRAINING (20 HOURS)

LEARNING GOALS

After completing 20 hours of training, 70 percent of the students in driver training component of AIT will:

1.0 - demonstrate a basic knowledge of common factors which affect the probability of being involved in an accident.

2.0 - demonstrate parking, backing and basic movement operations of a police vehicle under routine conditions.

3.0 - list the responsibilities and exemptions provided by California statutes when applied to a peace officer's operation of an emergency vehicle under emergency conditions.

4.0 - list Department policies and common factors involved in determining whether to initiate or abandon a pursuit.

5.0 - maintain control of a vehicle under a variety of skid conditions.

TRAINING OBJECTIVES

The learning goals are considered met when each of the following instructional objectives are fully attained by at least 70 percent of a randomly selected group; under conditions of a standard testing environment, each student tested will, to the satisfaction of the instructor:

1.1 Identify* at least three faulty drivers attitudes which contribute to the occurrence of traffic accidents.

1.2 Identify* the three main factors involved in the practice of "defensive driving."

1.3 Identify the distinction between the terms "reaction time" and "braking distance."

1.4 identify the definitions of the terms "reaction time," "braking distance," "rolling friction" and "threshold braking."

*1.5 compare the relative importance of caution and "proper" driving techniques and use of emergency warning devices on reduction of traffic accidents involving police vehicles.

1.7 identify the effects of vehicle speed on vision limitations.

*2.1 operate a police vehicle through a standard skill driving course to the satisfaction of the instructional staff.

3.1 identify the significance of the provisions of CVC Section 21055 (Emergency Vehicle Exemptions) according to Department policy.

3.2 identify the significance of the provisions of CVC Section 21056 (Emergency Vehicle Exemption) according to Department policy.

4.1 list at least three factors which one should consider in determining whether to continue or abandon a high speed pursuit.

*4.2 perform (to a level satisfactory to the instructional staff) police driving tactics that will reduce the liklihood of an accident while on an emergency response.

4.3 identify* Department policies regarding high speed pursuits which minimally include the number of units involved and conduct of the units.

*5.1 demonstrate proper steering and throttle control of a vehicle to the satisfaction of the instructional staff.

AIT OBJECTIVES

DEFENSIVE TACTICS (22 HOURS)

LEARNING GOAL:

The student will possess the ability to effectively control, search and handcuff persons confronting him/her with the use of hands and police baton.

Training Objectives:

Upon completion of 22 hours of training, and under standardized testing conditions with a training officer as judge, trainees will:

*1.1 recognize and demonstrate the difference between excessive force and needed force.

*1.2 demonstrate how to maintain effective body balance under combat conditions while mindful of his gun exposure.

1.3 demonstrate the recognized method of moving a combative suspect physically while controlling same.

1.4. demonstrate the recognized wrist lock and cuffing procedure adopted by the San Jose Police Department.

1.5 demonstrate the standing modified search and handcuffing method while controlling the suspect.

1.6 explain the physiological process that takes place when a Carotid Choke Hold is applied on a subject.

*1.7 demonstrate the Carotid Choke Hold.

*1.8 explain whether or not utilization of the police baton would be appropriate and/or justified, in at least three hypothetical situations.

1.9 identify* the vital body points and bone edges recognized as good police baton "target" areas.

*1.10 demonstrate how to remove a resisting suspect from a location through the utilization of recognized baton techniques.

1.11 demonstrate the recognized baton techniques to be used in subduing an aggressive suspect.

AIT OBJECTIVES

FIREARMS (12 Hours)

LEARNING GOAL

TRAINING OBJECTIVES

Upon completion of 12 hours of training and under standardized testing conditions on the range, trainees will:

*1.1 demonstrate safe handling of a handgun and a shotgun including loading, unloading and clearing malfunctions to the satisfaction of the instructional staff.

1.2 demonstrate drawing and holstering of his/her primary weapon (handgun) under stress and varied lighting conditions to the satisfaction of the instructional staff.

1.3 identify* the effective range of his/her handgun and a shotgun used by the Department to the satisfaction of the instructional staff.

*1.4 demonstrate shooting positions recommended by the Department including crouch, shoulder point, barricade (strong and weak hand), prone and kneeling positions as judged by the instructional staff.

1.5 (given a daylight practical range exercise with time limitations) fire the practical pistol course using the silhouette target at ranges varying from (7) to (50) yards qualifying with a minimum acceptable score of 450 (75%).

1.6 (given a daylight practical range exercise with time limitations under physical stress) fire a combat pistol course, using characture life-like targets at ranges from (5) ft. to (25) yards, with a minimum acceptable score of 450 (75%).

1.7 (given a daylight practical range exercise under physical stress) fire a shotgun at stationary and moving targets within 70 seconds while demonstrating proficiency to the instructional staff.

*1.8 (given various simulated hazards via projected media at night) demonstrate appropriate judgement when firing in shoot-don't shoot situations as rated by the instructional staff.

*1.9 (given various simulated hazard situations at night and under stress) demonstrate use of vehicle, protective cover, artificial light, and reloading in firing hand and shotgun at single or multiple targets demonstrating proficiency to the instructional staff.

AIT OBJECTIVES

EMERGENCY CARE (12 HOURS)

LEARNING GOALS

1.0 Trainees will be able to provide emergency care to others and themselves in each of the following areas: control of severe bleeding, shock, wounds, head injury, burns, poisoning, fractures, transfers and relocations, cardiopulmonary resuscitation, and sudden illness.

TRAINING OBJECTIVES

Upon completion of twelve hours of instruction and under standard testing conditions, students will:

Control of severe bleeding

1.1 identify the importance of providing prompt care to bleeding injuries.

1.2 identify at least three means for controlling bleeding, and demonstrate how these techniques are applied.

1.3 identify at least three objectives for emergency care for serious wounds.

Shock

**1.4 identify* at least two steps in providing treatment for shock.

1.5 identify at least two symptoms of shock.

*1.6 demonstrate the body positions that individuals should be placed in - depending upon the type of injury or complications present.

Wounds

1.7 identify at least three reasons why impaled objects should not be removed.

1.8 demonstrate one technique for securing impaled objects.

1.9 identify* emergency care principals for eye injuries.

1.10 demonstrate a bandaging technique for an eye injury.

1.11 identify emergency care principals for wounds of the chest to include: sucking, penetrating, crushing and lung injuries and demonstrate treatment for them.

1.12 discuss emergency care principals and positions for abdominal injuries.

**1.13 demonstrate minimal emergency care for wounds in general.

Head Injury

*1.14 list at least three indications that a head injury is present.

1.15 discuss the emergency care measures for a person with a head injury in conscious and unconscious states.

*1.16 demonstrate the positions that an individual with a head injury should be placed in.

1.17 demonstrate one way of controlling bleeding head injuries.

Burns

1.18 identify at least two objectives for providing care to victims of burns.

1.19 identify the three classifications of burns and a characteristic of each.

**1.20 list at least one emergency care measure to relieve the pain of a minor burn.

Poisoning

1.21 name the location of the local poison control center, and identify the information they should be provided with when calling.

1.22 identify at least three means for determing whether or not a person has swallowed a poison.

*1.23 identify*at least one of the objectives for treating poisoning by mouth cases, to include drugs.

**1.24 list at least two classifications of poisons for which vomiting should not be induced.

Fractures

**1.25 list three objectives for treating closed fractures.

*1.26 list at least three (out of four) signs that indicate a closed fracture.

1.27 demonstrate one technique used in controlling bleeding for an open fracture.

1.28 demonstrate the correct procedures for immobilization of actual or suspected fractures of lower and upper arms and legs, ribs, head, back and neck.

Transfers and Relocation

1.29 discuss the correct techniques for directing others to assist with moving an individual.

1.30 identify the basic procedure for lifting and moving individuals with specific types of injuries and fractures.

1.31 name at least four circumstances where the relocation of an individual would be required in order to protect the person from further danger or injury.

**1.32 name the principal danger in moving an injured person.

Cardiopulmonary Resuscitation

1.33 identify the importance of maintaining both the breathing and circulation process.

*1.34 demonstrate the correct procedure for giving mouth to mouth, mouth to nose, and mouth to mouth and nose resuscitation for adults, children and infants.

1.35 discuss the proper procedures for mouth to mouth resuscitation.

*1.38 demonstrate the correct procedures for performing cardiopulmonary resuscitation for an adult, child and infant.

a. locating the palpitation of the carotid pulse.

b. locating proper hand position for sternum.

c. proper body positioning of rescuer and victim.

d. proper technique for single rescuer.

e. proper technique for two rescuers.

1.39 identify signs of whether C.P.R. is being effective.

1.40 identify time limitations for interrupting C.P.R.

1.41 identify when C.P.R. should be begun and terminated.

1.42 identify when a precordial thump should be used.

Sudden Illness

1.43 identify four symptoms of a heart attack.

1.44 identify the proper emergency care and body positioning for a heart attack victim.

1.45 identify* at least three symptoms of a stroke (apoplexy).

1.46 discuss two major symptoms of epilepsy.

1.47 demonstrate the proper care and positioning of an unconscious person.

*Mandatory

**FINAL TEST: Standard First Aid Course.

AIT OBJECTIVES

LAW TECHNOLOGY (5 HOURS)

LEARNING GOAL:

1.0 The student will be able to identify the laws and proper police procedures related to armed robberies, auto theft and narcotics violations.

TRAINING OBJECTIVES: upon completion of five (5) hours of training, and under standard testing conditions, the students will:

1.1 identify* three recent Supreme Court decisions which affect the disposition of armed robbery calls.

1.2 identify* approved Department procedures to be followed in handling armed robbery calls.

1.3 identify* at least two methods used by professional auto thieves.

1.4 identify* the distinction between the provisions of California Vehicle Code (CVC) and Penal Code (PC) provisions related to reporting of auto thefts.

1.5 identify* the conditions under which an auto theft report is taken by an officer.

1.6 identify* recent methods of carrying narcotics by users.

1.7 identify* at least two recent laws related to the enforcement of narcotics traffic.

1.8 identify* by name at least three types of narcotics currently in popular usage by habitual users.

Appendix II

ADVANCED INDIVIDUAL TRAINING

Course Synopsis

CONFLICT MANAGEMENT — 6 HOURS

This class will deal with the various aspects of stress which affect an officer's performance. It will cover the areas of physiological and psychological problems associated with stress and stress reduction techniques available to the officer.

EMERGENCY CARE — 12 HOURS

Presents a multi-media approach to the state required first aid and C.P.R. training. Extensive use of films, training aids, and the opportunity for each officer to demonstrate his learned life saving techniques will highlight this segment.

DEFENSIVE TACTICS — 22 HOURS

Will provide the officer with the techniques of defensive tactics and of physical control. Emphasis will be placed on use of the baton, holds, and handcuffing. Physical fitness and agility will also be an integral part of the course, stressing the need for a continuous self-paced program.

CHEMICAL AGENTS — 2 HOURS

Designed to familiarize the officer with the use of chemical agents and its weaponry. Special attention will be given to the use of chemical agents in the following situations: barricades, hostage and crowds. Practical exercises will be used.

LAW TECHNOLOGY — 6 HOURS

Examination and discussion of the officer's prime enforcement tasks with emphasis on felony crime arrests. Laws having the most practical usefulness to arrest situations, based on expressed needs of a sampling of San Jose Officers, will receive special attention.

DRIVER TRAINING — 20 HOURS

Designed to provide officers with skills in day to day defensive driving techniques, and promoting accident free operation of departmental vehicles. Special attention will be focused upon the theory and practical application of pursuit driving techniques.

FIREARMS — 12 HOURS

A practical weapons exercise with moveable targets, vehicle dismounting, and night firing. A slide series detailing "shoot-don't-shoot" situations will be incorporated in the Hogan's Alley segment. Weapon safety will be stressed throughout the course.

END