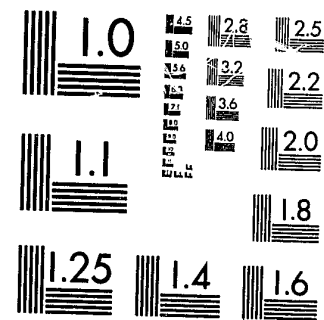


National Criminal Justice Reference Service

ncjrs

This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



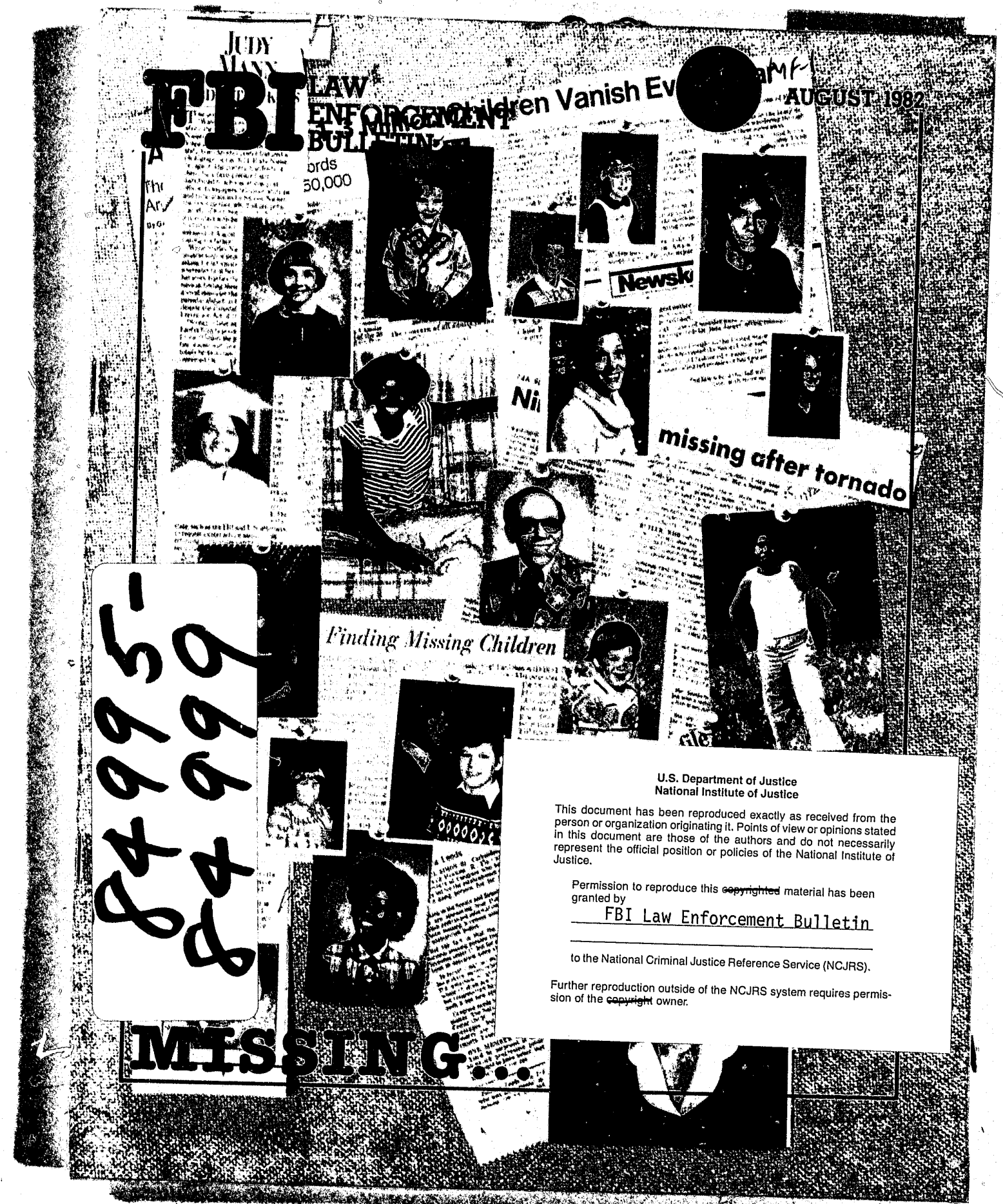
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504.

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U. S. Department of Justice.

National Institute of Justice
United States Department of Justice
Washington, D. C. 20531

11/18/82



U.S. Department of Justice
National Institute of Justice

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this copyrighted material has been granted by

FBI Law Enforcement Bulletin

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the copyright owner.

FBI LAW ENFORCEMENT BULLETIN

AUGUST 1982, VOLUME 51, NUMBER 8

EMA

Contents

- Aircraft** 2 **Use of Aircraft in Law Enforcement—An Illinois State Police Experience** 84995
By R. J. Miller and Joyce M. Hayes
- Personnel** 8 **Using Psychological Consultants in Screening Police Applicants** 84996
By Susan Saxe, Ph.D. and Joseph Fabricatore, Ph.D.
- Forensic Science** 12 **Dental Identification Program: An Overview**
By Paul Pane
- Firearms** 14 **The Use of Video Technology in Shotgun Training: A Unique Approach** 84997
By Donald J. Gray and Charles W. Steinmetz
- Cooperation** 20 **The National Crime Information Center's Missing Person File** 84998
By Demery R. Bishop and Timothy J. Schuessler
- The Legal Digest** 25 **Reasonable Expectation of Privacy, the Employee-informant, and Document Seizures (Part I)** 84999
By Michael Callahan
- 32 **Wanted By the FBI**



THE COVER:

The NCIC's Missing Person File can be an invaluable tool to investigators in solving missing person cases. See Story p. 20.

Federal Bureau of Investigation
United States Department of Justice
Washington, D.C. 20535

William H. Webster, Director

The Attorney General has determined that the publication of this periodical is necessary in the transaction of the public business required by law of the Department of Justice. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget through February 21, 1983.

Published by the Office of Congressional and Public Affairs,
Roger S. Young
Assistant Director

Editor—Thomas J. Deakin
Assistant Editor—Kathryn E. Sulewski
Art Director—Kevin J. Mulholland
Writer/Editor—Karen McCarron
Production Manager—Jeffrey L. Summers



ISSN 0014-5688

USPS 383-310

Director's Message

NCIRS

AUG 30 1982

ACQUISITIONS

At the beginning of this year, Attorney General William French Smith assigned concurrent jurisdiction to investigate drug offenses to the FBI in cooperation with the Drug Enforcement Administration. This is part of an "overall effort to achieve more effective drug enforcement through coordinated efforts involving the Drug Enforcement Administration, the FBI, the United States Attorneys and other agencies in this and other Departments," according to the Attorney General.

The Attorney General praised the work of the Drug Enforcement Agency, saying that everyone at DEA "can be justly proud of their accomplishments." However, because of the magnitude of the drug problem today "for the first time since its establishment over 50 years ago, the full resources of the FBI will be added to our fight against the most serious crime problem facing our nation. . . ."

This move is part of the Justice Department's overall strategy to bring about more effective drug law enforcement through more coordinated efforts on the part of the DEA, the FBI, U.S. Attorneys, other agencies in the Justice Department, and other departments of the Federal Government. The DEA, according to the Attorney General, "will continue its fine work" and will be helped by this new cooperative effort.

The FBI's investigative effort in this area will be concentrated on major narcotics trafficking organizations, both those tied to traditional organized crime and not, and on high-level smugglers, distributors, manufacturers, financiers, and corrupt public officials who aid narcotics dealing. All the FBI's new authority will be exercised in close coordination with DEA.

We found that this close coordination could, and did, work in the 6 months before this new plan was announced. During that time, the number of joint investigations increased from 6 to 120 throughout the country. In that period, the FBI Executive Assistant Director for Investigations, Francis M. Mullen, Jr., acted as Administrator of DEA. From an administrative standpoint, this was a very good way of bridging the gaps that existed between the two agencies. We envision the continuation of this coordination, including cross-training of DEA and FBI Agents.

The resources of the FBI will be applied as they have been consistently in the past—that is, to do the work that State and local law enforcement cannot do, as defined by the Congress in its setting of Federal jurisdiction. Often, large interstate narcotics smuggling is beyond the budget, personnel, and monetary abilities of local departments. Adding FBI resources in manpower, geographic coverage, and newly gained experience in undercover and organized crime investigations to DEA's wealth of knowledge and experience in the drug field, we believe will have a substantial impact on the national drug problem.

William H. Webster

William H. Webster
Director
August 1, 1982

84997

The Use of Video Technology in Shotgun Training

A Unique Approach

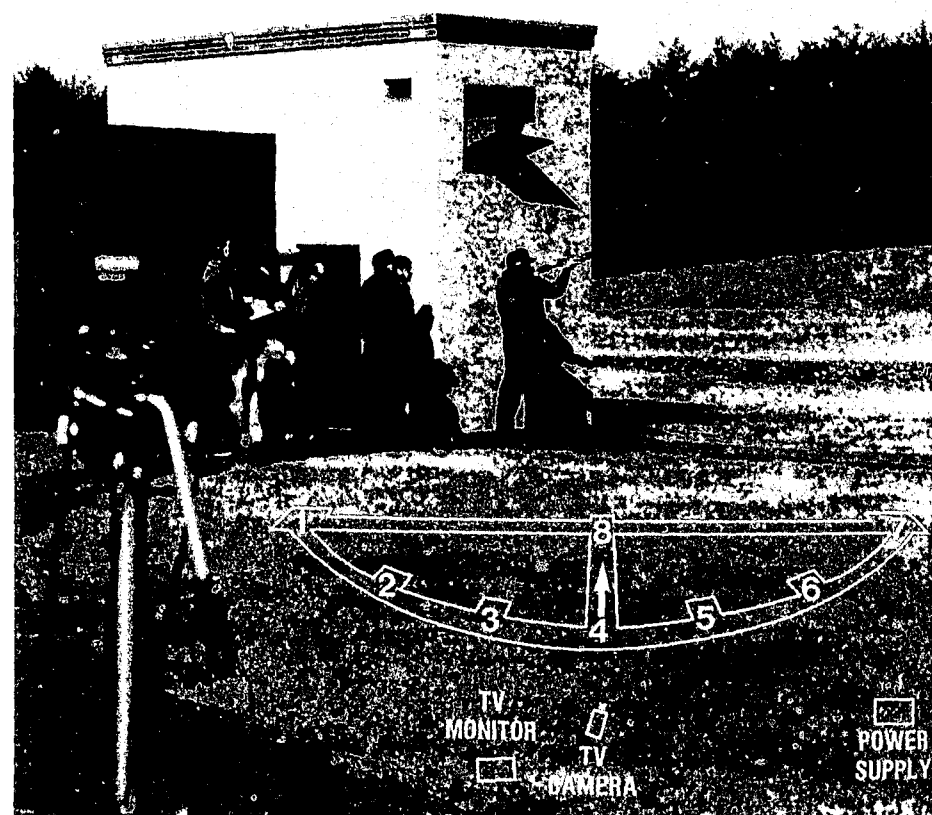
By
DONALD J. GRAY

Special Agent
Firearms Training Unit
and

CHARLES W. STEINMETZ

Special Agent
National Academy Unit
FBI Academy
Quantico, Va.

Material published in the FBI Law Enforcement Bulletin is solely for the information and assistance of law enforcement personnel. While brand names and companies may be mentioned from time to time, this is done in a strictly objective manner to help present articles in their entirety from authoritative sources. In such instances, publication of the article in the Bulletin should not, under any circumstances, be construed as an endorsement or an approval of any particular product, service, or equipment by the FBI.



Increased attacks on law enforcement officers in the United States in recent years emphasize the necessity for officers to be alert during all phases of police work. A key weapon in the defensive arsenal of a law enforcement agency is the shotgun, which necessitates a high level of skill in its use. To augment an officer's proficiency with the shotgun, the FBI initiated a "Police Shotgun Training Course," using a combination of video tape technology and student behavior modeling.

The procedure employed in this training is based on behavior-modeling theories. By this it is implied that behavior modeling or observational learning can add totally new behavior to one's repertoire. Wehrenberg and Kuhnle, writing in *Personnel Journal*, urge the use of video tape models for focusing on performance and changing performance.¹ Modeling-based training is also emphasized by Porras and Anderson, who state that the absence of modeling, including the use of video tape techniques, results in training programs that change attitude or perspective, but fail to change behavior.²

The term "self-confrontation," credited to Gerbard Nielsen who described the effects of video tape playback techniques on participants,³ is critical to the concept of this training process. Self-confrontation is a means of video tape feedback presented to an individual so that he may see and hear his performance as the instructor and colleagues witnessed it when it was delivered.

Background

The use of video tape recording and playback for training purposes is not a new technique. Researchers in the education field and private industry began to investigate the use of video tape equipment for training and education at the time of its introduction in the 1950's.

In the initial phases, the video medium was unproven for educational purposes, and there were doubts about its reliability. Costs of the intricate systems then available were prohibitive for many organizations, and the systems being developed were not compatible with each other, adding to the complexity of selection.

However, the use of video tape equipment made its way quickly into the institutional spectrum. Certain sectors, such as business and industry, have taken a lead, both in volume of current activity and originality of applications and program formats.⁴

Early use by educators was limited, primarily because video communications consisted of live programing on closed-circuit transmissions. As the development of video tape equipment progressed and the possibilities for programing, storage, and playback were enhanced, those in education were able to upgrade their capabilities. Today, the use of video equipment in the education field is widespread.

Video feedback is viewed as being a reinforcing device for the learner. It has been stated that reinforcement is probably the single most important concept in understanding the learning process. Some researchers see the relationship between feedback and behavior change as a process by which an individual can more effectively use the feedback of information appropriate to his change project, and thereby, be

"... TV applications, once thought to be imperfect or not practical, are possible today to help resolve law enforcement communications problems."



more successful in attaining his change goal.

Results in experiments with video feedback have produced mixed reactions. The theory that it is a useful device that does improve learning is shared by many who have used the technique; however, specific controlled research does not always support this view. One exception is that of McCroskey and Lashbrook, reporting in the *Speech Teacher*, who conclude that video tape playback of a student's performance, accompanied by instructor and student discussion, can make a positive contribution toward increasing students' insight into the communication process.⁵

In recent years, both small and large police departments who have

made extensive use of video equipment report positive behavioral change. The New York City Police Department has used video equipment extensively for inservice training, primarily for the largest segment of the department—the Field Services Bureau. The mobility of video equipment has enabled them to film street scenes, providing greater realism in training.⁶ The Greenburgh, N.Y., Police Department discovered that video may not be the least expensive method of training, but it can be extremely valuable in crime scene training, recording voluntary confessions, and surveillance. Unable to question the value of the video method with regard to its ability to transfer knowledge, they concluded it is well worth the expense in



an effort to upgrade professional skills through training.⁷

Another law enforcement approach was outlined by Lt. John Fakler of the Suffolk County, N.Y., Police Department, who employed television technology to assist in the control of large-scale demonstrations. Lieutenant Fakler stated that "television played a useful role at this demonstration and it is clear that it would be equally effective in disasters or other unusual disturbances. The equipment to do the job is available, dependable, and not difficult to use. Improved technology has also lowered the price for equipment that was once too expensive to consider."⁸ Lieutenant Fakler's summary of the situation is quite explicit: "Television technology has advanced considerably during the past 5 years, and TV applications, once

thought to be imperfect or not practical, are possible today to help resolve law enforcement communications problems."⁹

The Police Shotgun Training Course—Pilot Program

The Police Shotgun Training Course (PSTC) is an elective taken by students enrolled in the FBI National Academy. Students' abilities in the use of the shotgun range from highly competitive skeet shooters to those who are novices.

When a pilot program using video tape recording equipment in shotgun training was initially attempted, the PSTC consisted of five 2-hour sessions. Although the use of video gave the students an opportunity for self-confrontation, several problems developed. Since the video tape recording equipment had to be obtained from the Academy's Instructional Technology Services Unit, excessive instructor preparation time was necessary. In addition, a video technician was used to tape each session, since the instructors were fully engaged in the training process. As a result, the maximum training benefits were not achieved, since the technician lacked an adequate background in firearms training.



In order to insure that each of the 15 students were video taped during the 2-hour class period, very short segments of each individual's performance were taped. These segments appeared in random order so that the flow of instruction taking place on four separate skeet fields was not interrupted. The time constraints made it impossible for each student to view the video tape immediately, thereby reducing the effectiveness of this method of training. And the random sequencing on the field made it difficult to locate a particular student during playback, which was extremely time-consuming for both student and instructor.

The difficulties encountered in the pilot program alerted the staff to the fact that a concentrated effort must be applied if there were to be effective results.

Current Design of the PSTC

Student evaluations revealed that a majority of police departments offered insufficient training with the shotgun, which suggested that additional time should be allocated to enable the students to further develop their shotgun techniques and skills while attending the FBI Academy.

Currently, the PSTC elective is divided into 10 2-hour blocks of instruction, with each class of students divided into groups of 5. The first session consists of a lecture/discussion dealing with the application of the shotgun in police work. The second includes a demonstration by the instructor and practical application by students of safety checks, assemble area loading, unloading, and combat loading with dummy ammunition, with an instructor's critique of the procedures. The third session begins with live firing and the use of stationary targets to practice the fundamentals and techniques previously presented.

"As proficiency with the shotgun increases, law enforcement officers are better able to defend themselves and those they are sworn to protect."

Sessions four and five consist of the FBI's shotgun course #2 (skeet), while sessions six and seven are the FBI's shotgun course #8 (combat skeet). Both shotgun courses are used to develop the student's mastery of the operation and function of the police shotgun without consciously thinking about this process and to develop the concept of "lead" as it pertains to hitting moving targets. It is during sessions four through seven that each student is video taped and given time for self-confrontation immediately afterwards.

Methodology

Although the positions and number of shots used in shotgun course #2 are applicable to standard American skeet shooting, one major variation is used by the FBI. The student is required to start with the weapon below shoulder with the safety in the "on" position until the target (bird) is called. This ready-gun position invariably becomes an international skeet shooting position, wherein a portion of the weapon stock is below the lateral line of the forearms.

It should be remembered that the use of skeet for law enforcement training by the FBI is not an attempt to teach competitive shooting methods, but to prepare the student for the defensive use of the weapon. To contin-

ually allow a shooter to bring the shotgun to the shoulder and have the safety in the "off" position prior to initiating a timed shooting phase is analogous to never drawing from the holster when training with the handgun. Statistical surveys of gun battles show very few instances where the officer has the opportunity to cover an opponent with the weapon prior to using deadly force.¹⁰

By using the FBI's ready-gun position, the student must act upon a self-initiated, internal command (calling the target) or react to external stimuli (trap machine noise or the target exiting the house). If an internal command is employed by the shooter to initiate action (gun movement), the target will reach midpoint of the field approximately 1.5 seconds after the signal to release the bird has been given. It will reach the front lateral edge of the opposite house in about 3 seconds. When external stimuli are used, as particularly necessary in the combat skeet course, the target will reach the field midpoint in about 1 second and the opposite house 2.5 seconds after the trap noise or the target exiting the chute. Either method sufficiently reduces the time available to the shooter, which requires a reaction in place of a deliberate action as is usually possible in most shotgun training or qualification courses. By necessitating a reaction, i.e., mounting the weapon to the shoulder, placing the safety in the "off" position, tracking the target, establishing lead, and firing the shot, most shooters cannot simultaneously perceive their personal conditioned reaction in the attempt to break the target. In other words, the shooter normally is unable to recall action, such as how the weapon was mounted to the shoulder, head position, or continuation of swing. The in-

structor can advise the students of these actions, particularly those that are incorrect techniques. However, as in any verbal communication, visualization of the problem is difficult. At this point, the use of video tape recording enhances the development of proper techniques. The students themselves, through course critiques and comments, expressed increased enthusiasm for and awareness of the development of proper shooting techniques.

It was clearly demonstrated that behavior change of a position nature was achieved using instructor model-based training, in conjunction with immediate review of video taped student performance.

Equipment

A Remington Model 870, the standard-issued shotgun for all FBI field offices and many law enforcement agencies, is used during the training. The video recording equipment includes a Sony AVC 3200 black-and-white camera with a Fujinon 12.5 100mm. zoom lens, a Sony AV 3600 solid-state recorder with 1/2-inch reel-to-reel tape, and a Sony 19-inch television monitor for playback. A 100mm. zoom lens allows the instructor to position all the video equipment at a fixed location. The location of the camera behind station four enables taping of the entire field with minimum camera adjustments.

In 1982, this equipment is not considered "state-of-the-art," but is available through the Instructional Tech-

nology Services Unit for full-time assignment to the firearms range and proves to be both reliable and durable. The equipment used originally did not have sound capability, although it was adequate. However, the addition of sound equipment enhanced the realism of the self-evaluation by the student.

The recorder, monitor, and related equipment is on a mobile cart, while the camera is on a wheeled tripod. Both units can be moved easily to any location on the range complex.

Recommendations

For agencies that may wish to incorporate the use of video tape equipment into their firearms training programs, the following is recommended:

- 1) A total shotgun training period of 20 to 25 hours is desirable to accommodate video tape playback to provide immediate self-confrontation and reinforcement for the student. The additional time is required if students are to maintain the same level of skill practice on techniques as were present prior to the incorporation of video equipment. The results of this combination is a higher level of student proficiency than would otherwise be achieved.
- 2) A minimum amount of time should be allowed to expire between actual firing, self-confrontation, and return to firing (reinforcement). This enhances the skill learning process.
- 3) A stationary video taping position is necessary for the TV camera, recorder, and monitor which can then be adequately handled by a single instructor performing both cameraman and instructor duties.

- 4) When training is conducted on more than one field, within a limited time span, and with only a single video unit, consideration should be given to using a cameraman or technician with a firearms training background, enabling the principal shotgun instructor to have more time for training.
- 5) If available, the use of more than one video camera and cassette recorder being employed simultaneously on various ranges would accommodate more students. The playback equipment with an additional instructor should be centrally located for use by all groups on a rotating basis.
- 6) Training groups on each skeet field should be limited to five students, with a separate instructor for each group.

Summary

While the full potential of video tape technology has not been reached, advantages accrue for the law enforcement agency that wishes to train shotgun marksmen in a proficient and economical manner. The use of video tape recording equipment to complement a shotgun training course is a cost-effective and efficient method. Cooperative and imaginative efforts on the part of the law enforcement agency will enable a student to make judgments about the effectiveness of the video tape procedure as it applies to the unique law enforcement student. The results are likely to have impact on instructional procedures and could enhance the quality of training a law enforcement student receives.

Proficiency in any skill activity is dependent on the degree to which the student masters the basic techniques. Through the use of video taping and subsequent self-analysis, students are able to visualize defects in their own personal basic shotgun techniques. Once defects are identified, corrective action to change adverse activity and increase overall proficiency is accelerated. As proficiency with the shotgun increases, law enforcement officers are better able to defend themselves and those they are sworn to protect.

FBI

Footnotes

¹ Stephen Wehrenburg and Robert Kuhnle, "How Training Through Behavior Modeling Works," *Personnel Journal*, vol. 7, July 1980, pp. 76-81.

² Jerry L. Porras and Brad Anderson, "Improving Managerial Effectiveness Through Modeling-Based Training," *Organizational Dynamics*, Spring 1981, pp. 69-77.

³ John H. Barwick and Steward Kranz, *Profiles in Video* (White Plains, N.Y.: Knowledge Industry Publications, Inc., 1975), p. 2.

⁴ Harry P. Baker, "Film and Videotape Feedback: A Review of the Literature," Austin University of Texas Research and Development Center for Teacher Education, November 1970, p. 2.

⁵ James C. McCroskey and W.B. Lashbrook, "The Effect of Various Methods of Employing Video-Taped Television Playback in a Course in Public Speaking," *The Speech Teacher*, vol. 19, September 1970, p. 205.

⁶ Thomas M. Lawlor, "Video Tape: A Viable Training Medium," *FBI Law Enforcement Bulletin*, vol. 45, No. 9, September 1976.

⁷ William B. McDonald, "The Use of Video Tape in Law Enforcement Training," *FBI Law Enforcement Bulletin*, vol. 49, No. 12, December 1980.

⁸ John Fakier, "Television: A Versatile Tool at Large Demonstrations," *FBI Law Enforcement Bulletin*, vol. 48, No. 12, December 1979.

⁹ Ibid.

¹⁰ "Survey of Gunbattles Involving FBI National Academy Attendees," Firearms Training Unit, FBI Academy, Quantico, Va., 1982.

END