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A Three-Position Air Rifle Range Officer E-Learning Module

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A THREE-POSITION AIR RIFLE RANGE OFFICER E-LEARNING MODULE

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ABSTRACT

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This project focused on the rationale and development procedures for a computer-based training module for the purpose of instructing officials on the safe and fair conduct of three-position air rifle competitions. While hundreds of competitions are conducted around the country each year, no training existed for the officials in this specific shooting discipline. This project aimed to establish consistent training so that all competitions are conducted by at least one trained official. The learning module was developed using the analysis, design, development, implementation and evaluation (ADDIE) model of instructional systems design. After the course was developed, data was collected to help evaluate and determine the effectiveness of the course. Course evaluations were completed by volunteers to solicit feedback on course effectiveness, ease of operation, and overall value.

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SECTION I: BACKGROUND AND GOALS

General Statement of Project

The purpose of this project was to analyze the need and describe the development

procedures for an online training module that prepares competition officials to conduct fair and

safe three-position air rifle events. Each year, hundreds of air rifle competitions are held

throughout the United States, but there was no requirement that range officials be trained for

competitions sanctioned by the Civilian Marksmanship Program (CMP). The referees, or persons

responsible for the management of the event, are known as range officers in the sport of air rifle

shooting. This online training module helped to make standardized training available in order to

develop a pool of trained, knowledgeable range officers who know and can apply the rules of

competition in a fair and efficient manner. The audience consisted of both new and

inexperienced range officers interested in conducting three-position air rifle competitions. The

training is hosted on the CMP learning management system and its completion by match officials

will soon become a requirement for hosting a sanctioned event.

Background

The Civilian Marksmanship Program is charged under federal law to provide instruction

on the safe use of firearms, to teach marksmanship, and to conduct marksmanship competitions

for the citizens of the United States. The Corporation for the Promotion of Rifle Practice and

Firearm Safety was established in 1996, under Title 36 U.S. Code, 0701-40733, to supervise the

CMP (National Defense Authorization Act for Fiscal Year 1996, 1996). The CMP had been

government-chartered program since the War Appropriations Act of 1903 (Civilian

Marksmanship Program [CMP], n.d.a) so it has a long-standing reputation as a leader in

marksmanship competition. Developing volunteers to handle the hundreds of competitions that

take place across the country is an ongoing challenge that has heretofore been met through

informal face-to-face trainings. Providing an online training resource has enabled more

volunteers to be trained in the safe and fair conduct of marksmanship competitions.

One of the introductory marksmanship programs is called three-position (prone, kneeling,

standing) air rifle. Also known as "3PAR," this sport is conducted indoors with air-compressed

pellets at a distance of 33 feet (CMP, n.d.b). This has become an athletic competition sport for

youth (ages 10-18) that often leads to a more advanced level of shooting. Many high schools

have competitive air rifle teams in which males and females compete on an equal footing (CMP,

n.d.c). In the United States, 3PAR is considered a grassroots program designed to help athletes

to progress to higher levels of competitions (Meili, 2009). A wide range of ability levels

participate from the most novice athletes to the best junior competitors in the country. Many of

the athletes that compete in this program advance to other disciplines of shooting, such as

international style or National Collegiate Athletic Association (NCAA) rifle shooting (CMP,

n.d.c; Meili, 2009). Many of the elite shooters in the country began their shooting careers

competing in 3PAR events (Brugnone, 2016).

Air rifle competitions are sanctioned by various civic organizations, many of which came

together in 2001, to form the National Three Position Air Rifle Council (N3PARC). Council

members include The American Legion, Boy Scouts of America, Civilian Marksmanship

Program, Daisy/U. S. Jaycees Shooting Education Program, National 4-H Shooting Sports, The

U. S. Army Marksmanship Unit, USA Shooting and the Army, Marine Corps, Navy and Air

Force Junior Reserve Officers' Training Corps (JROTC) Commands (CMP, 2014). While CMP

is just one member of this council, it does take the largest role both financially and

administratively and has an entire department dedicated to air rifle programs. As part of this,

CMP officially sanctions three-position air rifle (3PAR) competitions and displays the results on the CMP Competition website. In addition, CMP publishes and sells the N3PARC rulebook, as well as conducts multiple regional and national competitions each year (CMP, 2014).

Another way that CMP supports 3PAR shooting is by maintaining three air gun facilities, designed for competitions that can hold up to 80 shooters at a time (CMP, n.d.d). CMP built its first permanent air rifle range at Camp Perry, Ohio, in 2008. This range is equipped with electronic scoring targets that cater to the three-position shooter by adjusting for each firing position. The technology allows spectators and competitors instant feedback on shot locations, both on the range and over the internet. For competitors, the instant results allow them to make adjustments in aiming and enables more fair competitions then the traditional paper targets (which have to be scored by hand after the shooting is over). This revolutionized 3PAR shooting in the United States, allowing parents, friends and family to watch shooters compete in real time where previously, spectators had to wait until the end of the competition to see results which made it a very boring event to watch. Electronic scoring of international air rifle competitions has enabled better coverage of the sport, such as through televised Olympic competitions. Almost immediately after opening the range at Camp Perry, CMP outfitted a second nearly identical range in Anniston, Alabama. A third mobile set of targets was also purchased by CMP in 2013. This range is used for major 3PAR matches on the west coast of the United States, as well as rented for various events around the country (CMP, n.d.d). Since their openings, these ranges have hosted three national, six regional, and countless other local events each year (CMP, 2015).

As stated previously, the CMP's air rifle department also manages the sanctioning of the N3PARC matches. According to the National Three Position Air Rifle Council Annual Report

from 2014, the number of sanctioned 3PAR matches have grown from 94 in 2007 to 238 in 2014 (Anderson, 2014). It is estimated that over 1000 matches (both sanctioned and unsanctioned) are currently being held each year in the United States, based on data collected from CMP and unsanctioned matches recorded on other websites (Anderson, 2014). Range officers are needed for all these matches as a matter of safety and competitive fairness. In addition, many of these matches are still done with paper targets without electronic scoring where the need for trained personnel in range safety and competition rules is even greater than in the state-of-the-art facilities run by the CMP.

The process to sanction a match includes submitting a completed application and match program. After the match is approved for sanctioning, the event information is displayed on the CMP's website first to publicize the event, and later to display results. It is stated in the match sanctioning instructions that it is the match director's responsibility to ensure that all officials at the event are familiar with the rules (CMP, n.d.e). There are no requirements listed on the CMP website that states that matches need to have trained or certified officials to conduct the competition (CMP, n.d.e).

Overarching Goals

There are three overarching goals proposed: (1) Upon the completion of the Three-Position Air Rifle Range Officer learning module, the learner will have a working knowledge of range safety, rules, and procedures necessary to perform the duties of an air rifle range officer; (2) This course will provide consistent and accurate training that increases the pool of trained three-position air rifle range officers; and (3) This course will provide accessibility to a self-paced online learning module that learning can take at any time, providing more opportunity for potential match officials to become trained three-position air rifle range officer or for current

range officers to take or update their training.

Learning Objectives

At the end of this training module, the learner will be able to:

1. Identify three common unsafe practices of air rifle competitors and list proper corrective

   measures to ensure safety.

2. Utilize the National Three-Position Air Rifle Council Rulebook to identify proper procedures,

   equipment, and positions as well as to identify any rule violations.

3. Identify the duties and responsibilities of the air rifle range officer, including giving proper

   range commands, checking conformity of athletes' equipment and positions, and resolving any

   range irregularities (such as protests, disturbances, penalties, malfunctions, irregular shots,

   extra time allowed, etc.).

Needs Analysis

Despite the fact that 3PAR match officials have not received any formalized training,

CMP relies on these individuals to fulfill one of the organization's main missions: to conduct

competitions. The officials play a critical role in providing competition opportunities to junior

shooters throughout the country. Participation in local events is how most young athletes begin

their participation in sports. As such, the local match officials are a valuable resource for CMP

and special consideration should be given to enhance their experiences as well as to encourage

their continued service.

In addition to the CMP, there are two other major competitive shooting organizations in

the United States that sanction matches with similar shooting disciplines to N3PARC shooting.

These two organizations, the National Rifle Association and USA Shooting, have training

available to officials. The NRA offers a range officer safety course both online and in a

classroom setting (NRA Programs and Services, n.d.). USA Shooting has a certification process

for officials, and require that one or more of the officials at each of their sanctioned matches hold

a current license (USA Shooting, 2013). Competitors and stakeholders have come to expect that

competitions will be run by qualified range officers, which are required for competitions

sanctioned by these two other national shooting organizations. Unfortunately, the CMP has not

had a training requirement for its sanctioned matches and has relied on range officers who have

had training from these other organizations or no training at all. As the sport grows, the CMP

has determined that its competitions need officials trained according to its specific rules and

requirements.

To this end, CMP officials have made training of range officers a priority, and current

range officers agree that this is essential to the development of 3PAR as a sport. Larry

Pendergrass, a member of the National 3PAR Jury of Appeal, is recognized as one of the most

experienced range officers in the county. He holds the highest USA Shooting License, as well as

an International Shooting Sports Federation's (ISSF) Level A Judge's License. The ISSF is

responsible for conducting all major international shooting events, including the Olympic

Games. Pendergrass has worked at 18 World Cups, 57 national level competitions, 44 national

junior competitions and 6 NCAA Championships. Pendergrass agreed that a training course

would help prepare range officers for their role in competitions, stating "competitions should be

officiated according to the rules for fairness and for the proper training of the young athletes.

This helps prepare young athletes not only for higher level competitions but for other parts of

life" (L. Pendergrass, personal communication, March 16, 2016).

Having worked many national level competitions, Pendergrass has witnessed the

frustration that some athletes and coaches experience when something goes wrong at a

competition. If the rules had been followed at their local matches, he contends, the athletes and coaches would know what to expect. Pendergrass states, "athletes learn the rules better if competitions are run according to the rules" (personal communication, March 16, 2016).

Pendergrass also noted that range officers are not always willing to study the rulebook on their own. It takes time to read and understand the rules. While he stated that a training course would be beneficial, he stated it may be difficult to schedule with many of the range officers also have other commitments (personal communication, March 16, 2016). With the widespread geographic distribution of officials and the time commitments, an online training opportunity is an effective way to facilitate a training course on this topic.

Any competition requires rules that are enforced in order that it is safe and fair to the athletes involved. Range officers are charged with enforcing rules and providing a safe environment for competition as they need to be focused on the competition and not learning on the job. Having trained officials would provide three benefits to CMP sanctioned competition. First, training ensures that all range officials are able to do their own jobs. Currently, more experienced range officers often have to divert their attention from the athletes they are responsible for in order to settle disputes or help untrained range officers. Training should be done ahead of the event so that athletes and coaches are given fair and equal treatment by the officials.

Second, training was important because of the complexity involved in air rifle shooting. Shooting is often referred to as a very technical sport. Almost every aspect of the sport is regulated by one or more rules, from the type of modifications that can be done to the rifle, to the clothing that can be worn, to the positions that shooters can fire in. Range officers need to be familiar with the rules to be able to recognize what is and what is not legal.

The third reason training was needed was so range officers could react efficiently to issues that arises at events. When an incident occurs, such as a malfunction rifle or an errant shot, the range officers must be able to recognize this as an issue and react according to the rules. Quick and accurate responses to these occurrences helps to make sure that athletes have been given a fair ruling and are able to promptly continuing competing. Trained officials are able to provide this to athletes by being able to acknowledge the situation, reference the rule and inform the athlete of what to do next.

With the widespread locations of the matches and officials (in 2015 matches were held in 46 different states), it was impractical to require match officials to travel to one location for training (CMP, 2015). CMP also does not have the budget or personnel to conduct trainings around the country. An online training module was a practical solution to make certain that officials are trained and updated on match procedures to help ensure the rules are being enforced uniformly. This next section highlights the need and rationale for the creation of the 3PAR online training module.

Literature Review

While online range officer courses exist for other shooting disciplines, there have been no published studies identified in research on the efficacy of these courses. USA Shooting's official certification is a general test of knowledge based on their rulebook and not a course (USA Shooting, 2013), and NRA provides a general range safety officer course but it is not specific to 3PAR (NRA Programs and Services, n.d.). There is no identified published data on how many people have completed these courses. However, a range officer is a sports official, and there have been studies on the importance and need for knowledgeable sports officials, as well as what organizers can do to recruit, grow and retain sports officials and volunteers (Costa, Chalip,

Green, & Simes, 2006; Hancock, Dawson, & Auger, 2015; Newton, Becker, & Bell, 2014;

Lirgg, Feltz, & Merrie, 2016).

Costa, Chalip and Green (2006) specifically address the needs of volunteers in sports

events, suggesting training as a means of increasing the volunteers' commitment and sense of

fulfillment. Opportunities to acquire new skills and knowledge have been found to increase the

likelihood of volunteers to continue service to an organization (Newton, Becker & Bell, 2014).

On the reserve side of that, inadequate training is also one of the main reasons for volunteers

decide to no longer support an organization with their time (Wymer & Starnes, 2001).

Lirgg, Feltz and Merrie (2016) suggest that sports officials, similar to athletes, take years

of practice to develop proficiency. Their work is often scrutinized and held to a higher standard

than the level of competition he or she is officiating. Hancock, Dawson and Auger (2015) argue

that officials face challenges during events and must be able to, "make split-second decisions,

have extensive rule knowledge, communicate with athletes and coaches and deal with

tremendous pressure and scrutiny" (p. 32).

Similar to the importance of an athlete to believe in his or her abilities, it is equally

important for officials to be confident. Self-efficacy in officials can be cultivated by successful

experiences, and six dimensions of referee success are described as (a) Game Knowledge, (b)

Strategic Skills, (c) Decision-Making Skills, (d) Psychological Skills, (e)

Communication/Control of Game and, (f) Physical Fitness (Lirgg et al., 2016). Lirgg et al.

(2016) state "Sports officials are an important part of competitions. A significant amount of time

is spent on helping athletes improve performance. Because of the crucial role they play, sport

officials should also be given every opportunity to improve their work" (p. 48). Others have also

recommended "officials ought to be provided with new challenges, such as increasing certifications" (Hancock, 2015, p. 37).

Another aspect of sports officiating is the interaction between the official and the athlete. The ways in which an official interacts with the players can have a profound effect on how the athlete perceives a call, such as when an official "communicated decisions calmly or with a short explanation" athletes viewed the officials as more "fair or correct" (Cummingham, Simmons, Mascarenhas & Redhead, 2014, p. 168). Training should directly address the communication styles of officials, so that they can develop a good rapport with athletes while remaining in command of the game (Cunningham, et al., 2014). "Regardless of the sport, all officials rely on their game knowledge and decision-making skills; they all must communicate with players, coaches and other sport officials" (Lirgg, et al., 2016, p. 42). A working knowledge of the rules can help officials to reach conclusions and quickly and confidently address issues with athletes, coaches and other officials.

Hancock and colleagues (2015) studied the reasons sport officials begin, continue and quit officiating. They describe three types of officials: interactors, monitors, and reactors. The categories are based on the type of duties required by the official. A range officer would be considered a reactor, categorized by "few responsibilities (in terms of number, not magnitude) and limited interaction with athletes" (Hancock et al., 2015, p. 33). Officials from many different sports responded to surveys and indicated that they are intrinsically motivated to both begin and continue officiating. Because of this, recruiters of new officials should stress the importance of giving back to the sport (Hancock et al., 2015). Often people who have participated in a sport or who have children who have benefitted by the sport, are drawn to providing service to sport through becoming a coach or an official. By providing a means for

interested people to become trained officials, this learning module gives an opportunity to give back to the sport. The research supports the idea that training will not only help to improve the quality of the officiating during 3PAR matches, but also supports the idea that giving volunteers the opportunity to improve their craft will increase volunteer retention rates (Wymer & Starnes, 2001).

Sports officials are often paid for their services, even if they have an altruistic motive for officiating. However, the range officers in the shooting sports are more commonly volunteers. The N3PARC member organizations include volunteer organizations such as the 4-H, Boy Scouts of America and the American Legion. Similar to the CMP, these organizations also rely on volunteer leaders to run many of their youth programs. In 2006, the 4-H launched a series of computer-based learning modules aimed to reduce the time, travel and family constraints of volunteers attending training courses (Ouellette, Lesmeister, Lobley & Gross, 2014). Both positive and negative comments were recorded by the volunteers trained with the use of the learning modules. Those surveyed listed the positive attributes of the online course as convenience, and the majority of negative reviews stated that the modules felt impersonal. It was noted that the new volunteers were generally the most positive about the e-learning experience (Oullette et al., 2014). This would support the idea that an introductory course for range officers in air rifle shooting would be especially useful to the new volunteers.

Reducing travel is not the only reason to consider e-learning as a means of teaching course material. In 2012, the University of Arizona created a series of computer-based learning modules to train their library staff and researchers found that the e-learning modules allowed training to be delivered in a "more dynamic and self-paced manner" (See & Teeter, 2014, p. 88). After comparing the competencies of employees trained using the learning modules and those

using traditional face-to-face instructions, researchers found that there was no difference in the knowledge and capabilities of the employees (See & Teeter, 2014).

Identification of Resources

Instructional Designer/Course Developer.

- The author served as the designer and developer of the learning module, and is employed as a Program Coordinator at the CMP.

Subject matter experts (SME).

- CMP staff members in the air rifle department served as content experts as they have extensive knowledge of the 3PAR rules. Context experts included Brad Donoho, Program Coordinator; Katie Harrington, Program Coordinator; and Michelle Woods, Program Support. These individuals are involved in conducting 10 – 15 3PAR matches each year and work directly with athletes and coaches on issues regarding the rules and procedures during matches.

- Members of the N3PARC Jury of Appeal also served as consultants to the designer. This included Larry Pendergrass, an experienced range officer with extensive knowledge of the rules.

Publications.

- The *National Three-Position Air Rifle Council Rulebook* served as the primary resource for the content of the course.

- *On the Mark* is a CMP publication for junior shooters and coaches, and was also utilized as a resource. A recurring feature of this publication features interpretations of the 3PAR rules and articles on the role of range officers.

Technology resources. The following list identifies the technology resources used in the development of the online training module.

- Adobe Captivate was used to create the learning module.

- Adobe Creative Suite was utilized, including Photoshop, Premiere, After Effects and Audition programs.

- Video and camera equipment were used to capture still images and video.

- Audio equipment included a desktop microphone.

- Expand Interactive, CMP's learning management system (LMS), hosted the completed training module.

Other resources.

- Event photos from the extensive CMP database were utilized.

- Athletes and range officers demonstrated scenarios for the video content of the course.

- Videos of athletes and range officers at competitions were recorded for use in the course.

SECTION II: PROCEDURES

This section described the procedures followed to fully develop the online training module. The ADDIE model of instructional design was used in the development of this course (Branch, 2009). ADDIE is an instructional systems design process representing five primary stages: analyze, design, develop, implement and evaluate. Each stage is clarified in relation to this project in more detail below.

Analyze

Much of the analysis portion of this project was completed and documented in Section I of this document. The target audience are both new and experienced individuals interested in hosting 3PAR events. This includes CMP staff members, JROTC instructors, junior rifle instructors from 4-H, Boy Scout or junior club programs as well as parents of shooting athletes. After competing this course, the desired outcome is to gain the knowledge necessary to conduct a 3PAR competition using the rules and procedures established in the N3PARC rulebook. It was determined that because of the widespread geographic diversity, as well as time and budget restraints of the intended audience, an online course would best facilitate the delivery of the information.

Design

The design stage involved planning out the content of the course and developing the final assessment (Branch, 2009). The learning objectives were identified previously and documented in Section I of this proposal. With these objectives in mind, the training content was outlined. This information was based on the content found in the National Three-Position Air Rifle Rulebook, as well as advice from subject matter experts (SMEs). The material is broken into

twelve different sections. Each section concludes with three to five formative questions. Lists of pictures, video, and audio clips necessary for each section were made.

A summative assessment based on the learning objectives was also developed. This was in the form of a multiple choice test. To create this test, the designer created a list of 40 – 50 questions. These questions were reviewed by a panel of SMEs. The questions were modified based on any feedback received from the panel. Twenty-four questions were selected to make up the assessment. It is important that all range officers are proficient, so this course is taught to mastery. Remediation is provided for each incorrect answer given in the form of feedback for each incorrect response.

Development

The development of the training module involved writing the script, storyboarding the content, creating the various multimedia components and compiling the parts into the complete learning module. The script for the course was written by the designer based on the content outlined in the design stage. Multiple CMP staff members edited the script content for accuracy and provided feedback to the designer.

After the script was thoroughly reviewed, storyboards were created for each section. Pictures and video from the CMP database were compiled. In addition to existing media, new video and pictures were captured. CMP staff members and volunteer junior athletes acted out and posed for video and pictures. The video clips were edited in Adobe Premiere, and still images were edited in Adobe Photoshop. The designer recorded the script audio in Adobe Audition. The designer then assembled the parts in Adobe Captivate utilizing the storyboards to create the learning module.

After the entire course was completed, it was uploaded to Expand Interactive, CMP's LMS. Experienced range officers, CMP staff members, and volunteers beta tested the course and provided feedback to the designer. Changes were made based on the comments provided.

Implementation

As stated earlier, the completed training module is hosted on Expand Interactive, the LMS used by CMP. Users need access to the internet, and the module is viewable on computers or mobile devices. The successful completion of the module has been identified as a new requirement to sanction 3PAR competitions. As such, all prospective match directors will be required to register for this course. A link to the registration will be available on the CMP's air rifle website. After the participants have registered, CMP staff members will import their email addresses into the LMS system. An email will be sent to each person that registers with a unique username and password for the Expand Interactive website and a link to the training module.

The learners are able to log-in at any point after receiving the email to complete the training module. There are twelve sections, and it is required that the learners view each section in its entirety. At the end of each section, an assessment is provided to help provide practice and feedback on the subject matter. This is described in more detail below.

Evaluation

The training module was analyzed through application of the Kirkpatrick model for evaluating training programs (Kirkpatrick & Kirkpatrick, 2015). There are four levels to this evaluation method, each focusing on a different element. These levels include: (1) reaction, (2) learning, (3) behavior and (4) results (Kirkpatrick & Kirkpatrick, 2015). For purpose of this project, the first two levels were evaluated and reported on. The the third and fourth levels are expected to take several months to complete and would exceed the life cycle of this project.

The first level evaluates the attitudes of the learners towards the course. For this training module, the participants were asked to complete questionnaires before (see Appendix A) and immediately following the training (see Appendix B). Both surveys are integrated into the training. The pre- and post-surveys were used to compare the learner's perceived skills before and after the course. The post survey also provides additional feedback on how positively or negatively the learner considered the training, and gives the learner an opportunity to provide comments.

The second level of Kirkpatrick's model involves determining if the learning objectives were reached (Kirkpatrick & Kirkpatrick, 2015). To evaluate this, a summative assessment was administered in the form of a multiple choice test, as described in the development stage of this proposal. Learners are encouraged to use the N3PARC rulebook to answer the questions, as this is a resource that is encouraged to be used when conducting 3PAR matches.

It is essential that all range officers are able to handle all issues, so it is necessary that a 100% score on this assessment is obtained to pass the course. Learners are permitted to retake the test a total of three times before being required to retake the entire training. Mechanisms are in place to provide remediation to anyone unable to pass the test on the first try. This involves immediate feedback for each incorrect response. Upon successful completion of the course examination, the learner's user profile on the CMP website is updated to reflect the successful completion of the training. This fulfills the training requirement to sanction 3PAR matches.

Changes from Proposal

There were several changes that were made from the proposal due to unforeseen circumstances. The project deviated in the areas of the timeline, the audience evaluating the course, and the design of the training. The changes are described below.

Timeline. The size of the finished project was underestimated in the design of this

project. Therefore, the development of the learning module took much longer than anticipated.

The accurate timeline is outlined below:

May 2016	• Interviews with subject matter experts and draft script created. • Script evaluation conducted by CMP staff.
June 2016	• Storyboards created based on completed script. • Lists of required multimedia to be included in the learning module identified. • Filming completed in the photography studio and during the Three-Position Air Rifle National Championships. • The development of the learning module commenced.
September 2016	• Audio recorded. • Video editing completed. • Additional filming conducted.
October 2016	• Completion of alpha version of course.
November 2016	• Evaluation of the learning module by CMP staff members and experienced range officers. Changes made based on the feedback. • Compiled learner evaluations. • Final project completed. • Edits to final report were made and submitted.
December 2016	• Project defense and final edits. • Submission of final copy of report.

Audience. The project was evaluated only by CMP staff members and volunteers.
Similar projects for range officers in other shooting disciplines are being developed by the CMP.
The formal release of this training module is set to coincide with that of the other range officer
course in early 2017. This is beyond the timeframe of this project; therefore, the audience
evaluating the project was CMP staff members and volunteers that could be recruited by the
researcher. Participants included experienced and unexperienced range officers, and are similar
to the target audience. The next iteration of this training will utilize inexperienced range officers
to further validate the content and obtainment of learning objectives.

Design of the course. The design of the course was altered to fit the capabilities of the
learning management system, ExpandShare. During the course of this project, the LMS went
through several changes, and some of the capabilities that were once available were no longer
offered. For instance, some of the interactive aspects of the project had to be eliminated, and
multiple choice questions required to replace these aspects.

SECTION III: DESCRIPTION, METHODOLOGY, AND DEVELOPMENT

The training module for three-position air rifle range officers was developed using Adobe Captivate. The content was based on the National Standard Three-Position Air Rifle Rules, and the goal was to create a training to prepare range officers to conduct three-position air rifle competitions according to the rules. The ADDIE instructional design model of analysis, design, development, implementation and evaluation was utilized in creating this learning module (Branch, 2009). The design, development, and implementation and evaluation steps are fleshed out in greater detail in this section.

The learning module was developed in three main phases: (1) researching and establishing training module content, (2) filming and developing digital media components, and (3) designing and creating module in Adobe Captivate. The final aspect of the course development was the integration of the course onto the learning management system and incorporation of the data collection tools. Details of the three main phases, the integration into the LMS, and the challenges faced are found below.

Researching and establishing module content. The National Three-Position Air Rifle Rulebook and the learning objectives listed in Section I were used to outline and write a script for the learning module. The author also served as a subject matter expert and instructional designer on this project. Additional information was gathered from sources such as articles on rule interpretations and match officiating found on the CMP website, and from other subject matter experts specializing in the management of air rifle competitions. Knowledge-check and final assessment questions were developed during this phase. The sections of the training module include the following: (1) Introduction, (2) Rulebook, (3) Safety, (4) Match Officials, (5) Range

Setup, (6) Range Commands, (7) Duties of the Range Officers, (8) Range Incidents, (9) Range &

Scoring Procedures, (10) Equipment, (11) Common Position Issues, and (12) Conclusion.

Filming and developing digital media components. Once the content was established,

the digital media was identified to support the training module. This included both photographs

and short video clips. To locate the media, the researcher utilized the photographs on the CMP's

database, and created lists of images and videos to be captured. Filming was completed during

competitions, in studio settings, and during practice sessions on the range. Adobe Photoshop,

Premiere and After Effects were used to edit the raw images and footage before the media was

placed into Adobe Captivate. Figure 1 shows a still image of an animated video created in

Adobe After Effects that is used in the training module.

Figure 1. Example of media created in Adobe After Effects.

Designing and creating module in Adobe Captivate. The learning module was

constructed using Adobe Captivate. The module was broken down into twelve sections, so

separate Captivate files were created for each section. A storyboard was used to produce an

outline of the course in Captivate. Each slide was developed to place pictures and video clips

where appropriate. After this frame work was in place, audio was recorded. This was done in

Adobe Audition and imported into Captivate one slide at time. Still images from each slide are

found in Appendix C. Figure 2 below shows the Adobe Captivate user interface, including slides

on the left and the timeline on the bottom.

Figure 2. Editing in Adobe Captivate.

User interface. The learning module is hosted on ExpandShare, the learning

management system currently used by the Civilian Marksmanship Program. To login to the

learning module, each learner is invited through the ExpandShare website. All that is needed to

invite a user is his or her email address. The email address of each individual is put into the

ExpandShare website and an email is then sent to the participant with a link to create a password.

Once the learner has logged in, the system tracks the user's progress and the answers that are

given for each question. Figure 3 depicts the main screen in ExpandShare for the three-position

air rifle range officer training module.

Figure 3. User interface on ExpandShare.

The module beings with an overview of three-position air rifle, some background on the

sport and the reason the course exists. At the end of the first section, a link is provided to a self-

evaluation hosted on SurveyMonkey.com. The ExpandShare website did not permit open ended

questions and SurveyMonkey.com was able to do this. The survey is meant to gather data on the

learners including his or her experience level and reasons for taking the course. The survey also

asks learners to rate his or her familiarity with the various section topics.

In each section, the forward progress button is disabled on the bottom of the slide until

the slide audio has completed. This prohibits learners from advancing through the training

module without viewing the content of each slide. At the end of the section, learners must press

"next" in the upper right hand corner of the web browser to advance to the quiz questions. These

knowledge-check questions are based on each section. It is recommended that the learners use

the N3PARC Rulebook to answer these questions. If the answer is correct, a notification is given

with "Correct" and a button to advance. If the question was answered incorrectly, an explanation is displayed as to why the answer was incorrect. This often cites a rule, which can then be referenced in the rulebook. After the quiz questions are answered, the learner advances to the next section of the learning module.

At the end of all sections an assessment is given with twenty-four multiple choice and true/false questions. Learners must complete the assessment with 100% accuracy to successfully complete the learning module. The learners are given three chances to do this, and are given feedback for each wrong answer. In addition, the learners are asked to evaluate themselves before and after the course and assess what knowledge was gained by completing the module.

Analysis of development. In practice, the three phases of development described above did not always flow in a sequential order. The researcher often had to go back to write new content when it became evident that information was missing or incomplete. This added to the time it took to create the course. Three other challenges in the development stage of this training module included: (1) learning the programs used to create the module, (2) the size and scope of the project, and (3) the limitations of the LMS.

First, the time to become proficient in various software programs was underestimated. This was especially true for the main program, Adobe Captivate. The program is very versatile, but many of the functions are not intuitive and take many hours to learn. Often the progress of the whole project was held up due to this.

Another obstacle was the size of the project. When outlining the project, it became evident that the finished learning module would be longer than expected. This translated to each section of the development being more work and taking more time then expected to complete.

The biggest obstacle was the learning management system. Certain parts of the learning module had to be adjusted or eliminated due to the limitations of the LMS. Some of the required LMS components needed, were not implemented in a timely manner, thus further delaying the upload of content. In fact, some of the functionality was lost. For instance, questions were only permitted to be true/false or multiple choice, and short answer was not permitted. This made it difficult to complete the course as planned, and adjustments had to be made when creating the data collection tools.

Data Collection Tools

Three data collection tools were developed for this project. The first tool is a self-assessment for participants to rate their skills as range officer. The survey asks the participants to evaluate their experience and skill levels, using a combination of multiple choice, short answer, and Likert scale questions. The list of questions can be found in Appendix A. The collection tool is hosted on SurveyMonkey.com, and participants were directed to this survey at the end of the introduction section of the course. SurveyMonkey.com was chosen over the LMS to host this survey because it offered a variety of question choices, and the LMS limited the types of questions that could be asked.

The second data collection tool is the final assessment for the course and is integrated into the learning management system. The assessment is comprised of twenty-four questions. These questions were designed to relate back to the learning objectives, and ensure participants have understood the course material. Participants are given remediation in the form of corrective feedback if he or she selects an incorrect response. The assessment questions can be found in Appendix E.

At the end of the training module, participants are directed to take a follow-up survey, hosted on SurveyMonkey.com. This survey asks again participants to rate how his or her skills, using the same types of questions found in the first survey. This survey also asks participants to rate the course content, aesthetics and ease of use. This data collection tool can be found in Appendix B. The data gathered through the three data collection tools were used to evaluate the course, and the results are described in the following section.

SECTION IV: EVALUATION AND RECOMMENDATIONS

The objective of this project, to create a training module to prepare range officers to conduct three-position air rifle competitions, was accomplished. A pre- and post-evaluation was given to all participants to gauge the success of the training and to look for areas to improve upon. A final assessment was also given to all participants to determine if the learning objectives were met. The evaluation received positive feedback, and indicated that this course would be useful in supporting three-position air rifle shooting. The results are described in detail below.

Evaluation

Each participant was asked to evaluate his or her learning, to indicate his or her impression of the course, and to rate his or her perceived usefulness of the course. Overall, the participants indicated an improvement in skills, evaluated the training module favorably and rated the training module as beneficial to three-position air rifle shooting. The complete results of the evaluations can be found in Appendix D.

Demographics. Seven individual took the training module, all of which work for the Civilian Marksmanship Program. Five of seven participants listed their experience officiating three-position air rifle competitions as substantial, and only one participant selected none (refer to Figure 4 for complete results). All of the participants who took and evaluated the course have been involved in competitive shooting for two or more years. The majority (71%) have been involved for five or more years. All but one of the learners had served as a range officer, most of which at the National level. Four participants hold range officer certifications from USA Shooting or the NRA.

Range Officer Experience Level of Participants

Substantial

Some

Little

None

| | | | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

■ Participants

Figure 4. Experience level of participants. The x-axis represents the participants and the y-axis represents the selection made by participants to describe his or her experience level.

Learning objectives. Participants were asked to rate their skill level based on the three learning objectives (LO) established in Section I, both before taking and after completing the course. For each question, the learners were asked to rate themselves on a scale of 1 – 5. The scale used was Very Low (1), Low (2), Neutral (3), High (4), and Very High (5). In the pre-evaluation, the seven participants on average rated their understanding of the safety rules specific to three-position air rifle as a 4.57 out of 5. At the end of the course, the same participants had an average rating of 4.71 out of 5. Participants rated their familiarity with the Three-Position Air Rifle Council Rulebook on average as a 4.0 out of 5 before taking the course, and a 4.86 out of 5 after the course was completed. They further rated their familiarity with the duties of a range officer on average as a 4.43 out of 5 before taking the course, and a 4.71 out of 5 after the course was completed. While most of the participants rated their skills as high or very high before completing the learning module, the results did indicate that after completing the course, an improvement was made by the group as a whole. One of the participants stated that "A lot of

pertinent material was covered and appropriately explained through visuals and text." A

comparison of the data gathered before and after are shown in Figure 5.

Figure 5. Ratings of learning objectives. The x-axis represents the three learning objectives of this training module, and the y-axis represents the average ratings given by the participants.

Since no pre-assessment of skills was administered, there is no measure of the knowledge

gained by the participants in this test group. However, a final assessment was completed by the

participants and indicated that the group had achievement of the learning objectives. This

assessment consisted of twenty-four questions, all aligned to respective learning objectives. Four

questions related to safety, thirteen related to the use of the rulebook, and seven of the questions

related to the duties of a range officer. While it is required to earn a score of 100% on the test to

pass the course, three attempts are permitted. On the first attempt of the assessment, the

participants in this test study had an average score of 92%. All seven of the participants

mastered the assessment on the second attempt. For complete results, see Appendix E.

User experience. In the post-evaluation, participants were asked to rate several aspects

of the format, content, and overall impression of the course. This included questions about if the

learner liked the look and feel of the course, if he or she thought the course covered the material

satisfactorily, and if he or she would recommend the course to others. The survey used a five-

point scale with responses of: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5). Participants were asked to provide additional comments, but most chose not to do this.

Format of training module. When asked about the format of the course, all but one of the participants agreed that he or she liked the look and feel of the course, giving this a score of 4 out of 5, for an average score of 3.86. All participants felt that the course was an appropriate length, and the group rated this as a 3.71 out of 5. One participant noted that, "the training was pretty long to sit through, but there is a lot of material to cover." All but one of the participants said that the course moved at the right pace, but it was unclear if this was too fast or too slow. Two of the seven participants strongly agreed that this training module would be better as a face-to-face course, and the remaining five disagreed. It is unclear why the participants believed the course would be better face-to-face, as the two respondents did not elaborate on this response. Four of the participants said he or she would take another course like this one, and the remaining three were neutral, for an overall score of 3.57 out of 5. Overall, the evaluations suggested that the look and feed of the course was effective.

Content. The participants were asked to evaluate the content of the course. Six of the seven participants agreed the training module improved their knowledge of the subject, and while one participant was neutral, resulting in an overall score of 3.86 out of 5. One participant stated, "As somebody who has been a Range Officer for air rifle matches for a long time, I felt like the course was a little basic, but I understand that the course would be overwhelming for new RO's."

Overall, the participants agreed that the course prepared them to work as a range officer for an average score of 4.14 out of 5. Overwhelmingly, the group felt that s(he) could utilize the rulebook during a competition, with an average rating of 4.57 out of 5, and were confident he or she could recognize and correct unsafe actions (4.43 out of 5). Participants ~~all~~ agreed that the course comprehensively covered the material, for an average score of 4.43 out of 5. One participant stated, "Everything was well explained," but thought that, "some sections could be combined to cut down a little on time." Figure 6 depicts the number of participants that agreed with each of the statements relating to the course content.

Figure 6. Participant ratings of course content. The x-axis represents the five response options, and the y-axis represents the number of participants that selected the specific response.

Participants were asked to rate the ten content subjects covered in the training module using a scale of (0) Below Average, (1) Average, (2) Good, and (4) Excellent. Figure 7 shows the average ratings by the participants for each of the sections. All ten subject content areas were rated in the "good" to "excellent" range. No below average ratings were recorded by the respondents.

Average Rating of Training Module Sections

Figure 7. Participant ratings of training module sections. The x-axis shows the average rating giving by the participants, and the y-axis is labeled with the sections of the training module.

Impression of training module. Overall, participants indicated that s(he) enjoyed taking the course, for an average rating of 3.71 out of 5. All participants agreed or strongly agreed that this course will benefit three-position air rifle shooting, with an average score of 4.43 out of 5. One of the participants responded that he, "has witnessed the poor conduct of many competitions in the United Stated," and ascertained, "the shooting community will benefit from more qualified range officers." Six of the participants agreed or strongly agreed that the course has prepared him or her to work as a range officer (4.14 out of 5). Six of the seven participants indicated they would recommend this course to others (4.29 out of 5).

Recommendations

Based on the findings of this project, a variety of recommendations for future

consideration are outlined below. In summary, it is recommended that additional evaluations are conducted with less-experienced range officers, that a new learning management system is used, and that the behaviors of participants and impact on the organization are evaluated.

Test group composition. Since a large part of the target audience of this course was not surveyed, it is suggested that a second round of participants are surveyed. This test group should have little to no experience as a range officer. It is recommended that parents and coaches of local junior programs be used for this test group. These individuals would have some knowledge of the shooting sports, but no direct knowledge of officiating competitions, making them an ideal group to survey. The training of this group would also be a benefit the CMP because the organization often relies on local volunteers to serve as range officers at our events.

Addition of pre-test. In addition to the data collection tools used in this study, it is recommended that the survey taken at the beginning of the course be expanded to ask specific learning objective based questions. The responses to these questions will then be compared to the responses of the final assessment in order to definitively determine what learning was achieved by the completion of the training module.

Modification of data collection tools. The results indicated that there were some areas of the course that should be condensed in order to reduce the length of the training. Further evaluations could be done to determine what areas of the content could be scaled back. To accomplish this, the data collection tools should be reworked so negative responses solicit a follow-up short answer question so that a written explanation is given for the response. To strengthen the feedback given for each section, the participants should be asked to rate the section immediately following the complete of the section. This way, the participant can more accurately recall his or her opinion of each section.

Additional evaluations of training module. The evaluation of this project was limited to the reaction and learning of the participants. As such, it is also recommended that the third and four levels of Kirkpatrick's evaluation model be explored (Kirkpatrick & Kirkpatrick, 2015). This includes documenting any changes in behavior of the participants as well as the evaluating the impact of the training module on the the organization.

The third level of Kirkpatrick's evaluation model involves determining how well the training has influenced the participants on the job (Kirkpatrick & Kirkpatrick, 2015). In the case of this training module, it is recommended that the match directors self-report after the completion of their first match. After submitting match scores, a survey should be sent to each match director by CMP staff members. This data collected in this survey can then be tracked to determine the numbers of officials that found the training to be useful. Feedback gathered from this survey can also be utilized to improve the course in the future.

Finally, an evaluation of the impact on the organization should be completed (Kirkpatrick & Kirkpatrick, 2015). CMP's mission involves conducting competitions, as stated in the background section of this proposal. The impact of this training module should be evaluated to determine if this module is contributing to the company's mission. It is recommended that this is done by analyzing the self-evaluations provided by match directors. The feedback can be used to evaluate if the training has improved the quality of 3PAR competitions. Anecdotal remarks by coaches directed to the CMP air rifle department that speak to the quality of officiating at a sanctioned event should also be considered.

Replacement of learning management system. The researcher will recommend to the Civilian Marksmanship Program the replacement of the current learning management system. The LMS used does not give the organization enough flexibility to update information, such as

test questions. The designers of the LMS assured the CMP that certain features would be available, but later decided not to implement these changes. This made it difficult to produce the training module online. A new LMS should be used that provides the CMP more control over the user experience and eliminates the need to always go through a representative of the LMS to facilitate updates. It is recommended that a list of required functions of a LMS be developed by employees familiar with the current system. Research should be conducted to find a LMS that fulfills the list of required functions.

Summary

The three data collection tools used in this project gauged the reaction and learning of the test population. The participants overall rated the project favorably, and felt that the training module would benefit three-position air rifle shooting. Participants further indicated an improvement had been made in their perceived skills relating to the learning objectives. All participants were able to pass the final assessment. The test group consisted of experienced range officers, so it is recommended that additional research be conducted with a less knowledgeable and experienced population. Additionally, further evaluations should be done to rate the overall success of the project, in terms of how the course changed the behaviors of the participants, as well as how the course impacted the organization as a whole. The facilitation of these new evaluations would also be improved by the use of a new learning management system with additional versatility.

Conclusion

The three-position air rifle range officer training module was the first range officer training course developed for the Civilian Marksmanship Program. While further testing is necessary to evaluate the training module's impact on the CMP, this completion of this course

makes way for other courses of similar design and function for shooting disciplines outside of three-position air rifle.

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APPENDIX A

Training Module Evaluation

Please fill out this survey before taking the Three-Position Air Rifle (3PAR) Range Officer Online Training Module.

Demographic Information.

1. What would you consider most accurately describes your experience officiating three-position air rifle competitions?
    - ☐ None
    - ☐ Little
    - ☐ Some
    - ☐ Substantial

2. What is the highest caliber event you have served as a range officer?
    - ☐ No experience
    - ☐ Local match
    - ☐ State match
    - ☐ Regional match
    - ☐ National match
    - ☐ International match

3. Please select any certifications that you currently hold.
    - ☐ ISSF Level A Judge
    - ☐ ISFF Level B Judge
    - ☐ USA Shooting Level 1 Official
    - ☐ NRA Range Safety Officer Trained

4. How long have you been involved in competitive shooting?
    - ☐ 0 – 1 year
    - ☐ 1 – 2 years
    - ☐ 2 – 5 years
    - ☐ 5 or more years

5. What made you interested in becoming a range officer? Check all that apply.
    - ☐ I am a club coach.
    - ☐ I am the parent of a shooter.
    - ☐ I am a volunteer.
    - ☐ I am a former or active adult shooter.
    - ☐ I am a JROTC Instructor

Skills. Please rate your current skills.

		Very Low (1)	Low (2)	Neutral (3)	High (4)	Very High (5)
6.	Understanding the safety rules specific to three-position air rifle shooting.	☐	☐	☐	☐	☐
7.	Familiarity with the Three-Position Air Rifle Council Rulebook.	☐	☐	☐	☐	☐
8.	Understanding and conducting the duties of a range officer.	☐	☐	☐	☐	☐

9. What do you hope to learn in this course?

APPENDIX B

Training Module Evaluation

Please fill out this survey after completion of the Three-Position Air Rifle (3PAR) Range Officer Online Training Module. Your responses will help us determine how effective the training has been.

Skills. Please rate your skills now that you have completed the training module.

		Very Low (1)	Low (2)	Neutral (3)	High (4)	Very High (5)
1.	Understanding the safety rules specific to three-position air rifle shooting.	☐	☐	☐	☐	☐
2.	Familiarity with the rulebook.	☐	☐	☐	☐	☐
3.	Understanding and conducting the duties of a range officer.	☐	☐	☐	☐	☐

4. What comments to you have about skill development?

Format. Please indicate how much you agree or disagree with the following statements:

		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
5.	I liked the look and feel of the training module.	☐	☐	☐	☐	☐
6.	I felt that the training module was an appropriate length.	☐	☐	☐	☐	☐
7.	I felt that the training moved at the right pace for me.	☐	☐	☐	☐	☐
8.	I think this training would have been more effective in a face-to-face setting.	☐	☐	☐	☐	☐
9.	I would like to take another course like this one.	☐	☐	☐	☐	☐

10. Any other comments about the format of the training module?

Content. Please indicate how much you agree or disagree with the following statements:

		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
11.	The material improved my knowledge on the subject.	☐	☐	☐	☐	☐
12.	This course has prepared me to work as a range officer.	☐	☐	☐	☐	☐
13.	I am confident that I would be able to utilize the rulebook during a competition.	☐	☐	☐	☐	☐
14.	I am confident that I can recognize and correct unsafe actions.	☐	☐	☐	☐	☐
15.	This course comprehensively covered the material.	☐	☐	☐	☐	☐

17. Please rate the following sections of the training.

	Below Average	Average	Good	Excellent	Do Not Recall
Rulebook	☐	☐	☐	☐	☐
Safety	☐	☐	☐	☐	☐
Duties of Match Officials	☐	☐	☐	☐	☐
Range Setup and Equipment	☐	☐	☐	☐	☐
Range Commands	☐	☐	☐	☐	☐
Duties of a Range Officer	☐	☐	☐	☐	☐
Incidents	☐	☐	☐	☐	☐
Range Procedures	☐	☐	☐	☐	☐
Equipment	☐	☐	☐	☐	☐
Firing Positions	☐	☐	☐	☐	☐

18. Any other comments about the content of the training module?

Overall Impression of Course. Please indicate how much you agree or disagree with the following statements:

		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
19.	I enjoyed taking this course.	☐	☐	☐	☐	☐
20.	I think this course will benefit three-position air rifle shooting.	☐	☐	☐	☐	☐
21.	This course has prepared me to work as a range officer.	☐	☐	☐	☐	☐
22.	I would recommend this course to others.	☐	☐	☐	☐	☐

23. Any additional comments on overall impression of the training?

Thank you for completing this survey! Your responses will be used to determine how this training module has impacted three-position air rifle shooting.

APPENDIX C

Section 1 – Introduction

Slide 1

Slide 2

Slide 3

Slide 4

Slide 5

Slide 6

Slide 7

3PAR Participation

❖ Estimated 1000 matches per
❖ Excellent safety record
❖ Teaches safe gun handling and marksmanship skills
❖ Encourages lifelong participation in the shooting sports

Slide 8

Air Rifle Basics

Slide 9

Classes

Sporter

Precision

Slide 10

Three Positions

Prone

Standing

Kneeling

Slide 11

Competitions

Gary Anderso
Competition
Camp Perry, G

Air Gun Range

Slide 12

Range Officers

Self-Assessment

Section 2 – The Rulebook

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Slide 2

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Slide 4

Slide 5

Section 3 - Safety

Slide 1

Slide 2

Slide 3

Slide 4

Slide 5

Slide 6

Slide 7

Section 4 – Match Officials

Slide 1

Slide 2

Slide 3

Slide 4

Slide 5

Slide 6

Slide 7

Slide 8

Section 5 – Range Setup and Equipment

Slide 1

Slide 2

Slide 3

Slide 4

Slide 5

Slide 6

Slide 7

Section 6 – Range Commands

Slide 1

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Slide 3

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Section 7 – Duties of the Range Officers

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Section 8 – Range Incidents

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Slide 5

Range Incidents

Dry Firing

7.10 DRY FIRING

Dry firing is releasing the trigger mechanism on a cocked rifle without releasing a propelling charge (air or CO2). Athletes may dry fire during Changeover, Sighting and Record Fire Stages as long as a propelling charge is not released. Note: Not all air rifles are capable of dry firing when air or CO2 cylinders are attached.

Definition of Dry Firing

7.10 Dry Firing

Please click and view the box above before proceeding. Next »

Slide 6

Range Incidents

Early or Late Shots

Before START

After the end of Prep and Sighting before Start of Record

After the command STOP at the end of record fire.

After and Emergency STOP Command

7.15.3 Shots Fired After an Emergency STOP Command

A shot fired after the command STOP at the actual or declared completion of the shooting stage must be counted. A shot fired within 3 seconds of the command STOP must be counted. Any additional shots fired must be scored as misses or may result in disqualification if safety is involved (Rule 7.20.3).

7.15.1, 7.15.2 and 7.15.3

Please click and view each box above before proceeding. Next »

Slide 7

Range Incidents

Interruptions

Click Box

Click Box

Click Box

7.16.2 Interruptions of More than Five Minutes

If the interruption lasts more than five (5) minutes and the athlete is not moved to another target or firing point, he/she must be given additional unlimited sighting shots and additional time equal to the amount of time lost to complete the stage of fire on the current relay. Additional sighting shots must be fired within the amount of time that remained when the interruption occurred except that when the interruption occurs after the five-minute warning, additional time equal to the amount of time lost plus two (2) additional minutes of extra time shall be given to complete any sighters and unfired record shots.

7.16 Interruptions

Please click on each timer and view before proceeding. Next »

Slide 8

Range Incidents

Entire Range Interruptions

- Same Rules Apply
- 5 Minutes or more
- Time Remaining + 2 Additional Minutes
- Unlimited Sighters & Record Shots

7.16.4 Interruptions of Entire Range

Slide 9

Range Incidents

Interruptions

- Requires an athlete to move
  - Amount of Time Remaining + 2 minutes
    - For unlimited sighters and record shots

7.16.3 Interruptions Requiring the Athlete to be Moved or Resquadded

Next »

Slide 10

Range Incidents

Malfunctions

No Extra Time
Unless malfunction occurs in last 5 minutes + 2 minutes

- Repair
- Replace   *Only replace if first rifle is not able to be repaired*

Out of Position
⇒ Return to sighters
⇒ Must fire in sighters and record shots in the remaining time

7.17 Malfunctions

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Section 9 – Range and Scoring Procedures

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Section 10 - Equipment

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Slide 5

Equipment

Sporter Class Rifles

⇨ *Lower Cost*

⇨ *Entry-level*

⇨ *Without Specialized Modifications*

4.2 Sporter Air Rifle

Next ►

Slide 6

Equipment

Sporter Class Rifles

Air Force Edge

Crosman Challenger

Daisy 888

Daisy 853

Daisy 887

Air Arms T200

4.2.1 Approved Rifles

Next ►

Slide 7

Equipment

Sporter Rifle Restrictions

✔ Weight of Rifle   ✔ Internal Modifications

✔ Weight of Trigger   ✔ Prohibited Modifications

✔ Stock   ✔ Sights

Please click and view each box above before proceeding.   Next ►

Slide 8

Equipment

Weight of Rifle

May not be more than 7.5 lbs

4.2.2 Weight of the Rifle

Next ►

Slide 9

Equipment
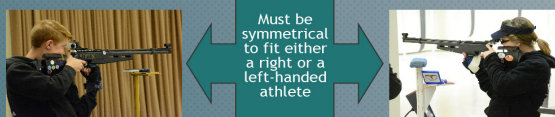
Weight of Trigger

Minimum Trigger pull is 1.5 lbs

4.2.3 Trigger Weight

Next ►

Slide 10

Equipment

Stock

Must be symmetrical to fit either a right or a left-handed athlete

4.2.4 Stock

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Section 11 – Common Position Issues

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Section 12 - Conclusion

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APPENDIX D

Training Module Evaluation

Please fill out this survey before taking the Three-Position Air Rifle (3PAR) Range Officer
Online Training Module.

Demographic Information.

1. What would you consider most accurately describes your experience officiating three-
   position air rifle competitions?

Answer	Number of Responses	Percentage
None	1	14.29%
Little	-	-
Some	1	14.29%
Substantial	5	71.43%

2. What is the highest caliber event you have served as a range officer?

Answer	Number of Responses	Percentage
No experience	1	14.29%
Local match	0	-
State match	0	-
Regional match	1	14.29%
National match	5	71.43%
International match	0	-

3. Please select any certifications that you currently hold.
   ISSF Level A Judge - 0
   ISFF Level B Judge - 1
   USA Shooting Level 1 Official - 3
   NRA Range Safety Officer Trained - 2

4. How long have you been involved in competitive shooting?

Answer	Number of Responses	Percentage
0 – 1 year	0	-
1 – 2 years	0	-
2 – 5 years	2	28.57%
5 or more years	5	71.43%

5. What made you interested in becoming a range officer? Check all that apply.

Answer	Number of Responses	Percentage
I am a club coach.	2	28.57%
I am the parent of a shooter.	1	14.29%
I am a volunteer.	1	14.29%
I am a former or active adult shooter.	5	71.43%
I am a JROTC instructor.	0	-

Skills. Please rate your current skills.

	Very Low (1)	Low (2)	Neutral (3)	High (4)	Very High (5)	Average
6. Understanding the safety rules specific to three-position air rifle shooting.	0	0	1	1	5	4.57
7. Familiarity with the Three-Position Air Rifle Council Rulebook.	0	1	1	2	3	4.00
8. Understanding and conducting the duties of a range officer.	0	0	1	2	4	4.43

9. What do you hope to learn in this course? 4/7 responses

- All the skills.
- Something I may be missing
- I hope to learn how to become a range officer in the event that we no longer need thousands of marvelous photos at every match and I have to do real work.
- To better serve as a range officer

Training Module Evaluation
Please fill out this survey after completion of the Three-Position Air Rifle (3PAR) Range Officer
Online Training Module. Your responses will help us determine how effective the training has
been.

Skills. Please rate your skills now that you have completed the training module.

		Very Low (1)	Low (2)	Neutral (3)	High (4)	Very High (5)	Average
1.	Understanding the safety rules specific to three-position air rifle shooting.	0	0	0	2	5	4.71
2.	Familiarity with the rulebook.	0	0	0	1	6	4.86
3.	Understanding and conducting the duties of a range officer.	0	0	0	2	5	4.71

4. What comments to you have about skill development? 3/7 responses

- This course should be taken once a year as a refresher course
- I think the beginning range officer is going to benefit from a course like this.
- A lot of pertinent material was covered and appropriately explained through visuals and text.

Format. Please indicate how much you agree or disagree with the following statements:

		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Average
5.	I liked the look and feel of the training module.	0	0	1	6	0	3.86
6.	I felt that the training module was an appropriate length.	0	0	3	3	1	3.71
7.	I felt that the training moved at the right pace for me.	0	1	1	4	1	3.71
8.	I think this training would have been more effective in a face-to-face setting.	0	5	0	0	2	2.86
9.	I would like to take another course like this one	0	0	3	4	0	3.57

10. Any other comments about the format of the training module? 2/7 responses
- As somebody who has been an RO for air rifle matches for a long time, I felt like the course was a little basic, but I understand that the course would be overwhelming for new RO's. I also feel that the course skipped around a little, and think that the course format should follow the rule book more closely.
- The training is pretty long to sit through, but there is a lot of material to cover. Maybe in the future, some items could be combined even more to cut down on time.

Content. Please indicate how much you agree or disagree with the following statements:

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Average
11. The material improved my knowledge on the subject.	0	0	1	6	0	3.86
12. This course has prepared me to work as a range officer.	0	0	1	4	2	4.14
13. I am confident that I would be able to utilize the rulebook during a competition.	0	0	0	3	4	4.57
14. I am confident that I can recognize and correct unsafe actions.	0	0	1	2	4	4.43
15. This course comprehensively covered the material.	0	0	0	4	3	4.43

17. Please rate the following sections of the training.

	Below Average	Average	Good	Excellent	Do Not Recall	Average
Rulebook	0	0	3	4	0	3.57
Safety	0	0	3	4	0	3.57
Duties of Match Officials	0	1	1	4	1	3.50
Range Setup and Equipment	0	1	2	4	0	3.43
Range Commands	0	0	1	6	0	3.86
Duties of a Range Officer	0	0	2	4	1	3.67
Incidents	0	1	3	3	0	3.29
Range Procedures	0	0	3	4	0	3.57
Equipment	0	0	2	4	1	3.67
Firing Positions	0	1	1	4	1	3.50

18. Any other comments about the content of the training module?
   - Again, I think the course was fairly glossy, and less in depth than it could have been, but would be very long if it were as detailed as it could be.
   - Everything was well explained. Again, maybe some sections could be combined to cut down a little on time. Though it is a lot of info to cover!

Overall Impression of Course. Please indicate how much you agree or disagree with the following statements:

		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Average
19.	I enjoyed taking this course.	0	0	2	5	0	3.71
20.	I think this course will benefit three-position air rifle shooting.	0	0	0	4	3	4.43
21.	This course has prepared me to work as a range officer.	0	0	1	4	2	4.14
22.	I would recommend this course to others.	0	0	1	3	3	4.29

23. Any additional comments on overall impression of the training? 3/7 responses
   - There were at least 3 questions that were worded incorrectly (technically making none of the answers correct) and one had an asterisk by the correct answer.
   - Having witnessed the poor conduct of many competitions in the United States, the shooting community will benefit from more qualified range officers.
   - Well done! Thank you!

APPENDIX E

Results of the Final Assessment

	Question/Answers	*Feedback*	Percent Answered Correctly in Initial Attempt	Learning Objective
1	**What are the three primary parts of the gun that affect safety?**		100%	1
	(a) Muzzle, Action, Trigger	*Correct.*		
	(b) Safety, Trigger, Cylinder	*Remember the MAT Principle.*		
	(c) Muzzle, Action, Safety	*Remember the MAT Principle.*		
	(d) Barrel, Trigger, Safety	*Remember the MAT Principle.*		
2	**When should a CBI be inserted in the rifle?**		83%	1
	(a) Any time a shooter is not in position, preparing to fire, or actively firing.	*Correct.*		
	(b) At all times except during record fire.	*Shooters are permitted to remove the CBI when in sighting period.*		
	(c) Any time the rifle is grounded.	*The rifle should have a CBI when grounded, however, it should also be inserted at other times.*		
	(d) Before Start and after Stop.	*The Start command is given many times in the match, and the athletes are not required to insert the CBI between sighting and record stages.*		
3	**Which of the follow are NOT duties of the range officer?**		83%	3

	(a) Giving range commands	*Range Officers should do this! Refer to Rule 6.2.*		
	(b) Scoring targets*	*Correct.*		
	(c) Checking the positions and equipment of athletes	*Range Officers should do this! Refer to Rule 6.2.*		
	(d) Ensuring the safety rules are being followed	*Range Officers should do this! Refer to Rule 6.2.*		
4	**The basic range commands include:**		100%	2
	(a) Load, Start, Stop – Unload	*Correct.*		
	(b) Commence Fire, Cease Fire	*These commands are not used in 3PAR shooting. Refer to Rule 2.0.*		
	(c) Line is not clear, Line is clear	*These commands may be heard, but are not the basic commands. Refer to Rule 2.0.*		
	(d) Begin, Stop	*"Begin" is not an official range command. Refer to Rule 2.0.*		
5	**The order of firing in 3PAR is:**		100%	2
	(a) Standing, Kneeling, Prone	*Please refer to Rule 5.3.*		
	(b) Kneeling, Prone, Standing	*Internationally, this is the shooting order, but the N3PARC did not make this change. Please refer to Rule 5.3.*		
	(c) Prone, Standing, Kneeling	*Correct.*		
	(d) Prone, Kneeling, Standing	*Please refer to Rule 5.3.*		
6	**Targets can be hung at whatever height works best for the specific athlete.**		100%	2
	(a) True	*There are specific target heights in 3PAR. Refer to 5.5.4.*		
	(b) False	*Correct.*		

7	**During sighting time, the penalty for releasing the propelling charge with no pellet inserted is:**		100%	2
	(a) 5 point deduction	*During sighting period, there is no penalty.*		
	(b) Zero on first record shot	*During sighting period, there is no penalty.*		
	(c) Warning first, then 2 point penalty for second offense	*During sighting period, there is no penalty.*		
	(d) No penalty, this is legal	*Correct.*		
8	**Sporter coaches can coach on the firing line during the entire match.**		100%	2
	(a) True	*During the record stage, sporter class coaches are no longer permitted to coach on the line.*		
	(b) False	*Correct.*		
9	**Precision coaches cannot coach on the firing line, but are permitted to gesture to the athlete to come off the line.**		100%	2
	(a) True	*Gesturing is considered coaching and should not be permitted. Refer to rule 5.2.*		
	(b) False	*Correct.*		
10	**Sporter and precision class athletes are not permitted to fire in the same relay.**		100%	2
	(a) True	*It is recommends that sporter and precision athletes are squadded in separate areas of the range, but the athletes may fire on the same relays.*		
	(b) False	*Correct.*		
11	**Any sporter air rifle with a muzzle velocity of 600 fps or less is permitted.**		33%	2

(a) True	*The muzzle velocity must be below 600 fps, however there is a list of approved sporter air rifles. Refer to Rule 4.2.1.*		
(b) False	*Correct.*		
12			
What is the maximum trigger weight permitted in the sporter class?		83%	2
(a) 4.5 lbs	*Refer to Rule 4.2.3.*		
(b) 1.5 lbs	*Correct.*		
(c) 1 lb	*Refer to Rule 4.2.3.*		
(d) There is no minimum trigger weight	*Refer to Rule 4.2.3.*		
13			
The precision rifle can be adjusted in any way.		83%	2
(a) True	*There are many restrictions on the precision air rifle. Refer to Rule 4.4.*		
(b) False	*Correct.*		
14			
There are no restrictions on shooting jackets and pants.		83%	2
(a) True	*There are many restrictions on shooting jackets and pants. Refer to Rules 4.6.1 and 4.6.2.*		
(b) False	*Correct.*		
15			
In the standing position, the athlete may rest the rifle on a stand between shots.		100%	2
(a) True	*Correct.*		
(b) False	*The rifle stand's function is to rest the rifle on between shots.*		
16			
In the kneeling position, a kneeling roll is mandatory.		100%	2

	(a) True	*Athletes may choose to fire without a kneeling roll. The position is known as low kneeling.*		
	(b) False	*Correct.*		
17	**If an athlete's position or equipment is not legal, on the first instance the Range Officer should:**		100%	3
	(a) Verbally warn the athlete and give him or her time to correct.	*Correct.*		
	(b) Yellow card the athlete.	*No warning cards are mentioned in the 3PAR rulebook. Refer to Rule 7.20.1.*		
	(c) Give the athlete an official written warning.	*No written warnings are given. Refer to Rule 7.20.1.*		
	(d) Consult with the Competition Director about disqualifying the athlete.	*The athlete must be given time to correct before disqualification. Refer to Rule 7.20.1.*		
18	**The intent and spirit of the rules is to:**		100%	2
	(a) Ensure fair competition for all.	*Correct.*		
	(b) Ensure an enjoyable experience for all.	*False, the rules are designed to be fair. Refer to Rule 1.4.*		
	(c) Make reasonable decisions given the match circumstances.	*False, the rules are designed to be fair. Refer to Rule 1.4.*		
	(d) Make sure every athlete fires their best match every time.	*False, the rules are designed to be fair. Refer to Rule 1.4.*		
19	**Use of CBIs is strongly encouraged, but not required.**		100%	1
	(a) True	*Use of CBIs is required for safety reasons.*		
	(b) False	*Correct.*		

20	**Going downrange for any purpose, must be done only:**		83%	1
	(a) After looking to see that all rifles are cased.	*All rifles do not need to be cased in order for someone to go down range. Refer to Rule 2.9.*		
	(b) After authorization is given from the Chief Range Officer.	*Correct.*		
	(c) After looking to verify that CBIs are inserted in all rifles.	*All rifles must have CBIs, however, the CRO must also authorize this action. Refer to Rule 2.9.*		
	(d) When athletes are not actively firing.	*The CRO must authorize going down range. No athletes must be firing, however, rifles should also be grounded, with CBIs inserted before this is permitted. Refer to Rule 2.9.*		
21	**No rifle may be removed from the firing line during a competition until it is cleared by a range officer.**		100%	3
	(a) True	*Correct.*		
	(b) False	*The Range Officers should verify that the rifle has a CBI inserted before allowing the athlete or coach to remove the rifle.*		
22	**Every Range Officer has the authority to disqualify athletes.**		100%	3
	(a) True	*The decision to disqualify an athlete must be done by two or more match officials. Refer to Rule 7.20.*		
	(b) False	*Correct.*		
23	**During competitions, range officers should make sure that spectators are:**		100%	3

	(a) Quiet at all times.	*Spectators are permitted to speak in normal tones. Refer to Rule 7.19.*		
	(b) Discouraged from attending matches.	*Match officials should encourage spectators. Refer to Rule 7.19.*		
	(c) Permitted to talk in normal tones, cheer and clap.	*Correct.*		
	(d) Permitted to heckle and yell in order to distract athletes from performing well.	*Spectators are permitted to speak in normal tones, but not yell. Refer to Rule 7.19.*		
24	**If an athlete has a loaded rifle after the Stop command is given, the athlete will:**		83%	3
	(a) Fire into the backstop.	*This may be done after an RO approaches the athlete, but the athlete should first raise their hand. Refer to Rule 2.9.*		
	(b) Remove the pellet from the action.	*The athlete should immediate raise their hand so that the ROs are aware there is still a loaded rifle. Refer to Rule 2.9.*		
	(c) Will receive a 2 point penalty for a loaded rifle after stop.	*The athlete will not receive a penalty if he or she alerts the ROs that his or her rifle is still loaded. Refer to Rule 2.9.*		
	(d) Raise his/her hand for assistance from the RO to unloaded the rifle.	*Correct.*		