

TRAINING THE ADULT LEARNER

THE GOLD STANDARD IN MOUNTAIN SAFETY AND RESCUE SINCE 1938.

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Introduction



More than 25,000 National Ski Patrol (NSP) members participate in ongoing education programs. These programs serve members acquiring new knowledge and skills in addition to those taking continuing education. The strength of the NSP system resides in its ability to provide continually updated, consistent training to the membership. A main part of training is the instructors who provide it. The first step in becoming an NSP instructor is the Instructor Development course.

However, the National Ski Patrol is, by definition, a dynamic, member-driven organization. Members are expected to complete extensive initial training and maintain high skill levels through participation in continuing education programs. Increasingly, members are saying that they have less time, but are expected to do more.

Changes in the NSP Instructor Development Program are a direct result of listening to the membership and application of the latest research on how adults learn. The new program requires initial Instructor Development education, followed by practical experience teaching NSP programs while being mentored by more experienced instructors. This manual is meant to guide the student the initial Instructor Development training and is to be used as a frequent reference by both students taking the course and all instructors who are planning, teaching, and administering their classes and courses in every NSP discipline.

CHAPTER 1. Overview of Instructor Development Program



"There is no more noble occupation in the world than to assist another human being to help someone succeed." — Alan Loy McGinnis

Illustration by Hinh Anh Choi, c/o Wikimedia Commons.

Concluding Objectives

- + Describe the purpose of the Instructor Development Course.
- + List the three required parts of the Instructor Development Course
- + List the five steps to become and remain an NSP Instructor

Purpose of the Instructor Development Course

All students demand and deserve quality training, regardless of the topic. The National Ski Patrol's Instructor Development Course and this accompanying *Instructor Development: Training the Adult Learner* manual are designed to introduce people to the core tenets of teaching so they can become effective, dynamic instructors.

While a strong grasp of a particular topic is essential, there is more to teaching than subject-matter expertise. Instructors must also understand how people learn, how to design classes and courses to match learners with tasks to be learned, and they must be able to apply common teaching strategies to ensure understanding and retention. In addition, they must be able to build credibility and inspire confidence in their teaching abilities. Instructors accomplish these objectives by imparting knowledge in a manner that is as engaging as it is factual. The art of instruction hinges on this subtle, dynamic interplay between the teacher, the students, and the course content.

These concepts are *the* foundation of NSP Instructor Development training. Applicable whether used in NSP courses or those of another organization, the following insights on adult learners, interpersonal relations, communications, tools and methods of teaching, and guidelines for lesson planning are key to successful teaching and learning experiences.

Overview of Course Content

Teaching looks deceptively easy to those who have never taught. Often, they underestimate or do not recognize the quantity and variety of the tasks required to successfully lead a class. A typical perception of teaching is that of a knowledgeable instructor dispensing information through lecture to receptive and bright learners; however, this picture fails to incorporate the planning, interpersonal relations, class organization, motivational tactics, and instructional skills that go into quality instruction.

Effective instructors rarely rely on lectures as their only — or even primary — teaching method. Consequently, utilizing additional creative training techniques should be a major part of an instructor's task to convey information so that the learners will participate, understand, and remember.

Organization and planning are major parts of an effective class. Many times, instruction tends to focus merely on delivery, but a well-planned class will challenge students to be engaged and to take an active role in acquiring skills.

This manual describes effective instructional strategies that support the Instructor Development course. As indicated above, the material is designed to be completed in a traditional classroom setting or in a Hybrid Course (online + face-to-face).

Here is a brief description of each chapter contained in this text:

- **Chapter 1. Overview of Instructor Development Program** introduces the Instructor Development Program and a summary of the course objectives and expectations.
- Chapter 2. How Adults Learn outlines common characteristics of adult learners, the principles of adult learning, and how to motivate adults with different learning preferences.
- Chapter 3. Interpersonal Relations and Communication Skills examines interpersonal relations and communication skills relevant to teaching, with an emphasis on how to provide effective feedback and manage conflict in the classroom.
- **Chapter 4. Instructional Management** covers the logistics of teaching, including course preparation, quality management and safety considerations.
- **Chapter 5. Lesson Planning** illustrates how to incorporate the concepts from the other chapters into the "six-pack" lesson plan format. This is the art of teaching the individual instructor's creativity and decision-making abilities regarding how to use the components of effective instruction in a lesson.
- Chapter 6. Lesson Content and Instructional Resources discusses lesson guides used to convey the subject matter. This section also discusses NSP instructor resources as well as the importance of organizing curriculum.
- **Chapter 7. Instructional Methods** highlights common instructional strategies used in content delivery, such as lecture, demonstration, and scenario-based learning (SBL).
- **Chapter 8. Monitoring and Evaluation** completes the discussion or instructional methods with suggestions for monitoring and evaluating student progress.

A glossary (*Appendix A*) and eight other appendices containing definitions of terms and additional reference material are provided at the end of this text.

Requirements of the Instructor Development Course

The Instructor Development Course has three basic requirements. First, the student instructor candidate should read this text, *Instructor Development: Training the Adult Learner*. The text can be downloaded from the NSP Center for Learning website in the Instructor Development Toolkit section.

Next, the student instructor candidate must complete a course where the essential material is covered. This can be accomplished with either a traditional face-to-face instructional format or as a hybrid format, "Instructor Development: Student Hybrid" (also referred to as a "Hybrid E-course") consisting of a self-paced, multimedia, online modules, followed by a face-to-face skills session. The traditional course usually lasts about eight hours. The hybrid course permits students to complete much of the coursework at their own pace. Time commitment is 5-6 hours for the online portion and 2 hours for the in-class portion. The hybrid course can be easily accessed in NSP's Center for Learning, which is found on the NSP website.

Finally, the student instructor candidate is required to prepare a mini-class lesson plan using the Six-Pack Lesson Plan form and present that mini-class to other students. In this presentation, the student instructor will demonstrate their abilities to write and execute a six-pack lesson. The lesson execution should show an understanding of the concepts and principles of the NSP Instructor Development Course.

The manual available for this course, *Instructor Development: Training the Adult Learner,* supports both formats of the course. There are many resources available to you on the NSP website once you have logged in to your personal page (<u>www.nsp.org</u>); **however,** student instructor candidates should be aware that instructor resources are only available to certified NSP instructors. Until a student instructor candidate becomes certified, another instructor mentor will provide needed information to you (such as forms used in course administration).

The Lifecycle of an NSP Instructor

Completing the Instructor Development course is just the first step in getting certified as an NSP Instructor. An instructor in training must master the course material as well as develop engaging teaching skills to become an effective teacher. A certified instructor must keep abreast of changing curriculum and expand their instructional methods to effective. NSP's Instructor Development Program has robust processes to help the new and experienced instructor.

The steps to becoming and remaining an NSP instructor are shown in Figure 1. Upon completing the Instructor Development Course, student candidates will take the knowledge they have acquired and begin the NSP Instructor Mentoring process. Here, the instructor trainee will be paired with an experienced instructor in a chosen discipline. During this process, instructional skills – as well as the skills needed for the specific discipline – will be refined. This *Instructor Development* manual can continue to serve as a reference while potential instructors move through the mentoring stage.

Mentoring and certification are available for Outdoor Emergency Care (OEC); Outdoor Emergency Transportation (OET — formerly called Ski and Toboggan); Avalanche; Mountain Travel and Rescue (MTR); Bike; and Instructor Development itself. *Appendix* B - NSP Instructor Job Description, identifies many of the requirements for becoming a certified NSP instructor and maintaining that certification.

All instructors must keep their teaching skills sharp by pursuing continuing education opportunities such as seminars and clinics whenever possible and attending an NSP Instructor Continuing Education (CE) course at least once in every three years of teaching. People don't become instructors merely because they have completed one or two days of training for the role. Instructors must be developed and nurtured through mentoring, observation, feedback, ample opportunities to practice, and continuing education. This manual serves as a reference tool for all instructors throughout their instructing career.

Chapter Summary

The Instructor Development course presents a basic background of instructional skills and approaches. All instructors should have common definitions for key terminology, understand and be able to use a basic lesson plan, and demonstrate effective instructional skills. The Instructor Development course serves as the beginning point in each instructor's ongoing search to locate useful teaching ideas, build positive communication skills, and motivate students.

The Instructor Development Program supports the NSP Instructor throughout their career. It provides programs and processes to mentor new instructors, instructor skill enhancement, and leadership. Since the inception of the Instructor Development Program in 1989, the NSP has continued to review and enhance the course content and delivery to keep current with the latest in technology and teaching methodologies.

CHAPTER 2. How Adults Learn



Concluding Objectives

- + Summarize the characteristics of adult learners.
- + Describe the concept and application of "enriched learning".
- + Summarize learning disabilities and their signs and identify possible solutions.

Adult Learners

Adult learners are different from younger students in more ways than just age. They come to class with a wide variety of past life and work experience and have already engaged in many learning events they can build on. They are self-motivated and voluntarily in your class. They have their own reasons for being there, and they can actively participate in their own learning. Adults require different teaching strategies to help them learn, understand, and commit concepts to memory.

Let us define "learning." Learning is the acquisition of knowledge that results in a goaloriented behavioral change in a student. Instructional programs are just one way to help students acquire new knowledge and skills. One of the great things about NSP is that it brings together so many people from different backgrounds to work toward common goals. Gender, age, experience, and culture are only a few or the qualities that make each of us unique and unlike anyone else. There is no typical student for whom you can design presentations and materials. However, this diversity provides powerful learning pods where your students can contribute their own, and to each other's learning by helping make connections of current learning tasks with other experiences and insights.

Understanding our students and their motivations can allow us to be more effective instructors. Foundational to this is an adult's need to know why they should learn something, how they will learn it, and when/how to immediately apply the knowledge or

skill. Research into adult learning suggests some other key characteristics of adult learning.

First, adult learners are self-directed, preferring to be in charge of what they learn. This does not mean that they expect to learn everything on their own, but rather that they exercise choices in how to learn something. Adult students will usually choose the most expeditious means to achieve their learning goal or may augment a program they are channeled into with a mix other materials.

Second, adults have experiences to draw from in approaching new material. Past experiences provide a reference point for new learning, and so don't assume the students are a blank slate. Even if a skill is new, the learners may have experiences they can reference or attach the current learning experience to help them remember and be successful. Be aware, though, that the differences in experiences of the adult students may provide a heterogeneous group, requiring the instructor to monitor progress and modify content delivery.

Third, adults have a readiness to learn. Their readiness to learn is founded on a desire to know "How will this help me?" Adult students appreciate clear learning objectives that identify what they will take away from the lesson. They are in your class voluntarily, that exhibits a high degree of motivation, even if their reason is job related.

Fourth, adult learners want to learn in order to solve problems. This is similar to readiness to learn; adults learn with a purpose focused on solving problems. The immediate applicability of many skills we teach is important to adult students and help anchor that learning into memory. By providing suitable, authentic tasks, and immediate application, we can address this need of adult learners. Consider the difference in working through a scenario requiring the solving of a problem, like application of a sling and swathe on a real patient versus only viewing the skill guide slides in a presentation.

Finally, adults have an internal motivation and readiness to learn. Whether it is a paid professional ski patroller or a committed volunteer, adult students' desire to learn is important to understand in providing an effective learning experience. Instructors can tap into the students' internal motivation to learn by offering an environment that encourages them to be active participants.

Educators have amassed a lot of helpful theories on learning fundamentals, adult learning characteristics, learning methods, and personal assessment methods. This information — along with your own insights — will help you gauge and address the various learning behaviors of those you teach. *Appendix G* — *Classifying Learning*, provides some education theory that is linked to the NSP teaching format discussed in later chapters.

Learning Fundamentals

Adults in particular take in, retain, and make sense of information differently, but certain fundamentals of learning pertain to all teaching settings. As an instructor, you need to

have a clear understanding of these learning fundamentals so you can apply them for maximum effect when teaching (see Table 2.1).

One of the most fundamental aspects of learning is that if you don't have the learners' focused attention, they won't comprehend or retain much of anything you present or demonstrate. That means you need to incorporate methods of instruction that focus attention at the beginning and highlight essential information throughout the lesson. It is up to you, the instructor, to develop a physical environment that enhances the learning process. Try to minimize any factors that might distract the students' attention (e.g., noise, activities, cell phones), and distractions that relate to physical comfort, too (e.g., heat, cold, hunger, thirst). Distracted students won't be inclined to focus on the lesson.

Table 2.1. Ways To Enhance Learning

Enhancing Learning

Prepare an environment to maximize learning:

- Get visual and auditory attention.
- Reduce distractions visual, auditory, physical, environmental.
- Relate the content to previously learned information and experiences make it meaningful.
- Evoke emotion use anecdotes/war stories or involve the students in the activity or imagine themselves doing
- Plan enough time. Repeat important information.

Another important learning fundamental is that people are more apt to remember things that are related to something they already know. For example, you probably find it easier to remember a new acquaintance's name if that person has the same name as someone else you know.

Whenever possible, help students find a way to associate new information with something they have experienced or have already learned. For instance, tell students that an easy way to remember that the radius bone of the forearm is on the thumb side is that the thumb "radiates" from the hand. Statements such as "this is similar to ..." help students make a connection between their prior knowledge and the new knowledge and will speed the learning process.

Another fundamental of learning is that people tend to remember things that have favorable emotional significance (e.g., excite, humor). Show videos (avalanche footage, for example, is always compelling) or share stories about events you, another instructor, or a student has experienced. Realistic related stories invite the student to put themselves into that situation and ask themselves what they would do. Time is another important factor in learning. People need sufficient time to reflect on and practice the new information, to develop meaning for themselves. Important information should be repeated at least three times, in different ways. Verbalizing a procedure — as we often have students do when they practice a new skill — allows valuable repetition and serves as an opportunity for the instructor to ensure that students are learning the information accurately. Ideally, if the material is complicated, mental or psycho-motor practices should be spaced, so student have time to digest and plan how they will approach the next engagement with the material.



Adult Learner Characteristics

Photo by Soren McCarty

Characteristics of Adult Learners

- Prefer self-directed learning, like clear goals at the outset.
- Are more willing to challenge the instructor, ask for the relevance of the material. This is usually not an argument, but an alternate experience they are trying to connect with experience.
- Need to be comfortable, with minimal distractions.
- Learn best by integrating new information into previous learning and experiences.
- Expect information to be immediately useful.
- Can hold intense focus for about 15-20 minutes and then need some kind of change or opportunity to refresh the mind. Chunking your topics or asking sensing questions can help provide this "breather."



Enriched Learning

Many of these learning and teaching approaches have been characterized as "enriched learning." These approaches are founded on the characteristics of adult learners discussed above. A summary of these approaches and suggestions follows:

- Distractions are minimized Try to minimize any factors that might distract the students' attention, such as a crowded location, the noise of a radio, the ring of a cellphone, and so on. Take into consideration those distractions that relate to physical comfort. If people are generally uncomfortable because they are hot, cold, hungry, or thirsty, they won't be inclined to focus on the lesson.
- □ Learning builds on prior knowledge Whenever possible, help students find a way to associate new information with something they have experienced or have already learned.
- □ Learning is immediately useful Adult learners have a natural high motivation to learn. However, participation can drop quickly if students feel that the activity is not what they wanted or expected.
- □ Learning is built up one layer at a time Neural pathways are best formed by beginning with something known, then adding on to it layer by layer. This means teaching the basics before getting into more specific or difficult knowledge or skills.
- □ Learning is based on evidence of learning Lesson design is meant to increase comprehension, retention, and meaning by considering student experience. Using factually based evidence provides a solid foundation in enhancing student comprehension and on bringing realism to your subject matter.
- □ **Material is presented using all the sensory modalities** needed to perform the task– Learning senses are hearing, seeing, smell, and tactile sensation. Using a combination, of these senses will help to develop neural pathways.
- Material is presented by tailoring the teaching technique to fit the tasks to be performed – Some subjects need to be taught in using specific sensory modalities. For example, there needs to be a "hands-on" (feeling) component to teaching toboggan handling. We use all of these senses when assessing and treating patients.

Here are some guidelines to follow to provide an "enriched" learning experience for your students.

Visual aids help everyone (Nilson, 2010).

Visual aids relevant to the topic/skill lead to deeper, more conceptual learning by presenting the big picture in context, and how concepts relate to each other. Visual engagement assists students to imagine placing themselves in the situation and promotes longer retention and easier recall of information and behaviors, and facilitates mental rehearsal, as it can provide multiple ways of coding for information. Imagine an unlabeled diagram of the skeletal system versus a labeled one. Relevant pictures (not eye candy) are as the saying goes, "worth a thousand words." For skills, presenting a demonstration, video, or simulation (scenario-based learning) prior to practice enhances

student comprehension. Even descriptive stories or anecdotes can conjure up images to support learning.

Tailor the material and teaching techniques to the demands of the task and the context where they are used. (Nilson, 2010, Mager & Beach, 1967, Mager, 1975). Matching the teaching method to the task demands fulfills the adult learner's desire to see immediate use/purpose of the skill, assists them in conducting mental rehearsals and experimentation in practice, and anchors memory formation and learning in their after-class reflection/practice. Try to situate the learning to simulate the real world application (scenario based learning), but in a controlled environment that safely allows you manipulate it for practice, experimentation and feedback in pace to skill development (e.g., if the task is physical, demonstration and coaching is better than talking about it; if the task is recall then explanation with videos or stories of how it is applied, followed by questions/quizzes that force recall). Key words in learning objectives, as used in Bloom's taxonomy, can assist you in planning instruction.

People learn new content best when they encounter the learning task multiple times, in multiple ways, and if they can link it to/build on past experiences (Nilson, 2010).

Students use the totality of their being to learn, both consciously and unconsciously. They should be able to observe the task in various settings/conditions (e.g., observer, patient, assistant, patroller in charge, peer tutor; slow motion, normal speed; in collaborative groups where members approach the task differently; or with different instructors).

The number of practices is more important than "time on task" (Deitchman, 1993, Ericsson, K.A. 2008, Morgado-Bernal, 2011).

The learning curve increases fastest in the first four to seven practices, with constructive feedback; after that point the learning curve tends to take about twice as many practices for an incremental increase in performance. Patterns of knowledge/behavior application help students form more useful lessons-learned, memories and mental rehearsals. For example, a training session with one sled run, one practice of a new turn or drill, one scenario does not provide sufficient data points for experimenting and for creating lessons learned and memories with which to work. Four practices with feedback beats one hour of stand and deliver, even in the classroom.

Feedback is critical to initial learning (Dunlosky, et al, 2013).

Feedback (e.g., recommendations, questions, what ifs) enables learners to identify what they know, compare that to what they need to know, and formulate strategies for doing it differently next time. Practice, feedback, and experimentation increases the student metacognition of the learning process, which is a fancy way of saying the conscious and the subconscious reveal that AHA! moment. Feedback after each trial is necessary during those first critical four to seven practices. After mastery is achieved, random feedback will maintain or correct the performance level. Feedback is more effective than explanation once the basic concepts are understood. The guide at the side is better than the sage on the stage.

Retrieval practice boosts cognitive learning (mental knowledge) (Dunlosky, et al, 2013).

Having students retrieve knowledge/skills with brief quizzes, verbal responses, observed practices, versus one-way didactic lecture/presentation solidifies memories and speeds student access to the memories when needed. Remember the "check learning" step in the six-pack lesson plan? Frequent recall and application help move knowledge from short-term memory to long-term memory and makes it easier to access on demand.

Spaced practice anchors learning and creates prior knowledge on which to build. (Dunlosky, et al, 2013).

To build on previous learning, spread lessons or practice sessions over time so that new knowledge and skills do not overwhelm the students' ability to process their experience (called processing memory, and still being researched), prevents confusion, and allows reflection and creation of mental and muscle memory. Returning to tasks forces retrieval of experience, and the mental rehearsal that was stored with it. If you ask, or encourage it, your students can usually tell you when you are about to overwhelm them. If not properly spaced, you will observe something like "scenario fatigue," which anchors negative learning that must then be relearned next time (remember that experience?). Spaced too far apart, and the forgetting curve will occur, requiring relearning what has not been retrieved, used, and anchored in memory. Remember, that for motivated students, the learning doesn't stop when the lesson is over, they will continue to mentally rehearse on their own.

Interleaving a mix of skills in a session encourages connections and transfer (Dunlosky, et al, 2013; National Research Council, 2000).

Overly contextualized (e.g., too specific) lessons can reduce transfer and adaptability, abstract representation can help promote transfer (e.g., scenarios-ski skills-toboggan skills, treat long bone with quick splint and next time require improvising a splint). It tends to anchor rote "black and white solutions" versus the adaptive, innovative "gray" we prefer in Patrollers. Interleaving topics that are somewhat related and studying them in different sequences improves retention over time as compared to intensive blocked practice for both knowledge and skills. A student may review shock and cardiac emergencies with better retention than multiple narrow sessions on each topic individually because the student make links between the topics as they switch. For skills, interleaving requires the learner to retrieve the correct strategy, enhancing learning. Be aware that initial practice sessions may have less accuracy than blocked sessions, but this will rapidly improve.

Adult Learning Disabilities

As an instructor, you are likely to find that some adult learners display learning disabilities that prevent them from either learning or demonstrating their knowledge in more traditional activities. These characteristics can range from physical disabilities to those that interfere with how they process and learn information.

Disabilities are not an indicator of low intelligence, as a physical disability may be completely unrelated to cognitive function.



Often, these individuals merely require certain adaptations in order to be successful. Although many adults may know how to adapt their learning environment to their own disabilities, others are often hesitant to ask for modifications or may not even realize that they have a problem processing information.

Many adults with learning disabilities have had less-than-positive experiences in school and may be wary of actively participating in class. As the instructor, you will need to be sensitive to their self-consciousness and avoid making any comments in front of other students or involving them in activities that may highlight their disability.

Some of the more common learning disabilities include the following:

- **Difficulty reading:** The student may inadvertently reverse letters, skip words or even struggle to read lines in the proper sequence.
- **Difficulty comprehending written material:** The student may have trouble understanding or remembering what he or she read.
- **Difficulty writing:** The student may understand the information but is not able to put his or her ideas into written form. The student may have difficulty with written activities such as completing the exercises in Outdoor Emergency Care, taking written tests, or preparing written lesson plans.
- Short attention span: The student may struggle to maintain focus, particularly if he or she is tired, bored, or stressed. To keep such easily distracted students focused and on task, try to minimize stimuli such as classroom noise and unnecessary activity. Another rule of thumb is to avoid using graphics and overheads that are too busy to convey the main point efficiently.

If you sense that a student is having trouble reading or understanding the material for the course, or in taking a written test, you may wish to privately discuss this with the individual. It is helpful to keep in mind that most accommodations, which can be viewed as extensions of good teaching practices, will benefit all the students.

Here are some additional considerations that may hinder the learning process:

• **Test anxiety:** The student may know the information but tend to "freeze up" when tested or evaluated. This may occur during a skill demonstration as well as

a written test. Reassure such students that they know the material and just need to relax and rely on their knowledge.

- Language barriers: The process of learning a new language is challenging at best. A student who speaks English as a second language may need additional assistance with vocabulary and reading. It is important to be discreet when asking if such students need help. Be sure to check for understanding continually.
- **Physical limitations:** Poor hearing and/or poor eyesight may impede a student's ability to take in information fully. Also, artificial limbs, previous injuries, and/or being in a wheelchair may limit the person's level of participation in certain activities. Encourage those individuals with hearing and eyesight limitations to be in the front of the group and remember to check for understanding throughout the lesson. For those students with limited mobility, you may need to structure unconventional creative learning activities that reinforce important concepts without requiring excessive movement.



If you notice that a student is making the effort to learn, but continues to struggle to comprehend the information, take that person aside and ask if there is anything you can do to help him or her learn. If that student identifies a disability, you will have some idea how to adapt the learning environment accordingly.

If the student *doesn't* identify any problem, you might ask some questions such as, "You seem to be struggling a bit to keep up with the reading, Tom. Is reading just not your thing?" Approaching the subject in a casual manner along these lines may make the

student feel more comfortable about revealing learning challenges. You can then come up with a plan for modifying the instructional environment or learning activities. For a student like Tom, your plan might entail providing him with bullet points that represent the most important concepts in the reading material. You could also merely talk with Tom about the concepts before he does his reading assignment. That way he will have a head start, i.e. familiarity with the material before he reads about it. Additional techniques for handling these situations are presented in the Instructor Development course.

Chapter Summary

The fundamentals of learning are simple but effective principles to guide the ways in which you present and receive information. Your understanding of these principles, along with your ability to recognize and respond to your students' learning characteristics, will have an enormous influence on the outcome of the lesson experience.

Adults usually prefer self-directed learning and need to integrate new information with previous knowledge, skills, and experiences. Adults also expect the information to be

immediately useful. They tend to respond more to first impressions and are more willing than adolescents or children to challenge the instructor or seek recognition. Whereas they may be keenly aware of passing time, they may be more inclined to spend that time in the pursuit or knowledge and skills.

Remember the importance of retaining the students' attention and do whatever is necessary to reduce distractions. Make instruction "real" by invoking an emotional response and relating it to previously learned information. At the same time, be sensitive to the fact that some adults will exhibit various learning disabilities. Learn to recognize these signs and make the necessary adaptations to the content and methodology of instruction to address the situation.

CHAPTER 3. Interpersonal and Communication Skills



Illustration by Jurgen

Appelo

"Communication does not begin with being understood, but with understanding others." - W. Steven Brown

Concluding Objectives

- + Describe the interpersonal skills of effective teachers/instructors.
- + Identify and explain the internal and external barriers to effective communication.
- + Identify and explain active listening skills.
- + Identify types of nonverbal behavior and the messages they convey.
- + Explain the principles of effective feedback techniques.
- + Explain the principles of conflict resolution.

Think back to those teachers/instructors with whom you have connected over the years. What personal qualities made them special and memorable? Were these teachers/instructors confident in their knowledge and skill? Did they display a sense of humor? Did they generate enthusiasm about their subject matter? Almost certainly they made you and the other students feel valued and important.

Your favorite teachers/instructors had this impact because they used good interpersonal and communications skills. Because they could connect and relate to you, you were engaged and involved in your learning experience.

In this chapter, we will review the interpersonal and communications skills used in effective teaching, feedback, and conflict resolution.

Interpersonal Skills of an Effective Instructor



What type of person makes the best instructor? You might think that someone who is an extrovert would be more suited to teaching/instructing than an introvert. However, most people can be good teachers/instructors if they use the right interpersonal skill set. Interpersonal skills are those abilities needed to communicate, interact and work effectively with individuals and groups. Examples of some interpersonal skills include patience,

mentoring, mediation, tolerance, cooperation, and knowledge competence. Most successful teachers/instructors demonstrate these skills through teamwork, positive human interaction, and strategic/skill-oriented results. Researchers have found certain teacher/instructor characteristics that are associated with improved student achievement. The good news is that there are several simple strategies that can help all instructors develop these characteristics and turn them into interpersonal skills. This course focuses on four characteristics: enthusiasm, authenticity, supportiveness, and fairness.

Effective teachers/instructors are a diverse group, some appear interested, confident, and energetic while others can affectively deliver content and student comprehension using low key, soft spoken, non-threatening techniques. Compassionate teachers/instructors are engaged when teaching, aware of their students and their needs. They keep the content/course flowing while providing feedback and continuously monitoring student comprehension. Of course, it is easier to be enthusiastic if you are passionate about the material. So, if you have the option, start by teaching something you really love or care about and have experience with.

An authentic teacher/instructor is true to themselves and shows their personality and empathy with the student, so they seem "real" to the students. They can laugh at themselves or admit to flubs or errors that come up in their teaching. These teachers/instructors are truly interested in getting to know their students and understand their backgrounds and goals. They also make the student feel welcome by being available to the student.

Supportive instructors build a learning environment where students are willing to try new things and ask questions. Student input is valued and appropriately incorporated into the lesson. These teachers/instructors use instructional methods that allow the students to work through their own problems and evaluate their own work. With ongoing monitoring, the instructor remains aware of student progress, provides constructive feedback, and adjusts the lessons accordingly.

Fairness is a critical trait for teachers/instructors. Fair teachers/instructors equally apply the standards to all students across situations. They begin by setting clear goals or expectations for both instruction (set by course objectives) and behavior (set by standards of acceptable behavior) followed by monitoring and consistent application of these expectations. As a result, the fair instructor avoids favoritism or prejudice of any kind.

Interpersonal Skill	Strategy to Develop or Enhance Skill
Enthusiasm	Use movement to maintain interest and attention.
	 Vary voice (pitch and volume) and use pauses.
	Maintain quick lesson pace.
Authenticity	Greet students by name.
	 Learn about the students' life outside of class.
	Smile frequently.
	 Encourage students to come to you with any
	class/content related issue.
	 Let the students know that you share this lesson, you
	want them to succeed.
Supportive	 Encourage student questions and input.
	 Use instructional methods that are student driven and
	breed success.
	 Monitor student progress.
	Provide constructive feedback.
Fairness	 Clearly define class goals and expectations to include:
	 Course objectives
	 Standards of acceptable behavior
	 Base feedback on goals and expectations.

Table 3-1: Strategies to Enhance Interpersonal Skills for E	Effective
Teachers/Instructors	

This list is not exhaustive, but these characteristics are the basis for interpersonal skills that create a nurturing, shared, encouraging learning environment. When employed, the result is students who are motivated to learn and feel "safe" to try new things.

This list also mentions several key concepts that are required for characteristics to be fully developed: instructional methods, monitoring, and feedback. In addition, the process of lesson planning is how you incorporate these into your teaching. All these important concepts will be covered in more detail later in this manual.

Effective Communication

It makes sense that an effective teacher/instructor needs to be a good communicator. You may be a world expert in a topic. But, if you cannot share your knowledge in a meaningful way with your students, they likely will not successfully learn and master new material. Effective communication is the very core of effective teaching.

According to Merriam Webster, communication is the "process by which information is exchanged between individuals through a common system of symbols, signs, or behavior." This process involves the sending and receiving of information between two or more people.





But effective communication is not just "transmitting." It happens with the correct message is shared and understood based upon feedback from your students.

Effective communication begins by developing this supportive learning environment. Ideally, instructors use interpersonal skills to create a classroom where students feel comfortable to share ideas, ask questions, and positively respond to feedback. By doing this, teachers/instructors set the stage for effective communication to occur.

To be effective, communication must also be understandable. A student will struggle if a teacher/instructor delivers a rambling lesson full of inaccurate information that overlooks half the material. Effective communication in the classroom should follow the "*Rule of C's*" by being clear, concise, correct, coherent, and complete. Methods to incorporate these qualities into your teaching are fully discussed in the chapters on Instructional Methods and Lesson Planning.

Teachers/Instructors need to also consider the barriers that can lead to a breakdown in communication. Barriers to communication can be thought of as filters. Just like a physical filter, some things go through and are received on the other side, and some things are turned back or distorted before they go through. That's the thing with filters in communication. They can get in the way, and we may not even realize it. A filter is something that can delete, distort, or generalize the message we're trying to share. And filters are in place for both the sender and receiver in every single conversation. In communication, there are both internal and external filters.





External filters are environmental factors that limit or distort communication. Imagine trying to get a message across to someone in a howling blizzard. Or trying to send a text when you don't have service. Is it possible the message will get lost? Misunderstood? Often, we can control external filters by changing the environment where the communication takes place or waiting for the proper time to have the communication.

Internal filters are personal experiences, values and beliefs that affect everyone's view of the world and how we communicate. They are unique to everyone, or groups, and are not readily apparent but are extremely important to consider if you want your message to be understood. Both the sender and the receiver of communication have their own personal values and experiences and must work to accurately communicate. So, all communication, including teaching, must pass through at least two filters. Figure 3-3 shows some internal filters that might change the message we send when it is received.



Figure 3-3. Internal Filters to Communication

These are only some of the possible reasons your message may not be getting across quite as you imagined. Can you think of other filters?

Filters affect all forms of communications. The conscientious instructor will not forget that everyone is unique and subsequently communicates with different filters modifying the message that is sent. They will mitigate the impact of filters by getting to know their students so they can understand their experiences and values. They will also monitor for student understanding.

The Instructor Development Course focuses on three additional components of effective communication: active listening, nonverbal communications, and constructive feedback.

Always remember that communication is a two-way street! Appendix C — Effective Questioning Skills, will give you additional information that can develop and improve your teaching.

Active Listening Skills

Although many of us like to believe we are skilled communicators, we only own half of



the communication. We are often better at **sending** information than **receiving** it and *interpreting* what others sent. There is much truth in the expression "communication is a two-way street." Communication consists of the ability not only to send messages but also to receive them, and this requires listening skills — a willingness to focus on what the student is saying and what the student means.

Active listening is a technique that enables you to fully concentrate on what others are saying and to accurately understand the complete message. When used, active listening increases not only understanding but fosters an environment of respect and authenticity. It is more than just listening to the words; it means looking at the intent, content, and emotions behind the words. To be successful, active listening requires you to be completely engaged—and to show it. In some cultures, they use eye contact and insightful comments to show that we are involved and not zoning out.

Whenever you are trying to communicate, it is important to minimize distractions. No one can hear let alone *listen* with too much background noise. You also cannot be attentive if you are reading emails or thinking about what you are going to do for dinner. So, active listening begins by optimizing the environment and putting aside distracting thoughts.

Figure 3-4: Steps of Active Listening



The steps to active listening are as follows:

• Pay attention by focusing on what the speaker wants you to *understand*. Look for the complete meaning to include the speaker's intent and emotions associated with the content. Observe the speaker's body language. Allow the speaker to finish each point before asking questions.

- Show that you are listening. Use your own body language and gestures to show that you are engaged. Have an open body position. Smile and make eye contact. Nod when appropriate and give small verbal comments like "yes" and "uh huh."
- Offer feedback to check your understanding. You could reflect on what was said ("What I am hearing...") or ask follow-up questions to clarify certain points ("What do you mean by...?).
- Defer judgement. Don't interrupt with your opinions or counter arguments. Avoid jumping to conclusions by asking for clarification, especially if you find yourself becoming upset. Allow the person to clarify their statements so you can avoid making unfair assumptions.

Respond appropriately. Be candid, open, and honest in your response. Assert your opinions respectfully. Do not "get personal" by attacking our putting down the speaker.

If the encounter is not producing the results that you and the student wanted, be willing to identify that issue, and restart the conversation. Frequently, emotional filters can inadvertently trigger a non-productive direction for a conversation toward a result that neither you nor the student wanted, but deep-rooted response behaviors make it difficult to stop. A skilled teacher/instructor will be able to stop, smile, state that they think this discussion is not going where we wanted it to go, see if the student agrees, and suggest starting over and trying to stay sensitive to those things that might hijack the conversation and verbalize that to the partner.

Active listening is a useful technique across a variety of settings to include classrooms, the workplace, and patrol room. How you apply active listening depends on the situation though the steps remain the same. For instance, in the classroom, you might focus on the following aspects of active listening:

- Use positive body language to show you are engaged and listening. Face the student in a relaxed position. Nod and smile appropriately.
- Pay attention to nonverbal messages; actions and expressions may convey more meaning than the spoken word.
- Avoid interrupting. By allowing students to finish what they have to say, you are demonstrating that you value their contributions to the class.
- Build pauses or activities into your class and invite learners to participate.
- Ask questions when you don't understand what the student is saying (and encourage everyone in the class to do this when they don't understand you).
- Paraphrase the message back to the student to show that you are understanding *and* paying attention.
- Tactfully manage class time so one student does not monopolize the class time or send the class off topic. If you cannot treat the student's question quickly during the class, ask to see the student after the class or during a break so that you more fully handle the issue.

Active listening skills are particularly useful for conflict resolution discussed below. Hopefully, you will never have a contentious situation in a classroom. But, if you do, you will have the communication tools needed to manage it.

Non-Verbal Communication

If you've ever tried to talk with someone who didn't speak your language, you can understand the importance of non-verbal communication. Facial expression, tone of voice, physical gestures, and body posture all dramatically affect the meaning of the messages we send.

Communication consists of two parts: content, (which is usually expressed verbally), and emotion (which is usually expressed non-verbally). Of the two parts, we are more attuned to the non-verbal. You might be surprised to learn that non-verbal messages can communicate up to 80 percent of the meaning in any conversation. Given their impact, you need to understand the types of non-verbal communication.

Non-verbal communication can be divided into several categories.

- **Body language:** This includes movement of the hands, head, feet, and entire body. A tilt of the head, clenched fists, or a shift of the eyes can communicate a great deal. For example, a tilt of the head may indicate curiosity or irritation; clenched fists or a tight jaw may indicate anger or discomfort; and a shift of the eyes may indicate embarrassment or even insincerity. Even changing skin color, trembling, or watering eyes or tears are powerful non-verbal signs.
- Physical characteristics: This includes physique, height, weight, and hygiene which powerfully affect our first impressions. We need to carefully moderate our interpretations to avoid jumping to conclusions. For example, although you shouldn't make assumptions about people, your students' physical characteristics provide important clues about which learning activities might be appropriate for them.
- **Appropriate touching behavior:** This includes a pat on the back, shaking hands, or putting an arm around someone's shoulders. Be aware that while some people may be comfortable with this level of appropriate physical contact, others may find any physical contact whatsoever inappropriate.
- Voice characteristics: This includes voice quality, pitch, rhythm, resonance, and inflections. It often is not what we say, but how we say it that conveys the real message. The comment, "That was a great run, Bill!" can be said enthusiastically, with looks of approval and voice inflections that indicate sincerity. Or it can be spoken sarcastically, with a slight smirk, suggesting just the opposite. Likewise, student voice reactions can provide you with clues that you may need to ask clarifying questions to make progress.
- **Body position:** This refers to the personal space between the instructor and the students and the position of your body in relation to theirs. The "cold shoulder" is an example of expressing through body language that you don't want to talk to someone (or vice versa).

The way we communicate non-verbal messages is closely tied to our cultural as well as our personal experiences. Remember that members of other cultures may interpret nonverbal communication differently. For example, a friendly hand gesture in the one culture, like the "peace sign" in the United States, is an offensive gesture in India. Some cultures value touching even among members of the same gender holding hands, while others find touching offensive or demeaning.

Being able to read your students' non-verbal messages is an essential part of being an instructor. By constantly scanning the audience for non-verbal signals, you can obtain immediate information about how the students are receiving the information and act accordingly. Table 3-2 shows several examples of student signals from non-verbal messages.

Table 3-2. Examples of Non-verbal Signals

Non-verbal Signals

- Do students roll their eyes as if they're bored or confused when you give them directions on how to complete a task, or do they look interested and focused?
- Do they avoid eye contact, as if they've "checked out" or do they look at you and listen to you while you talk?
- Are they slumped back in their seats, as if they're fighting sleep, or are they sitting forward, with an attentive expression, as if eager to learn?
- Are they fiddling with papers when you're talking, as if they're distracted or not listening, or are they looking at you or taking notes on what you're saying?
- Do they have a quizzical, confused look on their faces when you present a certain procedure, or does their expression convey understanding?
- Are they turning red, trembling, or pursing their lips?

Learn to interpret these non-verbal signals and think about how you can adjust your teaching methods on the spot to avoid barriers to learning. Sometimes a person's learning method is the cause of confusion or ambivalence; other times it's merely a case of boredom, or lack of understanding. If you observe, but do not know how to interpret a student's non-verbal responses that seem to be important, ask them.

You also need to be aware of the consistency (or lack thereof) between the verbal and non-verbal messages. You may be imparting one meaning with your words but another meaning entirely with your body language. If the non-verbal and verbal communication disagree, we will interpret and prioritize the non-verbal message. For instance, your friend says, "Everything is okay" but they are frowning. You would think something is wrong and that everything is *not* okay. You accept the frown. That said, it's important to recognize mixed messages that others may give when they communicate. They may have conflicting feelings and need reassurance that it's okay to be honest and open with their feedback.

In addition, remember that non-verbal communication, like all communication, is a "twoway street." We are all sending *and* receiving messages with our body language. You need to think about what your non-verbal messages are saying as they often "speak louder than words." You can use non-verbal communication in a positive way to *enhance* your teaching. Show enthusiasm with hand gestures and inflections in your voice. Show you are listening by looking at the person and leaning towards them. Conversely, your non-verbal messages can detract you're your message.

Constructive Feedback

Imagine you are in a ski lesson and the instructor starts yelling this feedback: "You're leaning back! You're going too fast! You forgot your pole plant!" and so on. What can you do with this information? Without any suggestions for improvement, this barrage of information is degrading and overwhelming. It will frequently trigger student frustration and a fight, flight, or withdrawal response; none of which is productive for the student or you.



Learning is usually a progression of successive approximations. Mistakes are an inevitable and frequently a constructive part of learning, and you need to reinforce desired behaviors for more effective learning with feedback. Feedback not only tells us how we are doing now; it also tells us what we need to do to improve and meet our goals. Students cannot understand concepts fully and learn skills correctly if they are unaware that they are making errors and do not receive guidance on how to correct those errors.

Feedback is one of the most important tools for effective learning. But, when done incorrectly, feedback can hamper student learning. Constructive feedback needs to be positive, objective, specific, limited, and timely.

An important rule of thumb is that feedback should never be entirely negative. Remember those communications and interpersonal skills discussed earlier in this chapter when giving feedback. Monitor your body language and do not let your emotions play a role. Develop a talent for catching learners in the act of doing something right and be quick to praise and encourage. When performance doesn't meet the NSPS standard, give them credit for what they *did* know and build on that. Also, realize that a positive approach does not mean that every message should be full of meaningless praise. People can sense when a compliment is insincere.

Objective feedback is professional and based on clearly defined goals. Goal-related feedback uses the instructional objectives established for the training program. For NSP

courses, be sure to use resources provided by NSP such as manuals, skill guides, and checklists. It is also important not to seem to criticize the student when correcting mistakes, it's the behavior. If possible, avoid using personal pronouns. For example, tell the student "The skill was done incorrectly" rather than "*You* did the skill incorrectly." This will help you avoid comments that might make the student defensive and be perceived as personal attacks.

The feedback must have enough information to be actionable or be **specific**. Don't just tell a student that his or her performance was "good" or "poor" or that an answer was "correct" or "incorrect." This doesn't supply the student with enough information to either maintain or change the behavior. You need to provide clear and *specific* feedback on what was incorrect (See examples in Table below). You must also provide input on how to correctly meet the learning goal. This might require a discussion of test questions or demonstration of a skill.

Nonspecific Feedback	Specific Feedback
"That needs work."	"You need to hold your left ski pole closer in toward the
	body. It's too far out to the side now which can cause"
"Try again."	"You'll be able to make better turns if you start your turn
	with putting your weight on the uphill ski."
"You're facing the wrong	"Keep your upper body facing straight down the fall line
direction."	while you are doing the sideslip."
"That scenario was a 'no	"When applying a pressure bandage, be sure to wrap
go'"	the bandage tightly enough that it won't slip."
"Wrong."	"What happened when you shifted your weight back on
	the toboggan handles? Did it help or hinder your
	performance? How would you adjust it next time?"
"Correct."	"For this injury, you placed the patient correctly in the
	toboggan with their head up hill."

Table 3-3. Examples of Specific versus Nonspecific Feedback

Limited feedback prevents information overload by focusing on one skill or couple of critical skills that need to be done together that the student needs to work on. A rule of thumb is to correct *one* mistake at a time until the student understands that procedure correctly. If several areas need improvement, focus on the most basic level of learning first. The student cannot build on their knowledge and skills if they have not mastered the basics.

Feedback is timely in two ways. First, feedback is best given as soon as possible after the student practice. If feedback is not immediate, the student often cannot link the feedback to their incorrect behavior. Delayed feedback is a lost opportunity for learning. Second, feedback shouldn't be a "one-time" thing. For best learning, feedback should be a regular part of the lesson, occurring where needed and at predetermined points to emphasize points in the lesson content. Sustained, ongoing feedback is one of the most efficient ways to help students learn. The table below shows what a feedback session looks like when all these steps are put in place. Feedback is best used in guided practice where the student is able to have an opportunity to show their understanding.

Table 3-4. Example Flow of Effective Feedback Session

- Have students perform a measurable or observable behavior that matches the lesson's objectives.
- Ask a question of students to measure their grasp of the content.
- Engage students in an activity that will indicate their understanding of the current lesson or topic.
- Provide immediate feedback.
- Use a positive approach.
 - o Identify the skills that are performed correctly.
 - Acknowledge the information that the students have acquired.
 - Recognize students' improvement since their previous evaluations.
- Give specific feedback.
 - Determine the cause of the error.
 - Provide precise information for improvement.
- Check for understanding.
 - Have the student paraphrase the concept.
 - Have the student repeat the steps.

The impact of feedback is magnified if you have already taken steps to create a supportive learning environment. Students are more open to feedback if they feel safe to ask questions and make mistakes. They are willing to work through issues independently and as a group so they can resolve the problem independently. These students learn much more with this self-assessment and peer-to-peer assessment. Just make sure the group understands that all comments should be constructive and appropriate.

Conflict in the Classroom

If you teach long enough, you will see class conflict. Consider these examples:

- A student who consistently challenges the instructor by loudly asking, "Are you *sure...*?"
- A student disrupts the class by talking loudly on their phone.
- A student who tells other students that their ideas are "stupid."

In each case, the student's behavior disrupted the supportive, cooperative learning environment that you worked to create. This behavior, called "classroom incivility," must be appropriately addressed to get the class back on track and to avoid escalation.

Like all things, it is often easiest and always best to prevent problems before they occur. Good interpersonal and communication skills are key to minimizing conflict. Students are more likely to positively contribute to the class and follow the class norms if they feel welcome and respected. Show empathy by getting to know your students and calling them by name. Show fairness by clearly defining and consistently applying the class standards of acceptable behavior. Be supportive by valuing the student input and involvement. Show respect by being on time and meeting your commitments. Listen actively to get the student's real meaning and minimize misunderstandings.

Even with a supportive learning environment, conflict will occur in the classroom. You will need to take action to address the problem. You may want to address the issue during class or ask the student to meet you for a meeting after class. If the behavior is persistent and particularly disruptive, you could ask for a break, so you meet with the student privately and maintain a positive class environment.

Conflict resolution is the process used to manage a problem. Throughout the process, you will need to use active listening techniques to help diffuse the emotions and increase understanding. As the instructor, you will likely be the facilitator of this process. You should set the stage by reminding the participants that the conflict is a problem for all of you to solve, not a battle to be won. You will need to go over the ground rules with all participants: everyone will be treated with respect, and everyone will get a chance to speak without interruptions.





The first step is to define the conflict. Describe the conflict in clear, concrete terms as you focus on the behavior or the problem, not the person. Use the communications and feedback skills discussed previously in this chapter. Be specific when describing the facts about the who, what, when, where, and why. Describe the behaviors, consequences, and desired changes. Focus on what you saw or felt by starting each sentence with "I" and not "You."

Once you have a good understanding of the issues behind the conflict, it is time to brainstorm for other solutions. Everyone gets a chance to share their ideas in an alternating order. Every idea is considered valuable and is put on a list. No judgmental statements are made about any idea.

Take time to thoroughly discuss the advantages and disadvantages of each suggested solution. Focus on real impact such as the consequences. Keep the discussion positive even though you might be pointing out negative impacts of another person's ideas.

After this discussion, you should be able to agree on the most *workable* solution, or a good first-try solution. Ideally, this solution would be an acceptable solution to everyone, or a "win-win" situation, but that is not always possible. At a minimum, the solution should de-escalate the problem so the class can move forward in a positive way.

At this point, everyone should be committed to implementing a solution to resolve the conflict. Everyone agrees they will follow through with the requirements and there is consensus. There should also be a plan to evaluate the impact of the solution with the understanding that the plan will be adjusted if necessary.

This approach to conflict resolution addresses unique needs of the classroom. However, basic tenets explained here could also be used for conflicts in the workplace and patrol room.

Chapter Summary

Interpersonal and communications skills are the backbone of effective instruction upon which all the other aspects of teaching. As you work your way through the manual, you will see that effective communication and interpersonal skills are mentioned in other chapters as key components to lesson planning, instructional management, and organizational management. It is important that you develop and use these skills during instruction.

A teacher's/instructor's interpersonal skills create a learning environment where students feel safe asking questions and making mistakes. In a "safe harbor" atmosphere, students are more receptive to learning and feedback. As a result, they are fully engaged with the instruction which increases their satisfaction and learning. Active listening also contributes to the supportive environment by enhancing communication of verbal and nonverbal messages. It also emphasizes that communication is a "two-way street" that values both the speaker and the listener.

Constructive feedback is another tool that relies on good interpersonal and communication skills. Feedback provides guidance to the student on how to advance to meet the course goals. Constructive feedback should be positive, objective, specific, and limited in order to focus on the learning behavior and be actionable. Constructive feedback is also best if it is ongoing during the use of guided practice.

Importantly, when the above skills and techniques are used, understanding increases and conflict decreases. But, when conflict does occur in the classroom, the same skills and techniques can help you manage it. The process of conflict resolution uses active listening to help de-escalate the situation and get the class back to a supportive learning environment.

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CHAPTER 4. Instructional Management

"Time is the scarcest resource and unless it is managed nothing else can be managed." – Peter Drucker

"Anything that can go wrong will go wrong, and at the worst possible time." – Murphy's Law

Concluding Objectives

+ Explain the importance and list examples of instructional management tasks:

- Organization
- Course preparation
- Quality management
- Safety considerations
- + Describe the difference between a standard of training and standard of care.
- + Discuss Instructional Management and the Nontraditional Classroom.

Organization

Even the most knowledgeable and engaging instructors will be hard-pressed to lead effective classes if they haven't put considerable effort into planning the design and how they want to conduct the course. When planning your course and the lessons themselves, you are always making trade-off decisions between the time and resources available and the training setting and selecting and adapting your training methods to optimize achieving the training objectives. Rarely are we able to present the perfect course or lesson to "maximize" effectiveness, we are usually compromising to "optimize" results. This takes forethought and decision making before the class begins.

Long before the course date arrives, you need to finalize your lesson plan, identify and coordinate for what resources you need to conduct the class, and plan how to set up the learning environment. For example, when conducting an indoor class, consider things like refreshments, restroom access, adequate heat and light, and how to reduce distractions such as excess noise and crowds. Students may take many of these creature comforts for granted, but the learning environment will be affected if basic necessities are lacking.

Safety is the most important aspect of planning. Many risks are inherent in outdoor activities, and the lesson plan needs to incorporate steps to minimize any unnecessary risks.



Plan for and rehearse your class. The rehearsal may be an abbreviated "walk-through", but it should be realistic enough to identify if your plan is optimized for the students, safety, and resources available (including time and assistants). Do you need to adjust your plan or make additional preparations?

Plan for Murphy's Law. Always have a Plan "B" for when the unexpected happens. Think of other ways to accomplish your learning objectives.

Course Preparation

Ensuring that the class runs smoothly, and all objectives are met requires considerable long-range planning. The devil is in the details. In-depth details of course organization are included as part of the mentoring process for specific disciplines, but here are the main considerations (see *Appendix J* – Course Preparation Checklist).

Scheduling

- Establish the course dates.
- Coordinate dates with patrol, section, region, or division.
- Register course with the NSP Learning Center online, and order materials and course Certificates of Achievement (See Appendix H Administrative forms).
- Arrange for facilities/sites that match planned activities. Physically inspect the training site to ensure that it meets your safety and training requirements. Are the electric plugs, ventilations, bathroom facilities, classrooms adequate and functional? Is there sufficient snowpack, shelter from extreme weather, and functional communications and evacuation means available?
- Coordinate with local recreation area management to meet specific local training needs.
- Arrange for equipment.
- Determine class size and instructor needs.

Notification

- Reach potential students through patrol, section, region, or division chain of command.
- List course on websites: NSP Center for Learning/division/region/patrol.
- Get course information into any newsletters or emails from patrol, region, and division.
- Contact instructors, evaluators, and any volunteers you may need.
- Contact the NSP national office for approval to modify currently approved NSP course objectives or content within a course, or obtain NSP approval of a course that is not in the NSP approved course catalogue.

Enrollment

- Ensure students enroll in the proper class in the NSP Center for Learning and pay any required fees.
- Have all students and instructors sign release forms.

- Prepare attendance sheets.
- Deposit fees/funds according to local and national procedures if applicable.

Course Outline (Syllabus)

- Outline instructional content.
- Provide pre-requisites to include any course work (such as online class or prior courses) that may need to be completed prior to attending this course, what equipment to bring to class, and any special considerations (e.g., special clothing for expected weather, training environment).
- Provide contact information.
- Distribute to students prior to first class.

Lesson Preparation



Never forget the challenge of technology. Leave time for setting it up right.

In addition to general course preparation discussed above, you will also need to plan each lesson in detail within the course. Using a variety of instructional materials and training aids appropriate to your training will increase your chances of presenting effective lessons. Instructor manuals and lesson guides for each discipline are available on the NSP website instructor section. These materials should serve as a base for preparing for your class. You should also familiarize yourself with student materials, which may require rereading text(s) and study books, previewing videos, etc. Later chapters in this book will discuss detailed lesson planning techniques.

Practice how to operate any audiovisual equipment that will be used, including overhead projectors, DVDs, PowerPoint software, digital projectors, and slide projectors.

Many courses require instructors to demonstrate the proper use of equipment, so make sure you are well versed in the use of all equipment that will be on hand. For example, Outdoor Emergency Care instructors must be able to use oxygen equipment, various types of splints, and blood pressure cuffs. Toboggan instructors must be experienced in handling various types of toboggans. Avalanche instructors must be able to demonstrate the use of different transceivers, snow analysis equipment, and probes. In addition to learning about the equipment itself, remember Murphy's Law: don't forget to have a contingency plan in case the unexpected happens (e.g., weather changes, WIFI fails, or the electricity fails).

In summary, here are important considerations to keep in mind when preparing a lesson:

- Know your content.
- Use the NSP lesson guides and materials to develop your lesson plan.
- Preview videos and other training tools.
- Practice with the materials and equipment well before class.
- Personally assess classroom and outdoor facilities.
- Have a backup plan if the unexpected happens.

On-Site Preparation

Instructional organization continues during teaching. Skilled instructors will fine-tune the physical setting and equipment necessary to optimize learning and ensure a safe environment. It is essential to take time before each class to make sure things are set up correctly, and all equipment and training aids are functional.

To ensure that the instructional area meets the lesson requirements, here are some guidelines to help you prepare the setting.

- Set up the teaching area to match the planned activity.
- Make sure the students:
 - Can see and hear you.
 - Can be seen and heard by you.
 - Have enough space for themselves and their personal gear.
 - Have enough space to move about comfortably.
 - Have enough space to practice skills presented, as appropriate.
 - Have access to restroom facilities.
 - Have audible pagers and cellphones turned off.
- Provide enough equipment, e.g., toboggans, splints, probes, so that all students will have the opportunity to practice the specific skills taught in the lesson.
Address Environmental Considerations



The following environmental considerations are inherent in outdoor recreational activities and require special attention:

- Identify proper clothing and appropriate equipment for the activities and notify students in advance of what will be required.
- If teaching outdoors, make sure the students face away from the wind and sun; seek sheltered/protected areas when stopping to talk. Make sure that your class can be seen from above, don't stop over the crest of a hill or bump in a "blind spot" for those coming downhill. Take up as little space as possible on the side of the trail to avoid interfering with other users of the trail.
- Be aware of the physical comfort and safety of the students at all times.
- If using "patients," do your best to ensure their comfort and safety.

Follow-Up Tasks

An instructor's responsibility does not end with the conclusion of the lesson. Before the students leave, ask them to complete an evaluation of the course and the day's activities. This can then be summarized to gauge the effectiveness of the program and guide the planning for subsequent courses.



You will also need to complete the following activities:

- Clean up the instructional area.
- Return all equipment, materials, and keys, as required.
- Close the course on the NSP Center for Learning website and submit course records to region/division, as appropriate (see *Appendix H* for links).
- File course schedules, materials, and lesson plans for future use.

- Complete and distribute course Certificates of Achievement.
- Send thank-you letters to the organization and staff that hosted the program, as well as to the instructors and the participants.



Safety Considerations

Student and public safety is a major consideration in course planning and class management. Outdoor sports are inherently risky. Students place their trust in you to help ensure their personal safety, and you must make every reasonable effort to anticipate, avoid, and respond to hazardous situations. The following sections address some of these considerations.

"Yoooo-hooo! Has anyone seen a ski pole that I dropped when I was on the chairlift?"

Safety Checklist

- Make sure students are applying emergency care devices appropriately.
- Have students use correct lifting techniques as necessary.
- Use only terrain that is appropriate for the students' skill level. Allow students to "opt out" of a situation that they think will place them in a situation of uncontrollable fear. That does not mean that they get an automatic pass for a required skill demonstration.
- Provide appropriate and accurate directions for the use of training aids and other equipment. Provide guidance and feedback as necessary to avoid injury.
- Use sites that are safe for practice and evaluation; keep students, instructional staff, and "patients" in these areas at all times. Avoid dangerous locations such as the middle of a crowded ski run/intersection/trail, below a depression or break where the class cannot be seen from above, under a ski lift, and on or below an avalanche path.
- Assure that each student and each instructor has signed a release form (See *Appendix H* for links).

Instructional Management and the Nontraditional Classroom

To be an effective instructor, you must be a good communicator. Keeping communication open with students will motivate them and help improve the overall program. In today's information age, there are numerous tools at an instructor's disposal to help in this endeavor.

Modern technology has drastically reduced or eliminated many traditional barriers to participation in educational programs. Consequently, there are numerous instructional class delivery systems that can augment — or perhaps even replace — the conventional face-to-face classroom setting, such as the hybrid course for Instructor Development or other hybrid NSP courses.

Technology will continue to simplify the management and delivery of instruction. However, effective learning environments will continue to be dependent upon competent instructors' preparation and planning. As the instructor, make the most of technology to enhance the teaching and learning process. The NSP website (www.nsp.org) has links to new information, as well as the NSP Instructor toolkits, available in the Center for Learning for each discipline, available only to certified instructors. The NSP national office is another good source of information. Other organizations that serve the outdoor recreation community may provide similar services.

Quality Management

Developing well-prepared and talented instructors is a critical part of NSP's mission of providing premiere education programs to the outdoor recreation community. However, top-notch instructors alone are not enough to consistently deliver high quality training that embodies best practices. To achieve this, NSP employs ongoing monitoring and evaluation of the entire educational process with NSP's Quality Management System (QMS).



The goal of NSP's Quality Management System is built on two basic elements of quality: quality control and quality assurance.

The quality control section defines NSP's standard for the delivery of its educational programs. To do this, NSP has established Program Standards for each of its education programs that include, among other things, Program Objectives, Course Contents, and Evaluation Format. Once established, these Program Standards are a required part the education program. In this way, NSP ensures that all courses are consistently delivered across all venues of NSP. Delivering these programs as described constitutes NSP's Standard of Training. More about this in the next section of this chapter.

With quality assurance, NSP ensures that programs are being delivered to the level prescribed the NSP's Program Standards. To do this, NSP audits is programs for compliance and provides feedback to NSP and its divisions to foster continuous improvement. In this way, NSP maintains the reputation and integrity of their education programs. As an instructor, you play an important role in this process by auditing the

classes you teach. The Instructor Trainers for each NSP discipline will also audit some classes of each course and the end of course evaluations.

Having your students complete a course evaluation form (see Appendix I – Quality Management Process) will provide the course instructors information about the students' experience in the course and perhaps identify ways to improve the quality of the course or the instruction. These forms will be submitted per your division's protocol to maintain ongoing audits of the courses.

NSP's Quality Management System is fully outlined in NSP's Policies and Procedures (available on NSP's website under Governance).

Standard of Training versus Standard of Care

We just learned about the importance of Program Standards as the basis for the quality management system. But what impact do these standards have on you as an instructor?

You may encounter the terms "Standard of Training" and "Standard of Care," which are usually associated with the administration of emergency care. The NSP Program Standards discussed below define the NSP Standard of Training and certifies what knowledge and skills graduates should be able to apply and to the NSP standard. Standards of Care have to do with what patrollers do on the job at their resorts and may include local protocols different from, or in addition to what was taught in an NSP course. This is sometimes visualized as Standard of Training + local protocols = Standard of Care.



The Program Standards essentially define the curriculum for each NSP discipline. They determine what is in the student manual, the instructor manual, and the lesson guides. They define the course objectives and the lesson content.

We also learned that we must follow the Program Standards which has two direct impacts on all NSP instructors. First, when conducting a discipline-specific NSP course, *all course objectives must be met.* This is called the *"standard of training"* for which NSP as an organization and NSP instructors are legally accountable.

In addition, it is equally important *not to teach beyond* the level of NSP-prepared material. For example, physical manipulation tests to assess individual knee ligaments are not taught in the NSP's Outdoor Emergency Care curriculum and should not be taught in the OEC course or performed by NSP personnel in an NSP sponsored event. This is important to minimize the risk of further injury. If athletic trainers, therapists, or

doctors who are also OEC certified choose to perform this type of activity, they are accepting personal liability for their actions in accordance with their health professional certifications but are not protected by state Good Samaritan or other non-medical first responder laws that may exist to protect ski patrollers.

When teaching NSP courses, NSP produced Instructor manuals and lesson guides for each discipline should be used (examples of lesson guides are found in *Appendix F*). The objectives set forth by NSP for the course are obligatory and *must be met.* You may reference another certifying organization's material and specific ski area standards and procedures, but you will need to identify this material as non-NSP approved content.

The following lists represent examples of NSP-approved programs versus local recreation area operational requirements/protocols.

National NSP-approved programs include, but are not limited to:

- Instructor Development/Mentoring
- Avalanche
- Mountain Travel and Rescue
- Outdoor Emergency Care
- Skills Development (Basic, Senior, Certified, Masters)
- Outdoor Emergency Transportation (Alpine, Snowboard, Nordic)
- CPR/AED and Incident Command System (ICS) courses by organizations listed in the OEC textbook.

Local requirements may include, but are not limited to:

- Avalanche (control and management)
- Lift evacuation
- Search and rescue
- Snowmobile operations
- Other local area requirements

Summary

Before the Course or Lesson

- Advertise it.
- Register the course with the NSP Learning Center (See Appendix H Administrative Forms).
- All NSP members have access to the member's login area of <u>www.nsp.org</u>. Once logged in, they can look up all the courses registered in the NSP Learning Center. Contact information is also provided for the instructor of record. In addition, most divisions and some regions have their own websites on which the student can find more information about the courses. This not only helps local students find the right course, but also makes it easy to attend a class not being offered in the student's immediate geographic area.
- The student must enroll for the course through the NSP Learning Center.

- Make sure you have coordinated for adequate training area, equipment and training aids, and assistants and volunteers.
- Ensure everything works and rehearse.
- Have a Plan B.

During the Course or Lesson

- Make sure the learning space is set up to accommodate your intended training.
- Make sure everything works as intended.
- Ensure the safety of your training area and have a response plan in case of accident.
- Allow students to opt-out of uncontrollable fear situations.

After the Course or Lesson

- Close the course.
- Complete and award completion certificates.
- Restore the training area.
- Thank your supporters, assistants and volunteers.
- Return equipment and training aids in as good or better shape than you received them.

CHAPTER 5. Lesson Planning

Concluding Objectives

- + Identify and explain the importance of lesson planning.
- + Develop a lesson plan using the six-pack format.
- + Describe the purpose the six steps of a lesson plan.

Lesson Planning: An Overview

A lesson plan is a road map to the course of instruction for one class, showing what you want students to learn and how it will be done.

Lesson plans are an instructor's most essential tool. The lesson plan will force you to think about the equipment and resources you need, the teaching environment, how and when to use your resources, and to think about potential points of failure and to develop a "Plan B" to overcome



obstacles that may occur. Having a well thought out written lesson plan increases the probability of a well-taught lesson but provides no guarantee. Teaching is much more complex than planning and requires rehearsal and constant, improvisational decision-making. The only way to gain effective and polished teaching skills is to teach.

Lesson guides and other tools that provide instructional resources are available from the NSP in instructors' manuals, from the NSP website, and elsewhere (discussed in more detail in Chapter 6). However, these lesson guides, by themselves, are not *lesson plans*, as they lack the instructor's intended methods, evaluation activities, and materials.

Six-Pack Method for Lesson Planning

This chapter presents a six-part lesson format to provide structure to lesson plan development, termed the "six-pack method." Most instructors write out complete "sixpack" lesson plans until the format becomes instinctive. Even professional educators write detailed plans whenever they need to think through a new or difficult lesson. Initially, this process is time-consuming, but you will find that it is well worth the effort involved. It will also be critical if another instructor has to fill in for you at the last minute.

The Six Pack



The "six-pack" lesson plan can be grouped into three sections for any lesson: the Beginning, the Heart, and the Ending. Each section is then further broken down into two steps that make up the section. For the Beginning, there are the Set and the Concluding Objective. For the Heart, there are the Content Delivery and the Learning Activities. For the Ending, there are the Summary and the Monitoring and Evaluation. Each step is an important piece to carrying out an effective lesson.

There is nothing magical about the "six-pack" lesson plan; in fact, it is similar to many teaching or speaking formats. Whichever method for lesson planning is used, instructors must devise lessons that actively engage students. They might prepare models and visual aids, organize practice sessions, devise discussion questions, monitor the class progress and, at some point, evaluate student proficiency in the content or skill being taught. The "six-pack" lesson model provides a straightforward lesson planning format to organize activities and methods. It is the framework by which the NSP has established a cadre of highly qualified volunteer instructors.

Table 5.1. The Six Pack

The Beginning

Purpose: To get students' attention and focus them on the lesson and its outcomes.

- Step 1: Set
- Step 2: Concluding Objectives

The Heart of the Lesson

Purpose: To give students information and provide practice. This is the heart of the teaching process.

- Step 3: Content Delivery
- Step 4: Learning Activities

The Ending

Purpose: To bring all the ideas and new skills together so students can make connections, and to determine if students have the skills or will need more instruction/practice.

- Step 5: Student Summary
- Step 6: Monitoring and Evaluation

Six-Pack Planning: The Beginning

The purpose of the Beginning is to get the student's attention and focus them on the lesson. A "set" is an attention-getter and should link to the topics to be covered. Concluding objectives drive the lesson-planning process and clearly state the learning outcomes.



Step One: The Set



(see Table 5.2).

Effective lessons are those that engage students from the very beginning. The instructor's first words or actions can have a significant impact on adult motivation. People walk into a classroom with all sorts of ideas crowding their brains. ("Will the kids see my note about dinner?" "I have to get that memo written before tomorrow." "I wouldn't be so rushed if I'd remembered to put gas in the car.") The purpose of the set is to help the student overcome these competing thoughts A set is an introduction that helps the learner focus on the lesson and prepare mentally for new material. It is a motivational instructional tool and should invite students to actively participate in the learning process. In addition to serving as an introduction to a lesson, a set can also introduce a new step within a lesson. An effective set uses the characteristics of adult learners to build motivation. Students become interested in a lesson that clearly relates the new topic to their past experiences or points out its immediate usefulness. This linking to previously learned material also increases the efficiency of learning. It should answer the question every adult student has when entering a class, "What's in it for me?" Why should I be interested in this topic, how will I use it?

The instructional methods you choose for a set should be ones that actively involve the students. Effective sets have learners *do* something, such as recall a personal experience, take a short quiz, view a skit and make comments or handle an object. The set is not the major activity of the lesson, but a "teaser" to jump-start the learner's mind into the lesson.

A set should get the student's attention and relate to the concluding objectives(s) for the lesson. One method to help develop a set is to decide how you can relate to the student's previous experiences.

Here are some questions to consider in the planning process:

- What do the students already know about this subject?
- What related experiences could they have had in their family, communities, careers, or recreational pursuits?
- Is there an analogy I can draw to any of these experiences?

Once you've established this link to the past, you can select a method to actively involve the students. Here are some questions to consider when determining your approach:

- Can I ask a question that will engage and focus the learner?
- What instructional method will be effective?
- Can I demonstrate something or have a model?
- Can I design a short hands-on activity?
- Is there an anecdote or story that demonstrates this topic?

Finally, design a transition to the lesson by asking yourself the following:

- How do I relate the new learning to past experiences?
- How will it immediately be useful to the students? How will they need this information (e.g., quiz, exam, following hands-on event)?

Table 5.2. The beginning – The Se	Table \$	5.2. T	he Beg	ginning	— Т	he Se
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Durrage	Characteristics		
Purpose	Characteristics		
 Focuses attention. Motivates students 	 Hooks into the students' previous learning and experiences. 		
Makes learning more	 Involves the students. 		
concrete and personal.	 Provides a transition to the new material. 		
 Provides a mental reference point. 	 Is completed in a short time (approximately 2 minutes). 		
	 Is used at the beginning of a lesson, at the beginning of a new section within a lesson, and at the end of a lesson to bridge to the next lesson. 		

Step Two: The Concluding Objective

As part of the Beginning of the lesson, let the learners know what is expected of them from the lesson. Having expectations set early in the lesson helps to raise the students' interest, focus their learning behavior, and eliminate any confusion over the purpose of the lesson. Most instructors find that telling learners the objective and purpose follows naturally as part of their set (see Table 5.3). The concluding objective will also help the



instructor plan appropriate learning activities. An OEC objective such as "Demonstrate how to place an oxygen cylinder into service" is likely better taught hands-on rather than with only presentation slides.

The objective should be clear and concise and may indicate expectations that may be part of the evaluation process (*i.e.* – at the end of this lesson you will be taking a written test in which you must score at least an 80% to pass). It should contain the task or action that can be externally observed, under what conditions it is to be performed (e.g., outdoors, with materials in your aid bag), and the standards to which it needs to be performed (e.g., within 20 minutes, immobilize so that the splint does not come loose in transport).

Table 5.3.	The Beginning	- Concluding	Obiective
	. The beginning	Conordanig	Objective

Purpose	Characteristics	
 Defines the learning experience. 	 Tells what to expect, know, or do. 	
 Defines what outcome is expected. 	 Explains the purpose for the learning. 	
	 Is stated in behavioral, observable terms. 	

Let students know the objective, and check for understanding:

- Restate the objective in student-friendly terms and provide examples.
- Print the objective on a white board, chalkboard, or flip chart and explain.
- Prepare the objective as a PowerPoint slide or transparency and explain.
- Place the objective at the top of a handout and explain.

Note: Objectives in written formats should be explained/elaborated. Don't assume students will see and understand objectives written in 10-inch letters on the board.

Six-Pack Planning: The Heart of the Lesson

During the Heart of the lesson, you will present the critical information or skills, create opportunities for students to interact with the new information, provide feedback to the students, and receive feedback from them. To utilize a medical analogy, this part of the lesson is the "pump" that will keep the process of learning going (see Table 5.4). Even experienced students will be able to demonstrate the NSPS standards and perhaps share insights into the task that will make it more meaningful to you and the other students.



Step Three: Content Delivery



The purpose of this step is to expose the required material to the students through reading assignments prior to class, completing case presentations, viewing videos and/or visual aids, providing explanations, and participating in demonstrations. The key to presenting the content or skills is to match an appropriate instructional method to the type of learning task (e.g., a physical action or a memory/recall task).

You need to be sure that you understand the concepts and skills that are required for each objective. Outlines of the essential content for each lesson guide are also provided in each instructor's manual; however, you may prefer to prepare your own topical outline. Just remember that a topical outline by itself is not a complete lesson plan. As part of the planning process, review the lesson guide materials to refresh your content knowledge and to become familiar with the student materials. Rereading chapters, viewing videos, and reviewing workbook pages will help familiarize you with the lesson content and select important sub-objectives. Planning and conducting a rehearsal will further anchor your knowledge and help you adjust your plan to fit the time available.

Skills usually require a demonstration or model. Cognitive/knowledge concepts can be presented through short lectures combined with analogies and visual aids, which you can follow with skillful questions and group discussion. Using a variety of methods permits the instructor to reach all types of learners and maintain their interest. While it's important to use the types of lesson presentation methods with which you are most comfortable, be sure to practice new methods and become more familiar with other techniques too. The methods need to be adapted to the type of task to be learned and the students' knowledge level. By broadening your comfort level with a variety of presentation techniques, you can provide more active and effective lessons. The material presented in *Chapter 7 — Instructional Methods,* provides a range of examples of instructional methods appropriate for education in the outdoor recreation environment.

Purpose	Characteristics		
 Presents the critical skill and content information required to master the objectives. 	 Matches methods for input to students to: Concluding objectives Type of learning (skill or concept/information lesson) Resources Instructor talents Student needs Consider guided and independent practice (how the student will participate). Consider strategies for student output (how will the instructor know the lesson has been learned). Build in opportunities for feedback that will allow you to adjust the lesson to meet student needs. 		

Table 5.4. The Heart — Content Delivery

Step Four: Learning Activities

Learning activities provide structured student practice sessions with the instructor present to provide feedback. Like content delivery, learning activity sessions can be designed from a wide range of material. The important element is to match the practice activities to the content to be learned (see Table 5.5).



Skill lessons require that students practice the skill, preferably as soon as possible after being introduced to the material. Concept lessons may incorporate games to help students with memorization, scenarios, and discussions, or student-developed analogies and charts to help them practice the concept. It is important to realize that the overuse of the game format as an instructional method can detract from the effectiveness of the entire lesson.

Purpose	Characteristics	
 Allows students a chance to practice new skills or process new information and concepts under the guidance of an instructor. 	 Have students produce. Selects appropriate methods for student practice and matches the lesson type to the activity. 	
 Allows students the opportunity to independently practice skills. 	Requires skills practice sessions.Uses questions and drill activities.	
 Allows instructors a chance to provide immediate and specific feedback to students. 	Has students explain concepts.Provides monitoring and feedback.	

Some lessons only need to focus on one practice method, while others require several methods. Remember that before students can perform skills or explain a concept, they must first remember the key terms and steps. Review your course instructor materials for suggestions on practice activities.

Circulate between the student groups to help them fine-tune their practice. Really look at what they are doing, ask questions to reinforce steps in a skill or key terms, and have them justify their techniques. This is an important step of your student monitoring and will help the students master the skill.

You may also want to suggest ways for students to practice on their own. Additional independent practice outside of class can help students gain speed and accuracy. You might suggest that students practice splinting techniques on family members, for example, or take a toboggan run with an OET instructor after the clinic. You could also suggest that they explain the principles of avalanche hazards to a co-worker. The more they review, recall, and manipulate the material, the better they'll understand and retain the concepts.

Six-Pack Planning: The Ending

The lesson is winding down. It's time to either move to a new lesson, dismiss the class, move outside for some practice drills, or begin a formal evaluation. The Ending of the lesson provides the opportunity to bring closure to what has been learned, review the main skills, check for understanding, and perhaps perform a more formal student evaluation (such as a quiz or scenario to demonstrate skills).



Step Five: Summary



Before you dismiss the students from the session, begin a new lesson, or switch to a formal evaluation, be sure to provide a lesson summary. This process is essential in that it allows everyone to obtain closure on the subject. A student's mind needs the chance to tidy up and file new information before moving on to another subject. This mental housekeeping enhances the student's ability to retain material by focusing on the main concepts, skills, or process

steps from the objective. An effective summary will help the students recall key information, relate the learning to their own prior experiences, and remind them of the purpose for learning. It may also identify gaps if some material was not able to be covered and discuss how that will be remediated.

Involve the students in the summary rather than run through it for them. Also, avoid summaries that begin with "To summarize ..." or "In summary, we learned ..." Why? Because this prompts you to summarize the material for the students rather than have them work through the process themselves. Also be careful when you ask, "Are there any questions?" Few adults want to admit in front of others that they don't understand something that was just presented in class. Instead, develop activities that make the students do the summarizing. Use an opening such as, "With your partner, list the key concepts we've learned this evening." After a few minutes, call on some students to present their ideas. This exercise prompts the students to recall the lesson content. You may also ask them to list the key points or steps in a skill or review the topics that were especially meaningful to them.

A summary can also be another opportunity to monitor student learning. Based on the summary, you can decide if the students are ready to move on or need additional instruction or practice.

Remember that summary activities should not be limited to the end of the class. Consider using them when the students have covered new information, when there is a major change in the content, before a practice session, or when there is a need to pause, organize the material, and reflect on it for a short time. If new, technical, or difficult skills are being taught, try to have students summarize more often.

Less frequent summaries are required when the students are more highly experienced or when you are reviewing information taught previously.

Here are the steps involved in designing a summary activity:

- Select student-centered instructional methods.
- Match the summary to the course objectives.
- Be sure key content points are identified.
- Ask students to participate in the activity.
- Allow time for them to think on, discuss, or organize their thoughts.
- Provide visual clues, if necessary.
- Randomly sample student response.
- Place special emphasis on some points as necessary.
- Hook the summary into the learning of the next lesson (optional).

Table 5.6. The Ending — Summary

Purpose	Characteristics
 Provides closure on the subject. 	 Matches concluding objective.
 Refocuses the students' attention on the main components of what they've learned. 	 Involves the students; the instructor does not do the summary.
 Allows the student to check mastery of the objective. This allows students to actively assess their progress and manage their learning experience. 	 Provides visual clues if necessary. Is concise. May include a set for the next lesson/learning activity.

Step Six: Monitoring and Evaluation

The purpose of monitoring is not only to determine whether the students have mastered the skills or concepts required by the concluding objectives, but also to help you determine the effectiveness of your instruction and whether the entire course is meeting the stated goals. Although student monitoring is listed as part of the ending of the lesson, it is really an ongoing process that occurs from the very beginning of the lesson.



Monitoring of student learning is entwined with each one of the lesson steps. Instructors watch their students right from the beginning of the lesson to read body language, listen carefully to verbal responses, and observe student practice.

Evaluation that occurs at the end of the lesson is usually a more formal evaluation process, such as the use of an Outdoor Emergency Care skill performance checklist, a written quiz, or a toboggan exercise using an evaluation checklist. Not all lessons need

to end with a formalized evaluation process. Final evaluation or "high stakes" evaluations should be carefully planned for the end of a lesson, a major course segment, or the entire course. Also, they should be designed to give every student an equal opportunity to perform well (Refer to the information presented in Chapter 8 — Monitoring and Evaluation for more information).

MONITORING Purpose		Characteristics	
Student progress towards		Occurs frequently.	
•	mastery of learning objective.	 Is a "quick" look at how the lesson is proceeding. 	
•	student capabilities. Do we need to make any real- time adjustments for the rest of the class or plan a remediation event later?	 Includes looking at observable behavior, checking for accuracy. 	
		 Allows the opportunity to adjust the lesson if learning is not being achieved. 	
EVALUATION			
Purpose		Characteristics	
Checks to see:		 Occurs at the end of major sections of instructions. 	
•	Has learning happened?	• Mov occur for an antiro subject (a.g. an	
•	Has student behavior changed?	OEC test).	
•	Was essential content	 Assesses major learning steps. 	
	satisfactorily completed?	• Tends to be a more formalized process.	
•	Has feedback been provided?	 Comes in two types" concept-based (objective) and performance-based (subjective). 	

Table 5.7. The Ending — Monitoring and Evaluation

** ORGANIZATION TIP

Pull all your materials for the lesson into one location using a notebook, file folder, or even a portable file box. Copy all related sections of student texts, workbooks, and instructor manuals, and add lesson plans, overhead transparencies, and references to storage (e.g., computer files, videos, models, or other materials too big for the notebook). Keep a log of the dates you taught the lesson and any comments or notes you made. **

Summary

A lesson plan is just that: a plan that lays out what is necessary to effectively teach a lesson. It keeps in mind what specifically is to be taught, how information is be presented, how the students will interact with the learning process, and how student mastery will be evaluated. Monitoring helps keep the lesson on track and allows the instructor to see when it is necessary to adjust the lesson to meet student needs. This course presents the six-pack lesson-planning format, which may be used to develop lessons appropriate for many outdoor recreation adult education courses. (See a review of the "six-pack" in Tables 5.8 and 5.9.)

Considerable planning is required so that lessons can be presented effectively to students. Without such planning, instructors most likely will not meet the needs of their students, the requirements of the course, or the goals of the organization that sponsors the program.

When preparing for a class, remember that what works well for one audience may not work at all with another group. Course content may not vary from one session to the next, but the mix of people will change. Successful teaching depends not only upon your ability to plan lessons effectively, but also upon your ability to modify the content and design a lesson according to the overall strengths and weaknesses of each group of participants. It is important to be as flexible as possible and always have a backup exercise at your disposal if a planned activity does not fit the characteristics of the current group.

Table 5.8. Developing a Six-Pack Lesson for a Physical Skill

The Beginning: The Set

Be enthusiastic in both actions and words when introducing a new skill. Speak clearly and use terminology the students can understand. Try to be brief. Involve learners in the introduction by building on their past experiences. The introduction should take less than two minutes. During the introduction, try to get the students' attention. Arrange the class so all can see and hear; name the skill and give a reason for learning it. Keep explanations short, clear, and concise.

The Beginning: Concluding Objectives

Give the students a clear statement of what they will be expected to perform and explain its importance to them.

The Heart: Content Delivery

Explain the skill through demonstration. This usually works best if one instructor demonstrates the skill correctly while another instructor identifies the key elements of the successful performance.

The Heart: Learning Activities

Begin practicing the new skill immediately after the demonstration. Show the class how to practice the skill, and then arrange the students so that the greatest number possible can safely and effectively practice it. When a drill is used to practice the skill, be sure it is easy to understand, simple to do, and that it emphasizes the skill to be learned.

The Ending: Summary

Allow the students time to verbalize what they gained from the lesson. Ask them to remember key points. Have them set a goal for their next practice session.

The Ending: Monitoring and Evaluation

Once the group begins practicing the skill, check to see that the students are doing it properly. If they are not, stop them and make the necessary corrections. If most of the students are unable to perform the skill, stop the practice and repeat the demonstration and explanation. Using a prepared evaluation sheet, observe student performance following the standard of training guidelines. (Note: Monitoring is not something that only happens at the end of the lesson; it should be done throughout the lesson.)

Table 5.9. Instructor Considerations About the Lesson

The Set

- Does the set hook into the students' previous learning experience?
- Does the set involve the students?
- Does the set provide a transition to the new learning?
- Have I built in relevance for the objective?
- Is the set completed in a short time?

The Concluding Objectives

- What is the objective I need to teach?
- How much of the material do I need to review?
- Do I need to break the objective into smaller steps?
- How do I rephrase the objective, so the students know what is expected of them?
- What is the purpose of this objective?
- Why should the students learn this objective? (Students may wonder, "What's in it for me?")

The Content Delivery

- What strategies can I use to present new information?
- How can I help students integrate the new learning with previous skills?
- What strategies can I use to work through the objectives and expected performance?
- How will the content delivery relate to the learning activity?

The Learning Activities

- Does this lesson require learning a skill?
- What strategies will keep the students actively involved, even in a concept lesson?
- What strategies can I use to help students memorize necessary facts, steps, or terms?
- What strategies can I use to help students build understanding of concepts?
- What strategies can I use to help students make the transition to the application of the concepts and skills?
- How many learning activities will the students need?
- What direction can I give them for independent practice?

The Student Summary

- What key points need to be reviewed?
- Is the timing appropriate to bring the entire objective to closure?
- How do I build for transition to the next activity or lesson?
- How can I relate this summary to a student activity?

The Monitoring and Evaluation

- How will I check to see whether students understand the lesson?
- How will I know whether students have met the objective and mastered the skill?
- Is this a "high stakes" evaluation? If so, how will I prepare the students and make the evaluation fair?

CHAPTER 6. Lesson Content and Instructional Resources



"Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction, and skillful execution; it represents the wise choice of many alternatives." — Will A. Foster

Concluding Objectives

- + Describe the what and the how of NSP teaching.
- + Describe the parts of a NSP lesson guide.
- + Describe the composition of an effective concluding objective.
- + Identify sources for other instructional materials needed for planning a lesson.

The What and How of NSP Teaching

The NSP lesson guides describe specifies the concluding objectives for each lesson topic, this is *what must be taught* to maintain a quality standard of instruction. *How the lesson is taught* is up to the discretion of the NSP instructor. However, the lesson guides provide suggestions for how the material may be presented. The *what* of a lesson is fixed; the *how* is the result of the instructor planning process as well as the interaction and communication that takes place between the instructor and the participants.

A typical lesson planning process looks like this.



The Lesson Guide



Developing any six-pack lesson plan requires what and how you will present the material to most actively engage the learners, and check to see how effective the lesson was.

The content of each NSP course is determined by an education committee and is then approved by the NSP board of directors. A certain amount of flexibility exists in any lesson, and both you and the students may exercise that flexibility as long as the desired learning takes place, and the objectives are met.

NSP has developed lesson guides for you for each topic in a course. The lesson guide provides you with reference material, the topics to be presented, and an outline that should help you prepare your lesson plan. Example lesson guides are provided in Appendix F. These lesson guides are available online to certified instructors.

NSP discipline instructors' manuals and lesson guides are also found in the NSP Center for Learning, in the instructor toolkit for each discipline. You will also have access to skill performance requirements, called Critical Performance Indicators (CPIs) (what students must be able to demonstrate at the end of the lesson), and suggested activities. Skill performance requirements may be either included in the lesson guides or accompanying them.

Lesson Guide Format

While the lesson guides are not lesson plans, they provide the essential objectives and a logical topical outline to help you to plan lessons. Each lesson guide is a template — a consistent pattern to be used for instructor planning. The lesson guide can prompt many six-pack lessons.

Lesson guides accomplish the following:

- 1. They describe what must be taught including concluding objectives and essential content.
- 2. They provide ideas for how the content may be presented, a reference for resources and materials.

The following are the general components of each lesson guide, though each specialty may have slightly different formats:

- Lesson (or chapter) number and title
- Instructor and student resources
- Concluding objectives
- Essential content
- Activities for problem-solving

Lesson Title

The lesson title should match the chapter heading of an accompanying text or the course outline of the education program. After you review the title of the lesson and the prerequisite skills required of the participants, you can begin organizing a six-pack lesson.

Recommended Instructor and Student Resources

All the related resources, reference chapters and pages in accompanying textbooks are identified for instructor use with each course. Other references, training aids, and audiovisual equipment are suggested, when applicable. The student resources include the manual/textbook, student workbooks, and other resources, such as found in Instructor Resources on the NSP website.

Concluding Objectives

Throughout the lesson planning process, be sure to pay careful attention to the desired end results/ concluding objective(s). These objectives describe what the students should know or be able to perform by the end of the lesson.

Concluding objectives play two roles in instruction. First, they provide the essential structure around which you plan the lesson, and second, the students' awareness of concluding objectives helps set their expectations for the activity and helps them structure their own learning.

The concluding objectives for each training program are outlined in the lesson guides for each course. As you read these objectives, consider the following questions:

- How do I ensure that students have mastered the objectives?
- What content or skill is to be demonstrated? Would it be helpful to break the objective into sub-objectives?
- Is there any unique condition or setting in which the desired behavior should be demonstrated?

All NSP objectives consist of two parts:

- The *key verb* indicates an observable action word that will demonstrate that the student can perform this content/task (e.g., list, choose, recite, describe, demonstrate) versus non-observable behaviors (e.g., know, appreciate, feel). These key verbs are related to various levels of learning (see Appendix G Classifying Learning).
- The *content/task* to be demonstrated. The key verb helps you select student activities that match the content. Pay careful attention to the key verb. For example, if the concluding objectives may imply prerequisite knowledge that may need to be demonstrated prior to performing this task.

Some examples of concluding objectives are shown in the table below.

Avalanche:

Students should be able to:

- Describe how wind, temperature, and precipitation type affect snowfall.
- Name and describe the typical snow characteristics of each U.S. snow climate zone
- · Identify critical weather conditions that tend to increase avalanche potential
- Describe the relationship between precipitation density and intensity with respect to loading the snowpack.

Instructor Development:

- Describe the what and the how of NSP teaching.
- Describe the parts of a NSP lesson guide.
- Describe the composition of an effective concluding objective.
- Identify sources for other instructional materials needed for planning a lesson.

Mountain Travel and Rescue:

The Learner will:

- List different types of shelters suitable for winter camping and the advantages and disadvantages of each.
- Demonstrate effective camping techniques during the advanced mountaineering course

Outdoor Emergency Care:

Upon completion of this chapter, the OEC technician will be able to:

- Explain how to prevent heat related illness.
- Explain how a body adjusts to a hot environment.
- List the signs and symptoms of a patient with the four types of heat-related illness.

• Describe and demonstrate the assessment and management of a patient suffering from each of the four types of heat-related illness.

Outdoor Emergency Transport:

The toboggan handler will execute a balanced and stable static turn while operating an unloaded toboggan.

Essential Content



The essential content identifies what the instructor will need to cover/include on a specific topic. The lesson guide establishes the required standard of training for each education discipline, as implemented by the instructor and measured through the quality assurance program. The essential content outline assists you in the detailed planning of your lesson.

Activities for Problem Solving, Summary, and Evaluation

Learner Activities should provide opportunities for students to practice or demonstrate their ability to perform the concluding objective or a sub-component of the objective and provide an opportunity for you to observe and provide feedback. Included in or accompanying many lesson guides are suggestions for various learner activities including guided practice, problem-solving, summary, and evaluation exercises. It is important to design activities that actively involve the students in performing the concluding objectives.



The evaluation portion of the lesson provides the opportunity for students to remember and link together the skills and ideas that have been covered in the lesson.

Lesson activities in the lesson guide are only suggestions and may be used or modified at the instructor's discretion. With the wealth of creativity among outdoor recreation instructors, many innovative lessons have been documented. This collection of activities and exercises can be found in each instructor manual, either under a separate tab or in the lesson guide section. Additionally, a variety of activities and resources may be obtained from the NSP Instructor's webpage (at www.nsp.org) or the NSP instructor's publications. Other outdoor recreation organizations provide similar resources that may be able to be adapted to your lesson.

Instructor Tools

A variety of presentations, activities, and other resources are available for each discipline in the NSP Center for Learning, instructor toolkits for each discipline.

You may also develop lessons and presentation of your own, and request to add them to the correct website page. These must be approved by the National Program Director for that discipline before the NSP staff will add them.

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Additional Instructor Development Program Resources

The National Ski Patrol constantly updates program information and resources. In addition to *Ski Patrol Magazine* and other bulletins, information is constantly added on the Internet. Visit the instructor's website for further information on instruction and for help putting your lesson plans together. The website provides lesson guides, activities, evaluations and other resources.

Also available online are course listings on the NSP Learning Center. These can be accessed by logging into the member's area of the www.nsp.org website. The member services area provides access to the NSP Online Store, order status, the *NSP Policies and Procedures* manual, and the member forum. It also includes a copy of a student feedback form for assessing your classes and as a quality control tool.

Chapter Summary

There are three essential components of lesson planning: 1) the concluding objectives, 2) the essential content, and 3) the manner in which you will present that content. As the instructor, you have access to a variety of materials for the course you are teaching, including lesson guides, course or lesson outlines, an instructor's manual, and the student text. These materials designing and conducting your lesson learning environment, and help you focus activities on helping students meet the objectives.

We encourage you to investigate other sources of information, not only on the subject matter, but also on successful teaching strategies. These sources may include the NSP website, instructor newsletters, and the membership magazine. Talk to, and watch other instructors, too. You may find that some of your most successful teaching strategies are those that you learned from someone else. Share your ideas. Instructors are encouraged to continually create and share activities, exercises, and other instructional methods.

CHAPTER 7. Instructional Methods



"To become successful, you must be a person of action. Merely to 'know' is not sufficient. It is necessary both to know and do." — Napoleon Hill

Concluding Objectives

There are a wide variety of methods and approaches you can use to teach a class, and frequently there is no one best solution, but requires trade-off decisions between the concluding knowledge/skills you want your students to demonstrate, the students background, and the tools and constraints available. This chapter:

- + Reviews how the instructional process enhances student learning.
- + Provides a toolkit of instructional methods and discusses the uses of various instructional methods.
- + Discusses the importance and how to create practice opportunities is every lesson.
- + Discusses considerations for instructional modifications for learning disabilities.
- + Discusses how to discover new instructional methods.

Process of Instruction

Learning is an internal activity of the student: only the student can learn. The instructor guides that process by building a learning environment that best fosters what we know about adult learning based on research, best practices, your experience, and most importantly- -effective two-way communication.

One of the objectives of this course is to promote instructor decision-making and creativity as you develop activities that will reinforce the teaching/learning process. Within each lesson, you will likely use multiple instructional methods to accomplish each objective. Instructional methods are the means to building and delivering powerful, active presentations and student activities. You choose appropriate methods to provide the students with new information and generate practice sessions. We use the term

"content," to represent knowledge, skills and abilities intended to be taught in the lesson or course.

You do not necessarily need to use dramatic strategies when presenting content. In reality, many shorter, subtle yet effective methods of teaching constitute quality instruction. Every time you ask a question of your students, use a visual aid, encourage a student to share a response with another student, or give a reading assignment, you have used an instructional method that enables constructive progress.

Ideally, the process of instruction considers:

- The concluding objectives, what needs to be demonstrated, under what conditions, in what setting, and how well must it be done (e.g., task, conditions and standards of performance).
- What the student already knows or can do compared to the concluding objectives. Adult learners do not come to us as blank slates. Ideally, we shouldn't waste time teaching what students already know or can do but focus on what they don't know. While we frequently do not know the precise experiences of the students we are to teach, we may know something about their experience or prerequisites that we can use to calibrate our class. We may be able to do a quick survey at the beginning of the class to see how many students already have prior knowledge of the subject or have used related knowledge/skills in another setting. We can use this during the class to help them make connections of prior experience with the current training or help us identify peer tutors to help others during practice. For example, we may know they had to read a chapter regarding this topic before class and that can help us focus on what they "don't know."
- For adults, learning something new is usually a series of successive approximations, or bite sized lessons that involve being introduced to the new material (e.g., presentation, demonstration, or problem solving), practice applying the concepts (e.g., oral questions, quizzes, restating, or student demonstration of skill), getting feedback (e.g., what was the result, and what might be done to get a different result), and additional practice to anchor/reinforce that new knowledge/skill (e.g., scenarios, cases, more runs). Know that the training will not stop for adults when they leave your class, they will imagine, dream and practice on their own to understand and anchor those skills before the next time they need to demonstrate that knowledge or skill.
- Trying to select the instructional methods that match the tasks being taught as closely as you can with the environment where the tasks will be practiced. The closer your training methods match the application setting, the higher the training transfer from training to application, and the more learning is reinforced. For example, talking about or watching films of transition turns in a classroom (or worse, on the slope) is no substitute to doing progressive drills on the snow (e.g., side slips, falling leaf).
- Remembering Murphy's Law and have a Plan B. What alternatives can you use to teach this lesson if your perfect plan gets ruined (e.g., weather, electricity failure, equipment doesn't work)?

In practice, the process you encountered with the six-pack and the lesson guides is useful:

- Introduce a lesson. Tell them what you are going to teach or have them do. Answer the unstated student questions, "Why do I need to learn this, how will I use it? What is it I need learn or demonstrate?"
- Provide students with the relevant course content. Here is where you put methods of instruction to work.
- Provide students the opportunity to practice the content and provide objective feedback that can be used to improve performance.
- Assess student learning and help students integrate the course content with previously learned material.
- Summarize what you told them or did and identify how this relates to how they will use the knowledge or skill.

It is important to think of a lesson as a continual flow of varied teaching methods that engage the students through the process of communication and match the tasks to be learned. As an instructor, you should be aware of learning methods and organize each lesson so that all students have the opportunity to maximize their learning.

Types of Instructional Methods

Identifying Appropriate Instructor and Student Behavior



Consider what you want the student to do during each aspect of your lesson content delivery, and then think about what instructor behavior and instructional methods would likely stimulate the desired student behavior. Think of these considerations as you review the methods of instruction and how to develop student practice opportunities.

Topic Lesson Guide Reference			
	Instructor Behavior	Student Behavior	
Set			
Concluding Objective			
Content Delivery			
Learning Activities			
Student Summary			
Monitoring and Evaluation			

Identifying instructor behavior and student behavior is an interwoven planning process. What methods you decide to use and how you direct the students to interact with those methods must match the essential content and ultimately satisfy the concluding objectives.

Ask yourself the following questions to help you select the appropriate teaching methods:

- What are the best methods for practicing a skill?
- What are the best methods for learning a concept?
- What are the most effective methods to use with the size of my class? Would other methods work better if I broke the class into small groups for this task?
- What learning activities fit with the concluding objectives?
- Is this an efficient way to teach the type of content of the objective (e.g., indoor or outdoor, cognitive/memory-recall task or psychomotor/physical performance task)?
- Which ones fit within the time, equipment, or assistants available?

Common Instructional Methods:

A sampling of strategies is listed below; however, the variety of methods and combinations is endless, and limited only by your creativity. How you organize and present content will determine whether they are instructor-centered methods or student-centered methods (who is doing the most work?).

Instructional Methods to Try		
Lecture	Demonstration	Model
Audio/Visual Aids	Readings	Scenarios
Questioning/Group Discussion	Skill Stations	Role Playing
Analogies	Problem Solving	Video Feedback
Multimedia Product	Skit	Categorizing/Sorting
Games	Electronic Media	OTHER?????

- <u>Lecture</u>: A well-designed talk or presentation where no hands-on skills are involved. It is best suited for cognitive tasks, things to be remembered, or concepts intended to be recalled or used orally or in writing. This method is especially suited to presentations before large groups. The presenter must be very proficient in oral skills to be effective. Because communication is one-way from the instructor to the students the effectiveness of learning is usually assessed based on questions and answers or the number of comments made by audience members. Lectures are most effective when they use related audiovisual aids to emphasize the points to be remembered.
- <u>Demonstration</u>: An instructor or other individual proficient with a skill performs it correctly in front of students. The skill must be one that is easily visible, or the demonstration will not be effective. Performing the skill slowly or in parts may make it easier for students to comprehend, and may allow for introduction of the evaluation criteria, such as skill guides with CPIs in OEC. Audiovisual aids such as videos can be used for effective demonstrations.
- <u>Model</u>: A realistic prototype of an object or system. This gives the students the opportunity to relate their current knowledge to that presented in the model.
- <u>Audiovisual aids</u>: The use of PowerPoint presentations, videos, flip charts, films, slides, etc., to present information or actual objects. Visual adjuncts have been shown to enhance learning for all sighted people. Audiovisual aids must be relevant and appropriately presented or they will detract from the overall effectiveness of the lesson (see Appendix E).
- <u>Augmented and virtual reality:</u> New technologies offer the opportunity to use virtual interactive simulations that stimulate student behaviors and then provide realistic consequences, and sometime feedback. Similarly, augmented reality presents audiovisual virtual objects superimposed on the real world that the student can interact with or call up just-in-time tutorials during a learning task. These may become more available for NSP topics in the near future (e.g., toboggan handling, OEC scenario coaching, avalanche topics, knot tying).

- <u>Reading</u>: Students read or review printed matter. Reading assignments that should be completed prior to class must be effectively communicated to the students, or adequate class time must be allocated for reading material to be absorbed in class. Often, class time is not adequate for students to digest extensive written material. However, since most people can read about 300 words per minute, while spoken word can only be effectively delivered at about 125 words per minute, facts and memory type content may lend itself to reading.
- <u>Scenarios</u>: Students act out pre-assigned roles to a realistic situation. This can be very useful in many situations, as it allows students to explore different solutions to the problems presented and to develop and practice skills. This method is not usually appropriate for use with large groups. Also, some individuals may not be comfortable acting out scenarios in front of others.
- Questioning and group discussion: Two-way question-and-answer sessions that increase a learner's interest and knowledge in a particular subject. Communication of this type (between students and the instructor) is a good way to probe ideas and brainstorm to develop deeper understanding. For example, if a student understands ligaments join contiguous bone ends, they may be able to elaborate that a sign of a severe sprain is joint instability." This process is especially effective with smaller groups and allows students to actively participate in the learning process. However, as with the scenario method, not all individuals will be comfortable sharing their ideas before a group. In addition, you will need to be careful not to allow one or two individuals to dominate the process, which could keep others from participating. Appendix C shows the steps for Effective Questioning.
- <u>Skill stations</u>: Think of it as a mini scenario. Students perform specific tasks or sub-tasks as directed by the instructor. This is a good method to observe the correct application of skills. It requires that you carefully plan and communicate to the students the skills that are to be demonstrated.
- <u>Role playing</u>: Students spontaneously respond to a real-life situation. As with scenario-based methods, this can be very useful to allow students to try different solutions to resolve a situation. You must remember to involve all the students as either active participants or observers with specific roles.
- <u>Analogies</u>: Students compare similar characteristics of two dissimilar objects or ideas. By associating new concepts with previous knowledge or experience, learners can simplify their understanding of complex topics. Analogies are useful in capturing students' attention and helping them focus on a specific topic.
- <u>Problem solving</u>: Students seek solutions to a situation fixed within a framework that is set by the instructor. As with scenario and role-playing methodologies, it is important to involve all students in the activity. You can increase student

participation by breaking class into multiple smaller groups to work on the problem separately and then present their solutions to the class.

- <u>Video feedback</u>: A student is videoed during a skill performance so that the instructor, the student, and/or peers can provide assessment. Some students may become uncomfortable when they are "on camera," so allow them to practice before the assessment. When used as part of the Instructor Development course, this method may also be useful in identifying any mannerisms an individual has that may be affecting the instructional process.
- <u>Multimedia product</u>: Students demonstrate their knowledge by putting the material into a media format, such as a video, slide show, or computer program. This is often useful as a follow-up project for a presentation later, as it is frequently difficult to provide adequate class time to complete such a project.
- <u>Skit</u>: Students act out a play developed by the instructor or a student. This can be a productive activity for small groups of students. It is essential that you provide sufficient direction to ensure that the material is on topic and that all the students are actively involved.
- <u>Categorization/sorting</u>: Students sort or organize information into related groups. This can help with the process of relating material to the appropriate learning objectives. It can also help students relate new concepts to previously learned information.
- <u>Games</u>: The use of board, TV, or card game formats to have students review information in an interactive way to demonstrate knowledge. Games must be carefully designed to ensure that they reinforce the appropriate lesson material. The overuse of this method can detract from the effectiveness of learning.
- <u>Electronic media</u>: The use of materials developed for student self-instruction, such as hybrid course online modules. This provides the opportunity for students to receive instruction and overcome obstacles such as distance, travel time, scheduling conflicts, and expenses. It may not be suited to all learners, however, as it does not provide the personal communication and interaction of a face-to-face class.
- <u>This is an open-ended list.</u> Look for activity ideas in the NSP's instructor training materials and in those of other organizations and use these suggestions to spark your own creativity. You should feel free to design and experiment with methods seen in other training environments. Keep expanding the training options so that the learners remain active. After all, learners who are active understand and retain more than those who are subjected to a sedentary instruction format.

Instructional methods are your tools for creating learning environments for the acquisition of new knowledge and skills during both the lesson content delivery and the learning activities. When planning your lesson, you can use activities that students do independently, such as required reading or online courses, to cover the knowledge material. During your class, you can then focus on activities that assess their learning and help reinforce the desired behavior. For example, let's say you are teaching a class about the factors that lead to avalanches. The students were told to read the relevant material before the class. Rather than giving a lecture about the factors, you could break the class into three small groups and have them fill in a blank graphic of the "avalanche triangle." You then bring the class back together so each group can explain their answers. In this way, the students are actively applying their knowledge while you are assessing their understanding. If necessary, you can do targeted teaching to cover areas where the students need help. This will not work with all material and sometimes a lecture is the best option. But remember that adult learn best when they are active participants.

Nontraditional Learning



The growth of the internet as an educational resource and communications media — along with the availability of videos, CDs, e-mail, and instant messaging — all have helped increase student access to nontraditional educational formats. Consequently, there are now numerous available instructional class delivery systems that can augment or replace the typical classroom scenario.

The traditional classroom setting in which an instructor works with a group of students has many benefits, including the opportunity for personal, face-to-face communication, peer exchanges, and on-site analysis of the effectiveness of learning. In today's world, with so

many other activities competing for students' time and effort, electronic media offers an alternative that cannot be ignored. It is the responsibility of today's instructors to keep pace with this changing technology and effectively utilize it to enhance the teaching/learning process, whether it augments or replaces the conventional classroom learning environment. Without recognizing the applicability of this technology in today's instructional methodology, the opportunity for some students to participate in educational programs may be greatly reduced.

Student Learning Activities and the Role of Practice

Group activities engage the students in the learning process and make them working partners with the instructor. Many instructors tend only to rely on a few basic training methods they are comfortable with but may not be optimal for all learning tasks. Studies indicate, however, that by varying teaching methods and using highly participatory
methods during a program, learner involvement will increase, as will the program's effectiveness. Make sure you continually refer back to (and incorporate) skills and concepts that were presented earlier in the course.

Practice activities, one type of observable student behavior, should be part of every lesson. The instructional methods presented previously can also be applied to practice activities. Outdoor recreationists are familiar with a variety of practice methods that are presented in different instructional settings. In NSP programs, scenarios are frequently used to practice emergency care skills, incident command roles, and avalanche rescue. Drills have been devised for toboggan-handling skills, and mountain travel and rescue students go out into the field with a compass and a specific list of tasks to accomplish. Other outdoor recreation disciplines also provide similar lists of methods that are appropriate for instruction and student practice.

Guided Practice

Students should practice each new concept or skill under expert direction. This guided practice reduces the chance that they will practice all or part of a skill incorrectly and anchor incorrect behaviors into "muscle memory" which become familiar and are hard to replace with new learning. Minimum criteria for guided practice include an observant instructor who provides immediate and specific feedback.

NSP programs provide frequent occasions for guided practice, such as coaching toboggan handling, Outdoor Emergency Care skill stations, avalanche transceiver fieldwork, or small group tasks.

Successful guided practice requires you to select an instructional method that generates observable student behavior, carefully check the behavior, and then supply appropriate specific feedback. Responses such as "Good job!" or "That's wrong!" do not help students identify what was successful or what was incorrect about their skill performance. Specific skill-related responses are required.

It is more effective for instructors to help students identify their successful and unsuccessful behaviors — and then select alternate approaches to solving the activity problem — than it is to provide a detailed critique. Reteaching an incorrectly learned skill is much more difficult than teaching a new skill. Just think of how hard it can be to correct a golf swing or "sitting back" in the bumps.

Independent Practice

Once students can demonstrate a skill, they can gain fluency, speed, or accuracy by practicing independently, which occurs away from the original instructional setting. When OEC students practice splinting on their family members or take a toboggan run after the conclusion of a clinic, they are engaged in independent practice. This helps reinforce the learned skills so they may be performed more effectively and efficiently. Remember to be sure that independent practice is based on correct skills knowledge.

Creating Learning Activities

Activities should be designed around how the student is expected to practice or use the content. Guided practice and independent practice, with feedback, speed student progress. Select one or more of these methods as a means of generating student activities. Students can write answers to questions, respond orally, or demonstrate a skill. They can also create a skit, build a model, put together a video, or play a game. These student activities can provide guided practice of the skill and serve as an opportunity to review and explain



what is learned in class. These activities can also be part of a formal learning evaluation.

Regardless, the method should generate student interaction with the new content. Students can either express their knowledge and understanding of the new information or demonstrate the skills individually or as part of a group.

Instructional Modifications for Students with Learning Disabilities

Less acco may pres may these stude disal

Lesson planning should include ways to accommodate any learning disabilities that may exist among students. The following list presents a number of ways that lessons may be adapted for this purpose. Many of these modifications can also be beneficial to students who do not have learning disabilities.

- Provide structure in your lessons.
 - Prepare written objectives and learning expectations.
 - Make transitions between activities or lessons clear; end one section with a summary and start the next with a set.
- Provide needed assistance to students who have difficulty reading.
 - Encourage reading and study groups that can help struggling readers learn the material.

- Ask students to explain or demonstrate a process rather than put it in written form.
- Present information in visual forms when possible, such as videos, demonstrations, pictures, etc.
- Give students outline notes to assist with note taking.
- Minimize distractions.
 - Have students sit in the front and in the "power center" of the room and make more frequent eye contact with them. They should avoid aisles windows, and the back of the room.
 - Reduce background noises and discourage 'side conversations during instruction. Emphasize successes and redirect problem areas.
- Focus on Self Image. Some students may have negative feelings toward "school." Students who exhibit learning disabilities or have not been successful in previous formal school settings may often lack a positive self-image. Be sure that they focus on what they can do well and find ways to approach a difficult skill in a different manner. It is important that you work with such individuals to help them minimize these feelings. The following recommendations can assist in this process:
 - Help students identify their assets. Encourage students to constantly remind themselves of those assets.
 - Help students develop a realistic plan of action for reaching their goals. Encourage students to constantly assess their progress toward goals, including why or why not the goals have been attained. If NSP goals seem to be unattainable, what alternatives might be pursued.
 - Praise good behavior, including learning behavior and social behavior.
 Positive reinforcement has an important role in the learning process. Use descriptive/objective praise instead of making judgmental comments.
 - Never make comments that might be misconstrued as belittling or humiliating. Also avoid comparing one student's progress to another student's progress.
 - Provide students with clear and simple instructions about a task.
 - Limit the number of decisions students have to make to what is required to successfully perform the task.
 - Discuss an individual student's problems in private.

Learning New Methods



To learn/use a new method, first apply it to teaching a topic with which you are comfortable and test it on a small number of trusted friends. This will help you identify weak spots and problem areas, as well as prompt you to develop ideas and logistics you may not have considered before. Be sure to evaluate the method in terms of the appropriate learning methods for adult learners. Once you've practiced the new method and feel comfortable using it, you can feel confident about adding it to your instructor "bag of tricks." Watch other instructors, what seems to work, what

doesn't? What seems to make it work or not?

Summary

Instructional methods are part of a large category of teaching and learning activities that generate instructor and student behaviors. It is important that you become proficient in utilizing a range of such methods and that you recognize the settings in which each one is most appropriate.

Learning activities provide a method for the students to practice new skills and behaviors and broaden the knowledge they've acquired during the instructional process. Whether this occurs within a traditional classroom setting, outdoors or through distance learning, the expected outcome is the same: to provide students with appropriate new knowledge, skills and behaviors.

CHAPTER 8. Monitoring and Evaluation

"I have yet to find the man, however exalted his station, who did not do better work and put forth greater effort under a spirit of approval than under a spirit of criticism." — Charles Schwab



Concluding Objectives

- + Identify the differences between monitoring and evaluation.
- + Define the purpose and characteristics of monitoring students.
- + Define the purpose and characteristics of evaluating students.
- + Distinguish between knowledge and performance evaluations.

Measuring Learning

Teaching can be summarized as: Identifying what we want students to learn, developing opportunities for students to learn or demonstrate their mastery of the desired material or skills and determining how we will know that they have learned it. Lesson planning and instructional management address the first two topics and this chapter considers the third topic.



An instructor's responsibility is not only to present information, but also to determine whether students are learning the material. How do you know when students have mastered a skill, embraced a concept, or internalized a process? What can you do if you recognize students aren't learning or making sufficient progress towards the course goal? Monitoring and evaluating student learning are essential parts of being an instructor.

General Considerations

As an instructor, you will need to base your assessment of student performance on objective observations of their learning behaviors, rather than on internal understanding, attitudes and feelings. This is more difficult than most of us would like to believe. For example, teaching a former student's child or sibling can challenge your ability to be objective with the actual person in front you. Depending on your experience with the former student, you may be inclined to be either unreasonably harsh or willing to overlook errors in the student's performance. To make the teaching/learning process

effective in this situation, it's important to be unbiased and rely on judgment rather than impulse. A clear learning objective or stated outcome can help avoid such bias.

Monitoring

As with taking a patient's vital signs, the act of monitoring while teaching refers to continually checking the student's learning progress. The information you gain from these "vitals" will help you adjust your instruction on the spot. Monitoring is sometimes called formative assessment. It allows the instructor to improve their teaching and the student to improve their learning in real time. By frequently checking the student's behavior, you can determine to what extent learning activities are producing the desired results. Based on student



responses, you can judge the appropriateness and effectiveness of the instruction, modify your approach, and make decisions about further student learning needs. This type of learning assessment takes place often and at small, incremental steps throughout the lesson.

An effective instructor builds into the lesson frequent opportunities for checking student understanding and skills. Observable student behaviors generated by student-centered instructional methods allow you to monitor learning. From the beginning of the lesson to the concluding summary, you should be looking for and checking student behavior.

Throughout the lesson, you will need to take your students' "vital signs;" that is, read their body language, evaluate their responses, analyze their performance in activities, and interpret their questions. Monitoring should check learning frequently. If you cannot monitor everyone individually, you need to make frequent random checks of students.

Prime opportunities to monitor students and adjust your instructional approach accordingly include the following:

- **The Beginning:** As students respond to the introduction (indicate previous knowledge).
- **The Heart:** As students respond to questions, participate in activities, and practice a skill.
- The Ending: As students summarize what they've learned.

Ongoing monitoring eliminates the unpleasant and unnecessary surprise of discovering at the end of a lesson or unit that students don't understand the material. Frequent monitoring helps avoid gaps in learning the content.

Based on information gleaned from monitoring, you have a responsibility and an opportunity to adjust the lesson. You may decide to move ahead, reteach, provide additional practice, or abandon the current learning activity. Be open to the fact that when most of the students are not grasping the content, something is probably lacking in the instructional process. Readjust the lesson and try again.

Summary of Lesson Adjustments

Move on When	Reteach When	Abandon Ship When
 Everyone already knows the material. Students can perform a summary activity. Everyone has mastered the material. 	 The instructions are not clear. Students are missing some steps or information. Students are missing most of the information and steps. Students need more practice. 	 Damage is being done to the students. This is a strategic decision. You do not want to reinforce negative learning that could occur. That takes more time and effort to correct.

When one or two students do not have a firm grasp of the material, you can remediate, e.g., work independently with those students after class so you don't take time from the class and the rest of the students. In this situation, you must diagnose the instructional/learning problems and reteach the lesson using different instructional methods. Reteaching in a manner that is qualitatively different can promote successful learning. Saying the same thing more loudly and more slowly will likely be ineffective.

Overall, instructors need to constantly monitor the learning progress of each student and then adjust instruction accordingly. Effective instructors set up students to be successful by always assessing what students have learned. Monitoring a student who is learning is like assessing a fragile patient; you take vital signs often, observe the patterns, and adjust the prescription based on the information learned. If you know that a student does not understand the current material, moving forward with the lesson plan is unacceptable.

While rare, sometimes you don't have the answer, no matter how much you want to. Sometimes a student will benefit from exposure to a skilled peer or anther instructor, or another setting. The more skilled you become, you will experience this even more rarely.

Evaluation

Evaluation serves to answer one critical question: Has the student mastered the lesson

content or skill to NSP standards? Each concluding objective should be considered a benchmark requiring evaluation, which must be based on an objective assessment of observable student behaviors. Evaluation must match the concluding objective. No one likes to be tested or judged on something he or she was never taught.



Photo by Onderwijsgek at nl.wikipedia.

Students need to know early in the course or program how their learning will be measured, what criteria will determine mastery, and when they will be assessed. Be sure to give them samples of the written questions and evaluation scenarios and tell them where to find skill performance checklists in the course and program materials. Also provide them copies of scoring/evaluating guides for the course and explain how these guides will be used. Every evaluation should build on the need of adults to self-diagnose. Ask students to continue to self-evaluate against these provided evaluation skill lists. They will actively manage their learning experiences when they can accurately identify the gap in the present performance with evaluation standards.

NSP instructors need to be familiar with evaluation materials developed by the NSP curriculum. These structured tools, based on observable behaviors, help make assessment consistent, reliable, and informative. They also help students recognize their strengths and areas that need improvement. Course materials, to include student manuals and instructor manuals, provide examples of evaluation tools such as the skill performance guides and critical performance indicators (CPIs), practice tests, and other web-based tools such as flash cards.

Evaluation typically occurs at the end of a major piece of instruction: the end of a lesson, a related group of lessons, or the course itself. Monitoring you recognize and assess student attainment, and helps you guide course and program planning. Evaluation is used by NSP to determine if students have met NSP standards of training and be awarded an official change in status (e.g., become a Patroller, Alpine Patroller or Instructor). Table 8.1 outlines the similarities and differences between ongoing monitoring and evaluation.

Evaluations, or a summative assessment, should be consistent, objective, and fair. Consistency takes real effort. At some point, all instructors are inconsistent, even the best. The worst form of inconsistency evolves from prejudice or bias and may result in the instructor singling out an individual for harsh, unfair criticism.

To be objective in your assessment, you must have given your students well-defined lesson objectives. If you demonstrate the skill to the students, do so at the level you intend to assess. An example is use of OEC Skill Guides that clearly state the steps and performance indicators for completing a skill.

Fairness implies fair treatment in all phases of performance assessment. Many forms of assessment have fairness built in. A written exam is usually inherently fair, especially if developed and tested by an outside source such as the NSP or American Heart Association. The area where fairness can be most problematic is in skill assessments. Fixating on one aspect of a student's skill demonstration and ignoring the fact that, in the end, the student met the objective, is patently unfair, but happens all too often in skill assessment. That student may not have done an integral task the way we would do it, but if in the end the objective was met, that's what counts.

Evaluation Types

Instructors generally utilize two essential evaluation methods to help gauge student progress: cognitive/knowledge-based content tests (e.g., memory recall, decision making) and performance-based evaluations (e.g., psycho-motor, physical).

Knowledge-based content tests



This type of evaluation is used to measure understanding of information knowledge, such as patient signs and symptoms, types of avalanches, parts of a toboggan, verbal or written decision making using taught material or similar material. Oral, written, and computer simulation tests are examples of knowledge-based tests.

Objective questions (true-false, multiple choice, or matching) measure the student's ability to recognize

the correct answer. Decision and application questions (essay, short answer, or fill-inthe-blank) measure the students' ability to recall facts or information and present the answer in their own words.

Knowledge-based objective tests are generally the easiest to administer and score; however, they cannot measure physical performance skills.

Performance-based evaluations

This type of evaluation requires the performance of a skill or task and are frequently conducted using scoring guides that support the concluding learning objectives. The instructor observing the student performing the skill must check methodical skills such as correctly setting up oxygen equipment, applying a sling, or using an avalanche probe. Usually, a simple checklist of steps can be utilized to assess whether the students have mastered the skill



and instructors will have acquired inter-rater reliability or a high degree of judgement accuracy with other NSP instructors through the mentoring process.

Complex scenarios or skills at the application level require the development of performance tasks and their associated rating criteria. The NSP instruction guides contain criteria performance scales to be applied. These scales will include the skill step and an indicator of how well the skill should be performed.

Accurately evaluating student performance often requires the use of multiple evaluators, which ensure inter-rater reliability and overcomes many forms of bias. For example, the NSP Senior Program and final OEC practical evaluation use multiple trained evaluators, each using identical evaluation forms. The evaluators attend clinics to ensure that their ratings are reliable and consistent. It is important to provide this same level of expertise and instructor training, no matter what outdoor recreation discipline may be involved.

There are hybrid evaluations that combine features of knowledge and performancebased evaluations such as OEC on-the-hill scenarios, interactive simulations and augmented reality evaluation that require recall, decision-making, and physical actions.

Some NSP Divisions maintain an online student assessment portfolio or a training card that the student takes from training session to training session to inform instructors of what the student has accomplished and what they need to work on. These records contain a history of the student's learning activities and performance, including instructor notes, skill performance guidelines, student self-evaluation, and important written test results, among other evaluative material. The training portfolio/card can be used in conjunction with written and practical assessments to more accurately evaluate the progress of each student.

Table 8.2. Monitoring and Evaluation

Monitoring	Evaluation
Purpose	Purpose
 Assesses student progress. Checks if students are learning small, incremental steps toward the concluding objectives. Used for short-term instructional planning. 	 Assesses student <i>mastery.</i> Determines if student satisfactorily meets the course objective(s) to complete the program. Ensures standard of training is met.
 Instructor adjusts current lesson. Instructor adjusts subsequent lesson(s). Characteristics Occurs frequently during instruction. Quick "vitals" to check attainment of small incremental steps. Steps 	 Characteristics Occurs at the end of a major section: end of a lesson end of a group of related lessons end of a course Test major learning steps (concluding objectives). Tends to be a more formalized assessment process.
 Obtain an observable behavior. Observe the behavior and check carefully for accuracy. Adjust instruction: Move ahead. Reteach. Provide for additional practice. Abandon ship. 	 Evaluation Types Knowledge or concept-based Objective Subjective Performance=based (subjective) Rote skills Application skills

Monitoring Design



You may find it necessary to design your own monitoring instruments. Summative final evaluations are provided by the NSP program you are teaching, such as the OEC written exam, however, effective monitoring tasks allow you to check in with student learning. This design process includes the following considerations:

• What (Content)

- What concluding objective(s) are to be evaluated?
 - How is this objective to be evaluated?
 - What observable behaviors will be checked for learning/mastery?
- Why (The purpose of the evaluation)
 - Determine the student's knowledge.
 - Check skill ability.
 - Group students together for practice.
 - Refine and modify the program.

• When (During or at the conclusion of the lesson)

- When should the evaluation be conducted?
- Where are the logical places to evaluate knowledge/skills?
- Who (Evaluators)
 - Who will perform the evaluation?
 - Can I involve students in self-evaluation?
 - Can I involve students in peer evaluation?
 - Do I need to invite an outside source to the evaluation?
 - Would it be best to use multiple evaluators?

• How (Evaluation method)

- What type of evaluation will I design?
 - * Knowledge-based evaluations make best use of paper/pencil-type evaluations.
 - * Performance-based evaluations require the development of a task and observation/evaluation form.
- How will I use the scoring guide?

Once you've answered these questions, you can prepare the monitoring tool to accurately assess student progress.

Chapter Summary

As an instructor, you are responsible for preparing lessons, instructing students, monitoring student progress during training, and evaluating whether the students can demonstrate the appropriate knowledge and skills. It is important to use NSP standardized to assessment and evaluation tools to validate student mastery of the NSP standard of training.

Any unique programs that you may develop and submit to the NSP for validation to teach under the NSP brand, should contain the features we have discussed (e.g., bike

patrol classes or courses, lift evacuation, or local protocols that you would like to teach with OEC.

Remember, monitoring and evaluation both assess learning. Monitoring assesses learning progress and can help you adjust your teaching strategies on the spot or identify the need for remediation opportunities. Evaluations will help you determine whether the learner has mastered the appropriate lesson content based on an objective assessment of observable behaviors. Evaluations must match the instruction, and the instruction must match the concluding objectives for the lesson.

Knowledge-based objective tests are used to measure knowledge recall, decisionmaking and application. Performance-based tests measure phyco-motor skill mastery. This performance is usually recorded on a skill checklist. Some evaluations combine the features of both knowledge-based and performance tests.

Without appropriate and effective monitoring and evaluation, instructors cannot assess whether the students have learned the lesson content, the instruction has been effective, and the goals and objectives of the course have been met.

Appendices

Appendix A. Glossary

The definitions provided in this glossary are intended to provide a working understanding of the terms used in this text. They are not precise, technical definitions.

accountability

Keeping thorough and complete records on each student, maintaining and documenting the completion of objectives and skill performance, and verifying a certain standard of training.

adult learner

An individual with unique experiences that influence his or her learning.

art of instruction

A lesson-planning format that requires individual instructor creativity and decision making relating the use of effective instruction strands to essential content.

beginning

The first two steps of a six-pack lesson plan include a "set" and "concluding objectives".

coaching

One-on-one, intensive learning through demonstration and practice, characterized by immediate feedback and correction.

concluding objectives

A concise statement or statement that describes the essential learning to be gained by completion of the lesson being presented.

content delivery

The portion of the lesson where the instructor provides the details and information that allows the student to learn the information or skill being presented.

critical performance indicators (CPI)

The minimum essential level of understanding or skill proficiency to be obtained by the student for the specific lesson.

ending

The point in the lesson is when it is time to summarize what learning has occurred and to assess if students have mastered it. Includes the "summary" and "evaluation and monitoring."

enriched learning

The creation of an environment that supports maximum learning and comprehension. **evaluation**

An assessment of the student to determine if the Critical Performance Indicators have been mastered.

feedback

The skill of providing information (praise, constructive comments, and guidance) as a result of a process.

guided practice

A situation provided wherein the students can practice a new concept or skill under the direct supervision of an instructor and receive immediate feedback.

heart

The essential core to the lesson is where "content delivery" and "learning activities" are woven together.

"how" of teaching

The instructional strategies and methods selected to generate the input of new information and the output of learning activities.

independent practice

A situation provided wherein the students can practice a new concept or skill to develop efficiency and form without the direct supervision of an instructor.

instructional management

Preparations and considerations considered by an instructor before conducting a lesson to ensure a safe, educationally focused and productive learning environment.

instructional methods (strategies)

The teaching and learning activities employed by an instructor to deliver a lesson and provide students the maximum learning experience.

instructor (certified)

A certified instructor is defined as being capable of carrying out all program event functions, including those of an IOR.

Instructor Development (ID)

An NSP education program that builds a strong educational knowledge base of teaching skills for potential instructors of NSP courses. Satisfactory completion of an Instructor Development course is a prerequisite for NSP instructor certification.

instructor of record (IOR)

The instructor who creates an NSP course and who has the ultimate responsibility for instruction, management, and administration of the course.

instructor trainee (also called a mentee)

A member of the National Ski Patrol or other affiliated organization who wishes to become an instructor in any of the NSP disciplines.

instructor trainer (IT)

A certified NSP instructor who is appointed by division supervisors and who has the responsibility for monitoring and evaluating NSP instructors and courses (Quality Management).

learning activities

Planned practice that incites a student to action, either through guided practice, independent practice, or other instructional methods (strategies). Used appropriately, this is an enjoyable and effective way to advance training objectives.

learning methods

One or a combination of sensory abilities (visual, auditory, or kinesthetic) used to learn and communicate.

lesson guide

A template used to provide a consistent pattern of the essential objectives and topical outline necessary for instructors to plan lessons. Lesson guides can be used to develop a variety of lesson plans.

lesson plan

The instructor's tool for organizing effective instruction. It increases the probability of a well-taught lesson. The NSP template for lesson planning is called the "six pack."

mentor

A wise and trusted adviser, counselor and teacher who encourages and supports personal growth. In regard to the NSP system, one who assists an instructor trainee in becoming an instructor.

mentoring

A means of sharing knowledge and experience with instructor trainees so they may gain from the coaching, guidance, and encouragement of their mentors.

monitoring

The continual checking of student progress during instruction; also referred to as ongoing monitoring. Monitoring is also used to evaluate the effectiveness of the instructor and the lesson plan.

non-specific feedback

Feedback that identifies whether a performance was "good" or "poor" or that an answer was correct or incorrect but does not supply enough information to maintain or change the behavior.

nontraditional learning

Alternative instructional methods (e.g., the use of new technology), designed to overcome traditional barriers to learning, including time and distance, learning disabilities, weather, etc.

non-verbal communication

Tone of voice, unspoken body movement, or physical behavior that delivers a message, e.g., a quizzical look, crossed arms, sarcastic tone of voice, etc.

objective questions

Questions that measure the student's ability to recognize the correct answer, e.g., truefalse, multiple choice, or matching.

performance-based evaluation

An evaluation requiring the performance of a skill or task.

quality instruction

Adhering to the standard of training by teaching the essential content from each lesson guide and meeting all the concluding objectives.

quality management

Describes how an education program is administered and continually improves to meet the needs of the organization and those it serves.

risk management

The process of analyzing exposure to risk and determining how to best handle such exposure.

Scenario-Based Learning (SBL)

Scenario-based learning (SBL) is an instructional strategy where learners are presented with a problem and choose a solution based on their own choices. Students are placed in interactive scenarios, often based on real life situations. SBL learning theory provides a more experiential learning process than traditional content delivery.

Senior trainer/evaluator

A certified NSP instructor who is appointed at a local, regional or division level, and who has the responsibility for monitoring and evaluating NSP instructors, insuring CPIs for the program are properly taught, and preparing and managing tests of program candidates.

set

A 2–5-minute introduction to a lesson or a new step within a lesson that gets the student's attention, focuses attention to the subject, and introduces the new lesson.

six-pack lesson plan

A template with six steps to organize an effective lesson of instruction and student participation. The six-pack steps are 1) Set, 2) Concluding Objective, 3) Content Delivery, 4) Learning Activities, 5) Summary, and 6) Monitoring and Evaluation.

specific feedback

Clear information on what was incorrect (or correct) and how to perform correctly; a process to help students arrive at the correct answer.

subject matter

Comprises the "what" of teaching for any topic or skill; vital for an instructor to have an in-depth understanding of the "what" being taught.

subjective questions

Questions that measure the student's ability to interpret the information, understand the value of the information, and present the answer in his or her own way, e.g., essay, short answer, or fill-in-the-blank.

summary

A point in the lesson in which the learner has an opportunity for closure on the material that's just been presented by restating the essential content or CPIs of the lesson; ideally, this is student-directed.

visual learner

A person who learns effectively by seeing the process or viewing pictures.

"what" of teaching

The subject matter and essential content for any topic.

Appendix B. NSP Instructor Job Description

Note: The NSP Policies and Procedures manual constitutes the approved national policies of the NSP and supersedes other printed materials. Please consult that manual for the most current job descriptions.



DOCUMENT LIBRARY

Find what you're looking for and then take a minute to discover something new!

SEARCH RESOURCES					
<u>Governance</u> Fina	inance	nce Award Forms		Membership	Education
	Res	ources	Arcl	hīve	
ISP Documents 🚖 뿹 Board Request for Action (RFA) form	Agree Under	Agreements and Statements of Understanding			
★ Nay 2021 NSP Policies and Procedures	MO	U Janadian Ski Pa	trol MOU		

Qualifications

- A current NSP member or associate member.
- Has successfully completed the specialty program's course(s).
- Has successfully completed the Instructor Development course.
- Has successfully completed the appropriate Instructor Development Mentoring Program.

Selection

- Initial appointment process
 - Submit a completed Mentoring Form to the instructor trainer for review.
 - With the instructor trainer, submit an instructor application to the appropriate program supervisor or administrator.
 - Is appointed by the division program supervisor or delegated individual for a three-year period.
- Instructor recertification (see specific details in discipline's instructor manual)
 - Teaching requirements (vary slightly with each discipline; check disciplinespecific instructor's manual).

- Attends a national, division, or regional instructor clinic/seminar at least once every three years.
- Completes separately, or as part of the continuing education clinic an instructor skills review (see <u>Instructor Skills CE Manual</u> at www.nsp.org).
- Completes all the program's annual refresher requirements.

Responsibilities

- Teaching
 - Actively teaches program's courses.
 - Actively takes and/or teaches program's continuing education/refreshers.
 - Maintains cooperative relationship with assigned instructor trainer.
- Quality assurance
 - Maintains personal competency in all knowledge and skill areas.
 - Responsible for student competency validation.
 - Certifies students' successful completion of course.
 - May be appointed to act as a mentor for an instructor trainee.
- Administration
 - As the instructor of record (IOR):
 - Establishes course and dates through division per division guidelines.
 - Preregisters all courses with the national office by logging onto the NSP Center For Learning website.
 - Leave adequate time after creating the course for students to enroll.
 - Orders required texts and material in a timely manner.
 - Organizes and plans courses.
 - Facilitates the mentoring relationship with individual instructors and their assigned trainees.
 - Distributes education certificates to students who successfully complete the course.
 - Collates course and instructor evaluations and forwards them to the division supervisor.
 - Completes course records through the NSP website within two weeks of course completion.
 - Maintains personal teaching and continuing education record.

Appendix C. Effective Questioning Skills

Lower/Higher Order Questioning Skills

- Recall questions: Use list, describe, what, when, how, and where.
- Concept formation questions: Use why, interpret, explain, discuss, evaluate, justify, and compare.

Pausing

- Ask a question. Wait three to five seconds, then call on a student (use a prompt, e.g., "Think carefully.").
 - Pausing promotes an atmosphere more conducive to discussion. Students will learn to use the delay to organize their thoughts.

Redirecting

- Ask the same question of several different students.
- Carefully phrase questions to allow for multiple answers.
- Use non-verbal as well as verbal cues to involve more students.

Rephrasing

• Reword the same question to assist the student in developing a better understanding of the question.

Probing Techniques

• A series of questions asked of one student that are developed to move a student's initial response toward a more acceptable answer. The instructor must have in mind a pre-determined acceptable criterion for the answer.

Prompting

- Ask additional questions that provide hints. Base each new question on the previous answer.
- This technique is useful for "I don't know" answers, weak responses, and partially incorrect responses.

Probing for Further Clarification

This type of question encourages the student to provide additional information. Some useful questions to ask:

- "What else can you add?"
- "Are there any other reasons?"
- "Can you state that another way?"

• "Can you tell me why you think you are right?"

Refocusing

• A high-level probing technique used to prompt the student to relate a completely acceptable answer to another topic. This technique is designed to help students develop new concepts and see new relationships.

Things to Avoid

- Repeating one's own questions. This tends to discourage students from listening because they soon learn that you will always repeat what you said. Do not clarify/repeat a question until the student's answer indicates that the question was unclear.
- Answering one's own questions. Doing so discourages the students from listening to anyone besides the teacher, who they regard as the sole source of information. They learn not to pay attention to each other.
- Repeating the student's answer. This tends to stop discussion by cutting off other students who might have responded to what the first student said. It is appropriate to summarize a student's answer when it may be time to move the discussion to a new topic or point.

Additional Reading

Using Effective Questions Cornell University <u>https://teaching.cornell.edu/fall-2020-course-preparation/engaging-students/using-effective-questions</u>

Appendix D. Effective Teaching/Instructing Techniques

New School Tools: Six Effective Teaching Techniques

By Ken Bergmann (reprinted from Ski Patrol Magazine, Fall 2000)

Teaching and learning. They are often viewed as separate activities, but the two are so closely intertwined that education hinges upon their delicate interaction. In some instances, learning can essentially become synonymous with teaching.

Here are six effective teaching methods that turn the rules of old-school class structure upside-down by introducing more student responsibility in the learning process and gracing the teacher with the novel title of "learning facilitator." In this new role, the learning facilitator provides students with experiences that promote learning and introduces methods that help students teach themselves.

There are multiple routes you can take to accomplish your new goal as learning facilitator, but the following instructional guidelines are particularly useful for conducting NSP classes.

1. Listening

As an instructor, you can learn a lot about your students simply by listening to their comments and paying attention to all their remarks. As vital as it is to listen to their direct feedback, you should also pay close attention to their unselfconscious chatter. From side comments and occasional expressions of concern, such as "I hope I don't have to lead a femur scenario," you can become aware of a student's readiness to learn as well as his or her weaknesses, hopes, and fears. As a learning facilitator, you can use student comments as an important tool to evaluate the success of your exercises and the needs of your students.

Gather feedback and listen to your students as an ongoing process throughout the day. After presenting the verbal part of a lesson, ask the students for direct feedback. Your job is to find out your students' interpretation of the information you provide. Did they truly comprehend what you told them? Before any training exercise, ask students to summarize the specific objectives you just presented to them: "What are you going to focus on?" "What is your goal?"

Have the students tell you what they learned from a previous exercise. What details did they pick up on? Don't ask for their opinion on the goal of the exercise, but rather seek feedback that is specific to the students' experience. This will give your insight into how each lesson was synthesized by the students. You may be surprised at what they notice. Elements of the exercise that you take for granted may be foreign to your class members.

Noting your students' observations, a new training method may emerge. As a group, you and your class can work to develop this and test its benefits.

After completing a training exercise, ask each class member to name one technique he or she learned from it. You're likely to get some very specific feedback. For instance, when leading a toboggan-handling exercise, you might get responses such as "I could really feel the importance of counter rotating," "I could feel how easy it was to guide the sled rather than force it," or maybe "I noticed the difference when I anticipated the terrain."

Though these responses may not coincide with the specific goal you started with, they are extremely valuable. They reinforce what the students experience, allowing them to learn from each other.

Most important, this feedback gives the instructor a clear idea of the students' skill levels by showing what skills the students had trouble with, had never encountered before, or were already comfortable with.

Apart from your students, there are other important sources of feedback; you can also gain much from listening to your fellow instructors. Every instructor, regardless of age or experience, has valuable insight to share. If you listen and integrate their ideas into your teaching, you can improve your classes with new techniques that will benefit everyone.

2. Focusing on One Element

It's easy for a teacher/instructor to focus on a student's weaknesses, but it takes an effective teacher to develop a strategy to help the student overcome those deficiencies. Listening to instructor and student feedback is crucial to developing the strategies that will best benefit the learner. As the learning facilitator, it's essential to boil down all the information you receive to determine the one focus that the student most needs. While all suggestions may be useful individually, presenting too many at a time is counterproductive. If students are unable to separate comments pertinent to their improvement from unimportant ones, they will become frustrated. At this point, the students will start to concentrate on simpler objectives ... such as when the lunch break begins.

Many times, when you correct a single skill, you may discover that a student simultaneously acquires multiple improvements. For example, if a candidate has problems side slipping while in the handles of the toboggan, you should have several options for addressing the issue, including such directives as "Lean forward," "Rotate your upper body to the fall line," "Adjust your hand position to facilitate rotating the body," "Roll your ankles," ... the list goes on. After hearing the first two suggestions, the student would probably "shut down" and your attempt to present additional concepts might become an exercise in futility. If, on the other hand, you choose just one element of the skill for the student to focus on and ignore the other problems, the student will be able to concentrate on that single issue and conquer it.

In the case of side slipping in the handles, the best solution may be to have the student focus on rolling the ankles and getting used to the kinetics of the skis' edges engaging and releasing. The maneuver does not address issues of upper body position, hand placement, or lateral balance, but those issues are irrelevant until the candidate is able

to release and engage edges by rolling the ankles. On the second run, after the candidate has successfully conquered the element of edge control, you may choose to present one additional element to the learner. In this case, rotating the upper body may be the best experience for the student. If you choose your elements carefully, you may solve two or three problems at once. When the student concentrates on rotating the upper body down the fall line, the student's hands should automatically move to a perpendicular position. With the body in this position, the knees should automatically flex as they counterrotate and simultaneously cause the skier to lean forward.

By concentrating on one thing at a time, your student has mastered all the skill elements and can move on with confidence. "This is fun!" will now replace the "When's lunch?" attitude. This is a student who is primed for the next challenge.

3. Practice

A tourist walks up to a guy in New York City and asks, "Hey buddy, how do I get to Carnegie Hall?" "Practice," says the New Yorker. "Practice." That famous joke is always good for a laugh, but there's also a lesson there. Practice is essential to learning.

It's frustrating to watch a student make the same mistake repeatedly. Usually, we address the problem by questioning the student and listening carefully to the responses to verify that he or she understands the concepts and individual elements of the skill.

But what if the student verbalizes all the skill's components correctly, yet turns around and makes the error again? Do you abandon the lesson? Avert your eyes and move onto the next phase of the lesson? Storm off in a snit? Of course not. You stick with it, but you must somehow change your approach. If the student isn't "getting it," then you aren't teaching it in a manner he or she can absorb. Encourage the student to break the concept down into its parts by practicing each element of the skill under your gentle guidance. Eventually, your student will pick up on the problem. Make sure that you are supportive, focus on the positive aspects of the student's performance, and emphasize the correctly performed part of the skill to further his or her success. This low-pressure environment is the best learning atmosphere.

Most NSP skills are kinetic, which means they comprise a series of linked movements that come together to form one action. The only surefire way to learn a kinetic activity is to practice it. Take the accomplished piano player, for example. The pianist's hands move at a velocity that we can barely see, much less comprehend. How does the piano player see the image of the note on the sheet music and cognitively connect that symbol to the motion of using a finger to strike one of 88 possible keys? And how does the musician complete this process at such a high rate of speed? In truth, this is not how it happens. The piano player does not address each note individually. Instead, each series of notes triggers memories of familiar patterns the pianist has repeatedly practiced.

Two distinct sections of the human brain are involved in this process. The cerebrum, or cognitive part of the brain, sees and interprets the notes on sheet music. The pianist will then practice this pattern repeatedly until it is memorized, not as a gathering of

individual notes, but as a group or pattern. Another, more primitive, section of the brain, the cerebellum, is a master at memorizing kinetic patterns. This section of the brain memorizes the group of notes and will execute it as a kinetic memory, rather than employing the cognitive process of seeing and interpreting individual musical notes.

To get a sense of the individual functions of the cerebrum and cerebellum, try the following experiment: tie your shoes with your eyes closed. Your cerebellum just executed a kinetic pattern. Now try tying your shoes while you think about each step of the process (Put one lace over and then under the other lace, pull both laces tight, now take a bit of the lace, etc.). If you're typical, you'll feel like you are 3 years old and trying to learn to tie your shoes. You'll be slow and uncoordinated. Your cerebrum has been allowed to interrupt a pattern your cerebellum knows so well.

Learning toboggan handling or Outdoor Emergency Care (OEC) skills is no different. Practice helps students accustom their cerebellum to the individual movements of each new skill. It's important, however, to take note of one simple fact here. The cerebellum is stupid. Really stupid. It's incapable of determining whether the pattern it is performing is correct or incorrect. Therefore, it's imperative that the student repeatedly performs the correct kinetic sequence each time. Otherwise, the cerebellum can absorb and retain incorrect patterns as the cerebrum supplies them.

This is why some ski instructors take their advanced skiing classes onto beginner terrain to teach them new concepts. They're attempting to create a learning environment that will guarantee the successful repetition of the skill's movements. Once the cerebellum has memorized the new technique as an executable pattern, the instructor can then move the lesson to advanced terrain where students can practice their newly acquired skills under different circumstances.

The cerebellum controls side slipping, slalom turns, and bump skiing techniques. Meanwhile, the cerebrum assesses the terrain and tells the cerebellum what learned patterns to execute. If you ski into a situation, you have never encountered before, your cerebrum doesn't know what to do and you may just execute the "face plant pattern" the cerebellum knows so well. The more kinetic ski patterns your cerebellum absorbs, the less likely you will ski into a situation that you can't handle. If you allow plenty of guided practice time, then your students can firmly embed kinetic movements into their cerebellum's memory.

4. Encouragement

It's very important for teachers to focus on the positive aspects of their pupil's performance. It's rare that learners will perform a new skill perfectly; those who do have already learned it. As mentioned, rather than point out weaknesses in student performance, the effective instructor helps the student overcome those weaknesses. One way to do this is to find the inherent strengths in a student's technique. Let's say a student practicing a run as tail rope operator did it completely wrong. He was out of position, his rope-handling technique was a mess, and he ended the run with a significant amount of p-tex facing the clouds. If you witnessed just 10 yards of perfection within this tail-roping disaster, then you should focus on those 10 yards. Have the

student forget his mistakes — he knows he blew it — and instead help him remember the kinetic sensation of the properly performed part of the run. Make this the one element you focus on.

You can facilitate this exercise by moving the practice to an easier slope, thus allowing the student to acquire the necessary kinetic patterns needed for successful tail roping. Over time, as the student gets the movement down, you can add factors to the exercise to further challenge him.

By focusing on the positive, you can build your students' skill levels based on their strengths. This encouragement will foster a positive learning environment, and the students will be motivated to learn more.

5. Success through Failure

How many times have you witnessed a well-meaning instructor constantly interrupt an OEC scenario during a refresher? "Hold on, this method of tying the cravat is more effective." "Wait a sec, the patient's feet cannot hang over the end of the spine board; you won't be able to successfully apply the Hare splint."

Interrupting a student to give advice is a common method of teaching, yet it is not necessarily the most effective. The key is for the instructor to take a step back and allow the students the freedom to fail. Learning is defined as the gaining of knowledge through experience, and sentient beings learn most effectively from failure. Any 4-year-old with a burnt finger has learned all he or she needs to know about hot stoves. As instructors, it's important to save your comments and allow your students to fail. By letting your students complete an incorrect process, they will be able to learn first-hand what their errors were. You, as the instructor, can now assist the students in correcting their errors while commending their accomplishments.

Students usually enter a lesson without previous experience. When you allow the students to complete exercises without interruptions, you provide an opportunity for the students to perform a skill in its entirety, thereby permitting them to gain valuable experience. For example, it's invaluable for an OEC student to experience the flow of the entire scenario from initial contact through delivery to emergency medical services (EMS) personnel. When you encumber a student with a flood of new information midway through this exercise, it can be frustrating and counterproductive. If a student identifies a specific problem, he or she will remember to avoid causing that problem or know how to remedy it in the future.

In a training situation, a student who allows the "patient's" legs to hang over the end of the spine board would soon find it difficult, if not impossible, to apply a Hare traction splint. Other students will witness the student's choices and decisions as well, and they will hopefully learn and remember not to repeat their peer's missteps. By making mistakes and working through them, a student will learn to anticipate the consequences of his or her actions. The instructor has created the *need* for the student to gain new information by remaining silent. The student knows there is a problem and will want to solve it. He or she is now primed to absorb any information necessary to successfully

complete the process of applying the spine board, while being specifically aware of difficulties that may arise.

Instructors strive for perfection in student performance and reach it through a series of small steps. Students, on the other hand, strive for success and self-fulfillment. After working through various problems, it's exciting when a student experiences a breakthrough or learns something new. The accomplished teacher leaves room for error so that students can learn from mistakes and appreciate their accomplishments.

6. Challenge

Frequently, you will encounter students who have excellent basic skills, but are afraid of applying those skills to a more challenging situation. You, as the instructor, have observed the students run toboggans down steep slopes with extreme confidence in the fall line. These students are impressive skiers, yet they consistently avoid training in narrow chutes. You know these chutes are well within the skiers' ability level, but the students are unable to overcome the mental block of being forced to ski between the two imposing rocky outcroppings of a chute with a toboggan.

To meet your students' needs, devise safe exercises that challenge them to take their performance to the next level. You know when your students have the skills to achieve the goal. Although you're aware of your students' skills, they might not be. It's your job to create activities that help convince them they have the necessary skills.

In the case of running a narrow chute with a toboggan, you might start on open terrain with an equivalent incline. Have your class run the toboggan within an area the same width as the chute. Mark this corridor with flagging or boughs.

You may choose a groomed slope to provide your students with the opportunity to experiment with the toboggan in this safer environment. Let them try it without the chain brake so they can feel the effect of losing their braking power. Take some training tools like a rope-a-goat on the slope so the tail operator can experience what it would feel like to "save" the sled if the front operator were to run into difficulty.

Build up their confidence. Once they understand how to deal with the possible dangers of running a toboggan down a steep, narrow chute, it is time to give them the option of challenging the chute. A good first step is to have an instructor run the toboggan so the students can witness how the techniques they practiced are applied to the actual situation.

Note: For safety reasons, all NSP instructors must ensure that their students understand their right and responsibility to refuse to perform any activity. This means that a student who does not want to attempt to run a toboggan down a steep, narrow chute is under no obligation to do so. As one instructor at a steep skiing camp put it, "We all have our days when we can ski anything, and we have our days when loading the chair can be a challenge. Make sure you know what day it is for you." This instructor makes it clear that no one is obligated to try a run he or she is not comfortable with. In fact, all participants are assured that they will earn the respect of their instructors and peers if they opt out of skiing a particularly challenging run.

Conclusion

A successful instructor gives students the room to learn from their mistakes. By listening to students' feedback on lessons, you can teach through encouragement and emphasize a focus on the positive. On the physical side, never underestimate the importance of practice in learning kinetic skills. Ultimately, you can take learning to a new level by guiding students into the active role of mastering new skills and helping individuals teach themselves.

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Brain Food for Thought

The separate functions of the cerebrum and cerebellum are part of a fascinating learning process.

You can experience these two parts of your brain in action by playing this simple game: Try patting your legs – one hand at a time – in this pattern without pausing between beats: R L R R L R L L (R = right hand and L = left hand).

Do it very slowly with no errors. You will notice as you attempt this 10 times in a row that you will involuntarily start to speed up. This is your cerebellum attempting to take over the pattern from your cerebrum. You will also notice that you occasionally execute the pattern without thinking about your individual hands. This, too, is a function of your cerebellum attempting to take over the pattern from your cerebrum. You can feel the distinct difference between the cerebrum controlling each hand's motions and the cerebellum trying to execute the pattern. You are now becoming cognizant of the cerebrum and cerebellum's roles in your learning process.

This process of becoming conscious of learning, i.e., the awareness of being aware, is called metacognition (a great term for cocktail parties). When students study new skills, their awareness of kinetic patterns is heightened. This awareness can be analyzed as useful feedback. It is now the responsibility of the instructor to create a safe practice environment for their classes where the students can improve their own kinetic patterns. At this point, students are learning by teaching themselves. This is the ultimate gift any teacher can provide for a learner.

– Ken Bergmann

Appendix E. Using PowerPoint

By Doug Ginley, 2018

So, I'm sitting here watching the one hundredth PowerPoint slide go up on the screen. It's blurry and done sickeningly in orange and brown. I'm thinking that I wish I was anywhere but here. As the presentation drags on, I've planned my next vacation, solved a work problem, sent 8 text messages, and still the speaker drones on reading from his ugly slides. Will it never end?



We've all been to a presentation like this, sat through a lesson like this, or something like this, but it doesn't have to be this way. PowerPoint is a very useful teaching and presentation tool if used properly. Although many of us have used PowerPoint, are we really using it effectively? After all, we don't ever want to be like the presenter in the example above. We want people to listen to us, to learn from us, to gain understanding and to be engaged.

In this article, we will discuss why you might want to use PowerPoint, and why you might not want to use PowerPoint. We'll look at some best practices (Things you should Do), and some common mistakes (Things you don't want to do) that occur when using PowerPoint. We can always learn how to teach and present in more effective ways, and hopefully this article will point out how to do that using the PowerPoint tool.

PowerPoint is a licensed product of Microsoft. It offers a unique way to present a wide range of information, ideas and data. It is very flexible and allows the speaker to adapt the slides for his or her benefit in presenting a new idea, teaching a skill, generating a discussion, or simply sharing thoughts on an important topic. It is essential to understand that PowerPoint is a tool, and not the total presentation. You are the presenter, and PowerPoint is the tool that can aid you in getting the point of your lesson across. In essence, it lends a visual aspect to what you are saying. Today, it is all too common for the slides to be the focus of the presentation instead of the presenter. Is this you? Really think about it. If you're not sure where the focus lies when you use PowerPoint, try the following:

- Select a lesson for which you have PowerPoint slides.
- Rework the lesson, and give it without using PowerPoint (if this seems "scary", you are probably too dependent on PowerPoint)
- Can you get the same points across?
- Was your lesson creative?
- Was the audience more or less engaged?
- Is there a way to combine the two approaches to get the best of each?

Why should you use PowerPoint?

- Your audience wants it.
- It's a recognized format for presentations.
- Most computer systems can handle a PowerPoint presentation.
- It's easy to insert videos.
- It allows you to communicate different types of information.
- It can be used as a form of "storytelling" which is a good way to get your point across
- It is versatile/flexible.
- There is ease of presentation when using PowerPoint.

When shouldn't you use PowerPoint?

- When there has already been a lot of PowerPoint presentations
- When you want to show your leadership (you want the audience focus on you)
- When you want to engage emotions
- When "connecting" is more important than the content
- When you want audience participation
- When you have limited preparation time (PowerPoints are worse than ineffective if not put together properly)
- When you have limited delivery time

If you have decided to use PowerPoint to help you with your lesson or presentation, then there are some best practices that will help your presentation, and some common mistakes that you can avoid.

PowerPoint Best Practices (Things you should "DO"):

- Know your audience and match your slides to them.
- Use a high contrast color scheme (simple designs are best), you can use one of the designs provided by PowerPoint or you can make your own.
- Keep it simple.
 - Limit the number of slides.
 - Put only the information needed to get the point across on each slide.
 - Consider using the 1-6-6 rule (for each slide 1 main topic, no more than 6 bullet points, no more than 6 words per bullet point)
- Limit animation, use only what is needed to enhance the presentation.
- Use high quality photos, graphs and charts (everything should be easily readable)
- Before starting to determine your main point(s) and plan how you will use PowerPoint
 - Plan the flow of your presentation, possibly with breaks to separate the main points.
 - Design the presentation to be easy to watch and read.
 - Practice your presentation several times.

- Try your presentation on the big screen (does it still look good?)
- Consider using blank or black slides to get the focus back on you you are the one who will get the message across, not the slides.
- Use your body to help keep the focus on you, walk around, use your arm/hand to point at things on the slides.
- Don't be afraid to switch media and use flip charts, ask for audience participation, etc.
- Have a summary slide to refocus on the main points of your lesson/presentation.

PowerPoint Common Mistakes (Things you don't want to do):

- Don't use a generic design if it can be helped. They've all been seen a lot.
- Don't get crazy with animation either from slide to slide or within slides. If you do use animation, make it subtle.
- Don't use sound effects as they usually detract from presentations instead of helping get the point across.
- Be wary of using clip art. Sometimes it can be insulting rather than focusing. Consider what the point of the clip art or photo is and decide if you really want to use it or not.
- Don't use lots of fonts. Pick one that is easy to read and stick with that font.
- Don't use more than 20-25 slides at a time without a break. Studies have shown that adults tend to stop paying attention after more than 25 slides.
- Don't read your slides to the audience.
- Don't put too much on any slide. It should be easy to read. It doesn't have to "say" everything, it is your job to add detail to the bullet point shown.
- Don't count on PowerPoint to work. Have a backup plan.
- Don't use slides that are "off topic."
- Don't present and work on a computer at the same time. You can't present as well (for instance making eye contact), and if you're looking at the computer, the audience will want to know what you're doing and potentially they will lose you and the lesson as the focus.
- Be wary of giving handouts. The audience might be reading them instead of paying attention to what you are trying to teach them. Use handouts to reinforce what you present, or to have reference points in your presentation for the audience. Handouts can also be used by the audience to take notes that follow your presentation.
- Don't forget that PowerPoint is just one tool for helping you as the presenter. Make sure you have a good lesson plan and/or message. Then use PowerPoint as a means of enhancing the important points in the lesson.

Appendix F. Sample Lesson Guides from NSP Education Programs

Outdoor Emergency Care Sixth Edition,

from the NSP website at Instructor Resources/OEC Instructors. Chapter 16. Gastrointestinal and Genitourinary Emergencies

OEC Instructor Resources: Student text, Instructor's Manual, PowerPoints, Test Bank, IRCD, NSP website at Instructor Resources/OEC Instructors (online resource), CD, website, gloves

OEC Student Resources: Student text, Student CD, NSP website at Instructor Resources/OEC Instructors (online resource), website, PowerPoints

Chapter Objectives

Upon completion of this chapter, the OEC technician will be able to:

- 16-1. List at least six possible causes of emergencies involving the gastrointestinal and genitourinary systems.
- 16-2. List the signs and symptoms of emergencies involving the gastrointestinal and genitourinary systems.
- 16-3. Compare and contrast visceral pain and parietal pain.
- 16-4. Describe and demonstrate how to assess the abdomen.
- 16-5. Describe and demonstrate the management of a patient with a severe GI/GU emergency.

Essential Content

- I. Anatomy and physiology
 - A. Four quadrants of the abdomen, formed by two perpendicular lines that intersect at the umbilicus.
 - B. Hollow organs: stomach, gallbladder, small and large bowel, appendix, ureters, urinary bladder
 - 1. Move materials such as food, bile, feces, and urine.
 - 2. Leakage from rupture or laceration causes peritonitis, or inflammation of the peritoneum.
 - a. Can cause intense abdominal pain, nausea, vomiting, fever, and septic shock.
 - C. Solid organs: liver, pancreas, spleen, ovaries
 - 1. Liver makes protein, synthesizes blood-clotting chemicals, produces bile to aid in digestion of fat.
 - 2. Pancreas produces digestive enzymes and hormones to regulate blood sugar.
 - 3. Spleen stores blood cells, helps make antibodies for fighting infections.
 - 4. Ovaries produce eggs for reproduction.
 - 5. Highly vascular, when damaged can result in profuse internal bleeding, leading to hemorrhagic shock.
 - D. Kidneys and ureters
 - 1. Outside posterior abdominal cavity in the flanks

- 2. Filter and excrete liquid waste into bladder in pelvis.
- 3. Located in retroperitoneal (behind the peritoneum/abdomen) space.
- E. Large vessels
 - 1. Abdomen contains two largest: the abdominal aorta and inferior vena cava.
 - 2. Numerous vascular structures contained within the pelvic cavity.
 - 3. Disorders affecting any of these blood vessels can lead to lifethreatening blood loss, shock, even death.
- II. Acute abdomen
 - A. Sudden, severe, unexplained pain in the abdomen
 - 1. Encompasses many different maladies.
 - 2. More advanced medical care is often urgently needed.
 - 3. More important for OEC technicians to recognize a serious illness, and that patient needs to go to hospital.
 - B. Two hallmarks of acute abdomen
 - 1. Severe pain
 - 2. Inflammation of the peritoneum (peritonitis)
 - a. Thin membrane that lines the abdominal cavity and contains two types of nerves.
 - b. When contacted by blood or contaminants, nerve endings become irritated, resulting in pain?
 - i. nerves enable one to perceive touch, pressure, heat, cold, and pain.
 - a) Pain can be easily and precisely pinpointed to specific location.
 - b) Known as parietal pain.
 - 3. ii. Visceral pain is diffuse, spread over a large area.
 - a) Patient cannot pinpoint exact location.
 - b. Distention or contraction of peritoneum stimulates visceral stretch receptors, can cause pain to be perceived at a distant location, known as referred pain.
 - C. Causes of the acute abdomen
 - 1. Appendicitis
 - a. Inflammation of appendix
 - b. Caused by obstruction due to infection, hard stools, undigested nuts, or parasites.
 - c. Requires urgent surgical intervention, can cause serious complications and/or death if surgery delayed.
 - d. Rupture can result in peritonitis and internal bleeding.
 - e. Present with periumbilical or upper abdominal pain; with time can move to right lower quadrant.
 - f. Pain accompanied by abdominal guarding, nausea, vomiting, fever, and, rarely, diarrhea.
 - 2. Pancreatitis

- a. Inflammatory condition where digestive juices become trapped within the pancreas, and organ begins to digest itself (auto-digestion)
- b. Can be mild or life threatening, can occur suddenly or recur throughout one's life.
- c. Causes include excessive alcohol consumption, gallstones (which block pancreatic duct), medications, trauma, viral infections, and pancreatic tumors or cancer.
- d. Has two forms
 - a) Acute
 - i. Sudden onset of moderate to severe parietal pain in both upper quadrants
 - ii. Often has referred pain to back or left shoulder.
 - iii. Abdomen distended, very tender to palpation, patient presents guarding.
 - iv. Nausea and vomiting common.
 - v. May have low-grade fever.
 - vi. Vital signs may be elevated.
 - vii. Severe cases present with shock-like signs, may result from multiple organ failure, considered life-threatening.
 - b. Chronic
 - i. Ongoing condition causes scar tissue to form in pancreas and decrease in functions.
 - ii. Can develop after years of alcohol abuse.
 - iii. Can also be caused by any factors listed with acute peritonitis.
 - iv. Symptoms are similar to acute, can be present for many days, often worsen after eating or drinking alcohol.
 - v. Untreated, can lead to decreased pancreatic function and diabetes if pancreatic cells are destroyed.
- 3. Hepatitis
 - a. Inflammation of the liver
 - b. Untreated, can result in decreased liver function and related problems.
 - c. Acute when starts but can become chronic if present more than six months.
 - d. Most common cause: viral infection
 - e. Other causes include bacteria, alcohol, medications, chemicals, and autoimmune disorders.
 - f. Present with flu-like symptoms: fatigue, loss of appetite, headache, nausea, vomiting.
 - g. May last for several weeks.
 - h. Possible low-grade fever

- i. Parietal-type abdominal pain, typically right upper quadrant, and/or just below sternum (epigastrium)
- j. Hallmark sign is jaundice dull yellowing of skin, first evident in sclera (white of eye), caused by bilirubin.
- k. If patient appears jaundiced, see a physician promptly.
- 4. Cholecystitis
 - a. Inflammation of gallbladder can be acute or chronic.
 - b. Most common cause is gallstones, blocks the duct that exits the gallbladder, causing backup of bile, irritation, and sometimes infection of gallbladder.
 - c. Other causes include alcoholism and trauma.
 - d. Patient presents with right upper quadrant tenderness or pain, nausea, and vomiting.
 - e. May have history of abdominal pain following meals, especially those involving fatty or greasy foods.
 - f. May have fever, and occasionally exhibits jaundice.
- 5. Pyelonephritis (kidney infection)
 - a. Infection of one or both kidneys and the ureters (tubes leading to bladder), can be acute or chronic.
 - b. Repeated infections can cause decreased kidney function, shock, and even death in rare cases.
 - c. Young, elderly, and infirmed more susceptible.
 - d. Caused by bacterial infections that typically begin as a bladder infection.
 - e. Bacteria enter through urethra, travel to bladder; left untreated, grow and travel to kidneys.
 - f. Women more prone to urinary infections due to short length of urethra
 - g. Complications can be widespread infection (sepsis), kidney stones, kidney failure.
 - h. Patients appear ill, present with symptoms that include severe abdominal, flank or back pain, fever, warm or hot skin, chills and shivering, nausea and vomiting, pain or increased frequency in urination or abnormal urine.
- 6. Nephrolithiasis (kidney stones)
 - a. Mineralized salts within the kidneys crystallize to form small, hardened deposits that grow over time.
 - b. Stones originate in kidney, become trapped within one or both ureters.
 - c. Urine flow may be blocked, causing pressure, spasm, and intense pain within ureter.
 - d. Causes include increased levels of stone-forming chemicals within the kidney, dehydration, congenital kidney defects, certain medical conditions such as high blood pressure, diabetes, and gout.
- e. Patients with lodged stone usually are in severe distress and generally in excruciating pain.
- f. Pain may be localized in abdomen, more commonly the flank; may radiate to groin area.
- g. Often described as tearing, or stabbing; may be unable to sit.
- h. Other symptoms include pain upon urination, blood in urine, nausea and vomiting.
- 7. Bowel obstruction (ileus)
 - a. Serious condition where segment of small or large intestines becomes partially or completely blocked.
 - b. Prevents solids or liquids from moving through digestive tract.
 - c. Causes can be scars from previous surgery, structural, diet, medications, chronic medical conditions, or cancer.
 - d. Patient commonly presents with history of constipation, visceral abdominal pain, guarding, profound nausea and vomiting, possible fever.
 - e. Abdomen may be bloated or grossly distended.
 - f. Initially vitals may be elevated, can fall quickly, leading to shock and even death if not treated.
- 8. Perforated bowel
 - a. Hole or tear that develops in the intestines, resulting in contents leaking into abdominal cavity.
 - b. Can rapidly lead to peritonitis, sepsis, and death if not corrected by surgery.
 - c. Causes include bowel obstruction, excess stomach acid, ulcerative disease, trauma, chronic weakness of intestinal wall.
 - d. Patients present with intense visceral abdominal pain, worsens with movement or deep inspiration, accompanied with guarding, high fever, severe nausea, intense vomiting.
- 9. Peptic ulcerative disease (PUD), gastro-esophageal reflux disease (GERD), and gastrointestinal bleeding
 - a. Condition in which excess stomach acid creates a defect of the lining of the esophagus, stomach, or duodenum.
 - b. Specific bacteria in lining of stomach can also lead to PUD.
 - c. Gastritis or esophagitis, inflammation of the stomach or esophagus, can occur causing heartburn-type symptoms.
 - d. Esophagitis is caused by GERD, where stomach contents mix with hydrochloric acid and flow back into the esophagus.
 - e. Factors that can cause excessive acid production include fatty foods, caffeine, smoking, and alcohol.
 - f. May present with chest pain, upper abdominal pain, nausea, sour taste in mouth.
 - g. Pain may be described as gnawing.

- h. May be difficult to differentiate peptic ulcer pain and acute heart disease.
- i. Assume pain is of serious nature.
- j. Severe cases of PUD can lead to life-threatening hemorrhage (GI bleed)
- k. Can occur in any part of gastrointestinal tract.
- I. Can be caused by medication, alcohol, tears within esophagus or intestines, ruptured vessels.
 - i. Upper GI bleeding can present as blood-tinged vomit (hematemesis), either bright red or "coffee grounds" appearance
 - ii. Can also present as bright red stools (hematochezia) usually indicates bleeding in lower GI tract.
 - iii. Tarry, black, foul-smelling stools (melena) indicate bleeding from the upper GI tract.
 - iv. Recommend hospital care for blood in vomit or stool.
- 10. Abdominal aortic aneurysm (AAA)
 - a. Weakened aorta that develops a bulge formed by localized dilatation of the wall of the aorta (aneurysm)
 - b. Typically, due to uncontrolled hypertension and arteriosclerosis
 - c. Can become large enough to cause pain or dizziness upon standing.
 - d. Rupture of aneurysm is true emergency that can lead to massive blood loss and sudden death.
 - e. Patients present in shock, may complain of flank or abdominal pain, weakness, and/or dizziness.
 - f. History includes recent fainting spells, cool and pale skin.
 - g. Often have unequal femoral pulses
- 11.OB/GYN-related conditions
 - a. Abdominal and pelvic cavity contains structures of female reproductive system that when affected by disease can cause signs and symptoms of acute abdomen.
 - b. Common sources include ectopic pregnancy, ovarian cysts, bladder infection, pelvic inflammatory disease.
- III. Common gastrointestinal ailments
 - A. Gastroenteritis
 - 1. Inflammatory condition involving the stomach lining and/or intestines.
 - 2. Typically caused by bacterial, viral, parasitic infections, may result from noninfectious source (excessive alcohol use, or prolonged aspirin/ibuprofen use)
 - 3. Presents with cramping abdominal pain, bloating, nausea, vomiting, and/or diarrhea, may or may not have fever.
 - 4. May become dehydrated from vomiting and diarrhea.
 - 5. Pain may be localized to upper quadrants or be diffuse.

- 6. Seek medical care if:
 - a. Symptoms persist over 24 hours, dehydration is possible.
 - b. Blood in vomit or stool may be due to undiagnosed GI bleed.
- B. Indigestion
 - 1. Upper GI tract can become inflamed due to stress, viral illness, rich or spicy foods, or excessive alcohol.
 - 2. Can result in nausea and/or vomiting.
 - 3. Usually presents with dull cramping pain in upper abdominal quadrants, may be as high as center of chest.
 - 4. Caused by stomach acid that ascends into lower esophagus, resulting in pain (heartburn)
 - 5. Can often mimic pain of heart attack
 - 6. Persistent or severe indigestion warrants exam by a doctor to rule out more serious medical conditions.
- C. Nausea and vomiting
 - 1. Vomiting is stomach muscles contracting violently, sending stomach contents up the esophagus and out the mouth.
 - 2. Nausea is a feeling of impending vomiting.
 - 3. Common causes of both include motion sickness, altitude, food poisoning, infection (viral or bacterial), irritating drugs or chemicals (aspirin, alcohol), ulcers, tumors, and abdominal trauma.
 - 4. Excessive vomiting without fluid replacement can cause dehydration and other problems.
 - 5. Vomiting from an unresponsive patient can cause aspiration.
 - 6. Aspiration can lead to lung infection, potentially life threatening.
 - 7. Important to quickly clean or suction vomit out of upper airway
- D. Colic
 - 1. Intermittent, severe abdominal pain caused by obstruction and distention of a hollow organ.
 - 2. Caused when muscular contractions within wall of organ try to force organ's contents past the obstruction.
 - 3. Common sources: gallstones, tumors, twisted bowel, trapped gas, mass of hard stool in bowel, kidney stones.
 - 4. Pain generally around navel but can move over time.
 - 5. For a blocked ureter, colicky pain occurs in flank and radiates to the groin.
- E. Diarrhea and bloody stools
 - 1. Passing of frequent liquid stools
 - 2. Caused by viruses, bacteria, protozoa, chemicals and other gastric irritants, medical conditions such as bowel disease, intestinal tumors, and food allergies.
 - 3. Prolonged or excessive diarrhea can lead to dehydration.
 - 4. In outdoor environment, most often caused by contaminated water or food.
 - 5. Modern sanitation has helped eliminate causes in urban setting.

- 6. Adenovirus and rotavirus commonly occur in urban centers and on cruise ships.
- F. Viruses, protozoa, and bacteria
 - 1. Staphylococci
 - a. Grow everywhere in environment.
 - b. When contaminated, acute diarrhea and vomiting can occur?
 - 2. Salmonella
 - a. Often present in undercooked poultry
 - b. Cause same problems as staph but lasts longer.
 - 3. Giardia lamblia and Cryptosporidium (protozoan)
 - a. Protozoa present in untreated surface water.
 - b. Can cause chronic diarrhea and mild, chronic dehydration.
 - c. Medications can treat.
 - 4. Escherichia coli (E. coli)
 - a. Common bacterial species found in human colons, aid in digestion.
 - b. Certain strains can cause deadly diarrhea; includes traveler's diarrhea.
 - 5. Any of these listed can cause dehydration, loss of electrolytes, starvation, shock, and even death.
 - 6. Hospitalization with intravenous therapy is recommended.
- G. Constipation
 - 1. Inability to excrete feces.
 - 2. Occurs due to inactivity, dehydration, lack of dietary fiber, or more urgent condition such as a tumor blocking the intestinal canal.
- IV. Assessment
 - A. Abdominal/pelvic pain can be difficult to assess.
 - B. Do not diagnose recognize signs and symptoms associated with an emergent condition.
 - C. Initiate lifesaving care if needed.
 - D. Refer patients to higher level of care if shock exists, and initiate lifesaving treatment in
 - 1. lieu of complete physical exam.
 - E. Ensure scene is safe.
 - F. Assess ABCDs and vital signs.
 - G. Question patient on medical history and pain symptoms using SAMPLE and OPQRST.
 - H. Determine type of pain:
 - 1. 1.Constant or intermittent
 - 2. 2.How long pain has been present
 - 3. 3.If pain has moved since onset
 - 4. 4.Any aggravating or relieving factors: motion, coughing, breathing, belching, urination
 - I. Identify associated symptoms: nausea, vomiting, diarrhea, bloody stool, fever, loss of
 - 1. Appetite.

- J. Physical exam
 - 1. Calm patient to allay anxiety.
 - 2. Ask permission to examine and explain exam.
 - 3. Place patient in position of comfort, ideally in supine position with knees slightly.
 - 4. flexed, which will allow abdominal and pelvic muscles to relax; move to a warm location.
- K. Inspection and palpation
 - 1. Inspection
 - a. Expose and observe for clinical signs such as trauma, distention, bulging, or discoloration.
 - b. Note if patient is motionless or unable to sit still and how abdominal wall moves with respirations.
 - c. Identify pain and its location.
 - 2. Palpation
 - a. Systematic physically compress all four quadrants to determine presence or absence of pain, masses, tensing, guarding, or rigidity.
 - b. Begin with quadrant farthest away from site of pain.
 - c. Place one hand atop the other and place on patient's abdomen.
 - d. Rest hands in this position to allow the patient to become comfortable.
 - e. Move slowly, apply firm but gentle downward pressure, and note the patient's response.
 - f. Feel if the abdominal muscles suddenly tense in response.
 - g. Slowly release pressure, gently glide the hands from one quadrant to the next, repeating the process for each quadrant.
 - h. Note any evidence of tenderness on exam.
 - i. Rebound tenderness release of pressure on exam of the abdomen resulting in severe pain— usually indicates presence of serious intra-abdominal problem.
 - j. Check right and left flank.
- V. Management
 - A. Move patient to moderate temperature location and keep patient warm and in comfortable position.
 - B. Provide supplemental oxygen as needed.
 - C. Anticipate vomiting.
 - D. Do not give food or drink.
 - E. Monitor vital signs.
 - F. Anticipate shock and treat accordingly.
 - G. Most patients require further medical evaluation:
 - 1. Transport to higher level of care; or
 - 2. Encourage patient to seek physician evaluation and definitive treatment.

Case Presentation

You are working first-aid duty in the patrol room when a 35-year-old man slowly walks in complaining of severe abdominal pain. You steer the patient to the nearest exam table and begin to assess his condition. Moments later, he vomits. The vomit is clear and does not appear to contain blood. The patient apologizes and states that he started feeling ill this morning but decided to come skiing anyway to be with his family. He has not suffered any recent trauma and is not currently taking any medications. There is nothing pertinent in the patient's past medical history. He says he has never experienced anything like this before and describes his abdominal pain as "intense."

What should you do?

Case Update

On examination of the patient, you notice that he is pale, sweating, and feels warm to the touch. He relates that his pain was originally near his navel but has now "moved down and to the right." Examination of the abdomen reveals severe tenderness in the right lower quadrant. He tells you that every bump in the road on the way to the ski hill felt like he was "being stabbed in my gut." The patient has a heart rate of 116, blood pressure is 132/88, and respirations are 20 and shallow.

What do you think is wrong with the patient?

Case Disposition

As you examine the patient and listen to his story, you become concerned the patient may have an acute abdomen. You place the patient on oxygen, keep him comfortable, and have him transported to the hospital. A week later, the patient's wife comes to the patrol room to thank you and the other patrollers for taking such great care of her husband. She reports that he had surgery for acute appendicitis and is now doing well.

Discussion Points

Has anyone had or known of someone with an acute abdomen? What are some more ways to make a patient comfortable while being examined or waiting for transport?

How might a child react differently with this type of condition?

How do you determine if a condition is acute or chronic?

Level I Avalanche Course

Lesson — General Avalanche Awareness

Suggested time: 40 minutes.

Instructor Notes: This lesson sets the stage for the learning that follows. Integration of avalanche video clips, slides, and lecture works best. Students should develop an appreciation and understanding for basic avalanche phenomena, learn common nomenclature, and discuss avalanche accident data in sufficient detail to recognize trends and understand the importance of timely rescue.

Avalanche Rescue Instructor Resources:

Avalanche Instructor's Manual; See required text and instructor list on pages 12-13 Instructor

- Slide set.
- Board/paper and marker.

Student

Snow Sense, pages 1-9

Concluding Objectives

- Identify problems encountered with an avalanche burial.
- Explain avalanche-related terms correctly.
- List types of avalanches and know how they relate to avalanche hazard (personal safety).

Essential Content: Avalanche Hazard and Nomenclature

- A. Consequences of burial
 - 1. Avalanche survival statistics
 - 2. Avalanche hazard
- B. Introduction to and simple definition of the avalanche triangle
 - 1. Weather
 - 2. Snowpack
 - 3. Terrain
 - 4. Human factors
- C. Types of avalanches (and ingredients)
 - 1. Loose snow
 - 2. Slab
 - 3. Ice
- D. Avalanche nomenclature (acquaint with terms that will be defined in later lessons)
 - 1. Start zone
 - 2. Crown
 - 3. Flanks
 - 4. Stauchwall
 - 5. Bed surface
 - 6. Track/path
 - 7. Toe

- 8. Deposition zone
- E. Avalanche triggering (broad view)
 - 1. Natural
 - a. Cornice
 - b. Ice
 - c. Other
 - 2. Artificial
 - 3. Most often by the victim
- F. Classification of avalanches
 - 1. Slab, loose-snow, ice
 - 2. Wet, dry
 - 3. Airborne, ground, mixed
 - 4. Trigger
 - 5. Size

Suggested Instructional Activities

For problem-solving, summary, and evaluation:

- 1. Use excerpts from the Avalanche Awareness video.
- 2. View the Colorado Avalanche information Center's *U.S. Avalanche Accident Statistics* slide set.
- 3. Describe an actual accident scenario.
- 4. Develop a question-and-answer session using made-up names for things. Explain to students how avalanche terms are descriptive names for very specific things.
- 5. Use a blank drawing of a slab avalanche and have students name the parts.
- 6. Use the *Avalanche Dynamics* video or slides to illustrate various types of avalanches.
- 7. Make puzzle pieces for the key avalanche elements. (Alternative idea: Use slides or props.) Dissect and discuss each key avalanche element. Explain that if any piece is missing, it is unlikely to avalanche, but if all are present, beware.
- 8. Use Activities references (Chapter 6).

Appendix G. Classifying Learning

Learning Domains

This appendix addresses different areas of learning as defined in the work by Bloom and others. It focuses on how instructors can plan lessons to match those learning areas. Educators have identified three major areas of learning: cognitive (i.e., thought), psychomotor (i.e., motor skills), and affective (i.e., values and beliefs). Within each domain, a set of learning levels has been defined. Due to the physical and mental activity required of NSP members, the organization's training focuses primarily on the cognitive and psychomotor domains. Moreover, while the following information can be very helpful to instructors, it is not essential to know them to be an effective NSP instructor.

Because people learn skills in each area or domain in different ways (visual, auditory, and kinesthetic), teachers/instructors who understand the fundamental differences between these domains of learning can relate them to the various learning levels associated with each domain. This appendix focuses primarily on the first three levels of the cognitive domain, although general information on the remaining cognitive levels and the psychomotor and affective domains is also briefly presented.

The NSP textbook *Outdoor Emergency Care Sixth Edition* divides all objectives into these three domains (see Table G.1). Other courses and programs focus primarily on the cognitive learning levels of information, comprehension, and application. The cognitive level of learning refers to mental processes such as memorizing facts, understanding concepts, developing reasoning skills, and applying logic. Much of what NSP members learn occurs at the cognitive level — for example, memorizing bones in the body, developing an ability to read a map, and understanding the importance of snowfall rates in assessing avalanche danger.

The psychomotor domain of learning refers to physical skills, such as learning to drive a car, ski, apply a splint, or play tennis. The affective level pertains to the exploration of feelings, emotions, and values. Examples of affective learning include being able to explain the importance of tolerance when caring for a stroke patient or valuing the skills that members with diverse talents bring to an organization. Each of these domains have associated learning levels, as can be seen in Table G.1.

Cognitive learning levels are expressed in behavioral terms in the form of specific action verbs that help learners and instructors communicate objectives. NSP materials adapt the concept of learning levels from *Taxonomy of Educational Objectives*, developed by a committee chaired by Benjamin Bloom, Ph.D., of the University of Chicago. Bloom's six cognitive levels of thinking and processing information form the foundation for almost all education programs. His committee also prepared a taxonomy for the affective domain, and other researchers continued the work and provided information on the psychomotor domain. It is for the work in the cognitive domain that Bloom's committee is most recognized.

Table G.1. Three Major Areas of Learning

Cognitive: Thinking, logic <i>Example:</i> Memorizing facts, understanding principles <i>Learning Levels</i>	Psychomotor: Motor skills <i>Example:</i> Learning how to ski or ride a bike <i>Learning Levels</i>	Affective: Values Example: Modifying education to take advantage of some of the concepts presented in the model and perhaps generating a set of lessons using some of				
Information	• Imitate					
Comprehension	Manipulate	the concepts presented.				
 Application 	Precision	Learning Levels				
Analysis	Articulation	 Receiving 				
Synthesis	Naturalization	Responding				
Evaluation		Valuing				
		Organization				
		 Characterization by value 				

Information on the affective domain is adapted from David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, *Taxonomy of Educational Objectives. Handbook II: Affective Domain* (The Classification of Educational Goals) (New York: Longman, 1964).

Cognitive Learning Levels

Learning levels help to categorize the complexity of thinking required to remember and use information. Instructors select learning activities that match the learning level abilities of their objectives. It is important to be able to detect the student's learning level, teach to that level, and evaluate progress at that level. The goal is for students not only to function at a beginning level, but also to be able to advance to higher levels of learning by applying the new concepts to other problems and in other situations.

The cognitive domain involves knowledge and the development of intellectual skills, which include the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities. The levels can be thought of as degrees of difficulty. One level must be mastered before learning can take place at the next level (see Table G.2).

The Instructor Development course focuses on the first three levels of cognitive learning: information, comprehension, and application. (Additional information on the last three levels is available in the *Taxonomy of Educational Objectives*, cited above). Certainly, some outdoor tasks require analysis, synthesis, and evaluation; however, initial instruction in outdoor skills generally focuses on integration of the first three levels.

These levels build sequentially. A student who can list or name the concepts covered in a lesson is at the information level. Being able to explain or describe how to apply the

concept represents the comprehension level, and being able to demonstrate how or where the concept might be applied exemplifies the application level.

Table G.2. Cognitive Learning Levels

Foundation Levels: Lower-level thinking skills

- Information knowledge
- Comprehension understanding

Integrated levels: Higher-level thinking skills

- Application using learned materials
- Analysis basis of logic and formal reasoning
- Synthesis putting parts together to form a whole
- Evaluation making judgments about value

A recent revision of Bloom's Taxonomy indicates the following:



Vanderbilt University Center for Teaching

Instructional Design — The Taxonomy Table

How to Write Objectives¹

To dispel the confusion between the means and ends of instruction, contemplate these definitions:

Ends

Objectives describe intended results, outcomes, and changes.

¹ Adapted from A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. Lorin W. Andersin and David R. Krathwohl; et al. (New York: Longman, 2001).

Means

Instructional activities, such as reading a textbook, listening to lectures, conducting surveys, and observing field work, are means by which objectives are achieved.

For an objective or outcome to be measurable, learning a fact, concept, or procedure is implied. In addition, invoking a change central to a student's beliefs moves the learning to the highest level: meta-cognitive knowledge.

Examples taken from OSU Extended Campus distance courses are attached to each category in the Cognitive Process Dimension and the Knowledge Dimension in the taxonomy table below (Table G.3). Click the links to open the example windows:



Table G.3. Bloom's Taxonomy

Given that current NSP texts rely on the "old" taxonomy for "keywords," that taxonomy is described in detail below.

Students must acquire sufficient information to comprehend the meaning. No one can apply skills and knowledge without first having a firm foundation of facts and an understanding of those facts. Information and comprehension make up lower thinking levels, while application requires higher thinking processes. Sample key verbs and typical matching learning activities are identified for the first three levels.

Information

Most adults relate to information and comprehension level tasks, since most of their past education experience probably stressed learning at these levels. Learning at the information level requires the student to bring forth the appropriate, previously learned material. Memorization and the ability to repeat it later characterize this level (see Table G.4).

Whether the data consists of only a few specific facts or a complete theory, you should realize that the process of learning material at the information level is hard work. Memorizing lists of medical terminology, complex steps in emergency care, or variables required for accurate avalanche prediction requires brainpower, so be sensitive to this and try to remember what it was like for you to go through this process.

Most evaluation activities fall into the information level, as do labeling items, listing, and game show-type quizzes. Although information-level learning does not require complex thinking processes, students need adequate time to build an adequate knowledge base before moving on to higher-level comprehension and application activities.

Comprehension

Comprehension activities require learners to translate an idea into another form. Students who explain what they have learned in their own words display comprehension-level learning. Other means of expressing comprehension include summarizing, making comparisons, predicting what will happen under certain circumstances, and giving examples (see Table G.5).

Table G.4. Learning at the Information Level

(*Remembering previously learned material, simple regurgitation of facts, information, lists, etc.*)

Key Verbs	Typical Learning Activities			
o Identify	 Tell/write correct name for an item. Write correct labels next to diagram 			
 Recognize Name Locate Recall Define List 	 or pictures on a worksheet. Write/say any list of information. Match a card with a label to the correct item. Find the correct answer in multiple choice. Write/say the definition to a term. Write/say the steps to a procedure. Write/say any list of information. Answer a game-type question about a procedure, definition or category. 			

Table G.5. Learning at the Comprehension Level

(Grasping the meaning of the material)

Key Verbs	Typical Learning Activities
-----------	-----------------------------

Explain/describe	Start with either written or oral activities:			
	What can you conclude?			
	 If X happens, then what? 			
	Give an explanation in your own words.			
	 What is the best (answer, procedure, step), given the following information? 			
Distinguish between	Given several examples, scenarios, situations, etc., select the correct one for the question and explain the reasons.			
	 What reason or evidence supports your use of? 			
Perform/demonstrate	 Perform rote skill from beginning to end. Develop plays, skits, pictures to illustrate an idea 			

Discussion activities can be excellent avenues for developing student comprehension. Instructors need to check that learners comprehend major concepts and principles before expecting them to apply their comprehension in real situations.

Application

The ultimate goal of instruction is to develop students who can apply what they have learned. Application activities require students to use learned material in solving problems. Students must select the appropriate information and use it correctly for application-level tasks. The information must be used in its entirety, rather than in the smaller pieces in which it may have been taught. A student who can regurgitate all the right lists and information may not be able to use the information during an actual situation.

Hands-on learning should not be confused with application-level learning. Hands-on activities can occur at any level, but not all hands-on activities push learners to the application level. Frequently, instructors confuse basic (rote) skill performance with application-level performance. Rote skill performance, while a necessary step, does not push learners to application. Application, a higher-level thinking skill, demands considerable decision making and the use of integrated skills. Practicing the steps to apply a skill that has been demonstrated in class repeatedly is rote learning; assessing a situation, determining which skill is needed, and then correctly using that skill requires application. To adequately demonstrate this learning level, the students must apply learned skills in different settings (see Table G.6).

Table G.6. Learning at the Application Level

Key Verbs	Typical Learning Activities
Perform/demonstrate	Role-play "patient" in scenarios when given a minimum of signs and symptoms.
Reconstruct/assess/name	Assess a situation and select the best treatment and/or technique. Rebuild probable preceding events. Improvise materials when necessary.

When working at the application level, a student solves a lifelike problem that requires identifying the issues and using appropriate generalizations and skills. You may find that learners seem to "hit the wall" when presented with application-level activities. This glazed-eye response relates to a sudden brain flurry as students frantically search their brains for all information relevant to the problem.

NSP and other outdoor recreation instructors make frequent use of higher-level thinking and application activities through scenario-based exercises and role playing. Application activities require a minimum of directions since the situation is based on previous learning and the students are expected to know what to do. To ensure success at the application level, make sure students have an adequate foundation of knowledge at the information and comprehension levels.

Information: Remembering previously learned material. The recall of facts, information, lists, concepts, and theories without interpretation by the learner.

Comprehension: Grasping the meaning of previously learned material. To restate, discuss, describe, explain, review, translate, or locate.

Application: Using learned materials in new and real situations. To operate, illustrate, use, employ, sketch. Commonly misinterpreted terms are to show, to apply thorough knowledge.

Analysis: Breaking information into parts and detecting the relationships between those parts. Analysis is the basis of logic and formal reasoning. Behavior terms include appraise, calculate, test, compare, contrast, solve, criticize, infer, and distinguish. **Synthesis:** Putting together new elements and parts to form a whole. This level encompasses most creative behaviors, including composing, proposing, planning, designing, managing, collecting, constructing, organizing, preparing, summarizing, and revising.

Evaluation: Making judgments about value for a specific purpose. Evaluation includes the development of criteria on which to base the judgment. Key behaviors include evaluating, rating, selecting, estimating, measuring criticism, and justifying.

Table G.7. Psychomotor Domain

Level	Definition	Possible Verbs
Imitate	Observe a skill and attempt to repeat it, or see, attempt, copy, duplicate a finished product and attempt to replicate it.	Attempt, copy, duplicate, imitate, mimic
Manipulate	Perform the skill or produce the product in a recognizable fashion by following general instructions rather than through observation.	Complete, follow, play, perform, produce.
Precision	Independently <i>perform</i> the skill or produce the product, with accuracy, proportion, and exactness (at an expert level).	Achieve automatically, excel, perform expertly, perform masterfully
Articulation	Modify the skills or the product to fit new situations; combine more than one skill in sequence with harmony and consistency.	Adapt, alter, customize, originate
Naturalization	Complete one or more skills with ease.	Perform naturally

Psychomotor Learning Levels

The psychomotor domain pertains to the use and coordination of motor skills (see Table G.6). Development of these skills requires continual practice and is measured in terms of speed, precision, and distance in the execution of procedures and techniques.

Many outdoor recreation activities involve highly developed physical skills; consequently, it is important for instructors to be familiar with this learning domain. There are several different taxonomies available for the psychomotor domain. The following table was abstracted from material contained in Dave, R.: *Psychomotor Domain*, Berlin: International

Conference of Educational Testing, 1967.

Table G.8. Affective Domain

Level Definit	Possible Verbs
---------------	----------------

Receiving	Gain the learner's attention.	Awareness, willingness to receive, consciously attend, listen, focus
Responding	Engage the learner at the level at which interests are born.	Agree, respond, choose, believe
Valuing	Examine beliefs, ascribe worth, commit to living in accordance with stated values.	Examine, ascribe, seek, identify, act, promote
Organization	Analyze the internal consistency of one's value structure.	Analyze, prioritize, compare, contrast, question, expand
Characterization	Act consistently in accordance with internalized principles.	Act, do, serve, share, demonstrate, argue

Affective Learning Levels

This domain pertains to emotional responses — that is, feelings, values, appreciation, enthusiasm, motivation, and attitude. Effective learning is demonstrated by behaviors that indicate attitudes of awareness, interest, attention, concern, responsibility and the ability to listen and respond to others. Bloom's committee identified five levels as illustrated in Table G.8. This domain also incorporates values, such as enjoying, conserving, respecting, and supporting others. As an instructor, being aware of the affective domain as you interact with students will help you.

Appendix H. Administrative Forms

The administrative forms for instructors and instructor trainees are available on the NSP website, as well as linked in the *Instructor Development Student Hybrid Course* on the NSP center for learning. You can find them by logging in and going to resources, document library, education:

	Center For Learning	NSP Store Pr DONATE ABOUT	Deals I MY	(ACCOUNT - 👩 🔍 (PLORE PROGRAMS	Keyword search
DOCUMENT LIBI	RARY				Document Library Governance Committee Directory Division Websites
SEARCH RESOURCES					Meeting Calendar
Governance	Finance	Award Forn urces	IS Memi	bership	Education
Education D_Instructor Development N Form ID_Instructor Development P Charter	Aentoring Program				
ID_Instructor Roadmap Diago « 1 2 3 4 5	»				<u>^</u>

Appendix I. Quality Management System

Section 1 — Purpose of the Quality Management System

A Quality Management System (QMS) has been established to protect the interests of the National Ski Patrol by creating a quality control process that ensures programs and services are being delivered consistently and in accordance with national standards that embody best practices.

The system also creates a quality assurance process that is designed to audit the programs being delivered by the membership and creates a feedback loop to the national office and divisions necessary to foster continuous improvement and maintain the reputation and integrity of the National Ski Patrol as the premier provider of training and education programs for the outdoor recreation community.

Mission

To help keep people safe on the mountain and during other outdoor activities.

Vision

Our curriculum-based programs achieved the level of an industry leader, like OEC. We met the changing needs of our principal customers and reached a point of financial, staffing, and systems stability.

Core Values

- Excellence
- Service
- Camaraderie
- Leadership
- Integrity
- Responsiveness

NSP Quality Policy

The National Ski Patrol is the premier provider of training and education programs for emergency rescuers serving the outdoor recreation community. QMS sets quality guidelines that ensure that the process of delivering NSP educational programs follows national standards. It also ensures that these programs are being taught by accredited instructors, are monitored through independent auditing, and are enhanced via continuous improvement measures.

Section 2 — Management Responsibility and Organization Structure

The NSP organization is required to carry out its mission as described in its federal charter and state articles of incorporation, NSP Bylaws, and *NSP Policies and Procedures*. The educational and credentialing functions are provided by the:

- National officers
- National volunteer staff and program directors

- National office staff
- Division officers
- Division, region, section, and patrol staff (paid/pro or volunteer)

The services to the ultimate customer, the outdoor recreation community, are provided by the individual patrol members, organized in patrols under the direction and full responsibility of resort area management.

The NSP Policies and Procedures describes the responsibilities of the board of directors (BOD), which assigns responsibility for the delivery and quality of NSP's programs to its division directors. The NSP Policies and Procedures assigns responsibility for the development, promotion, and administration of the discipline programs to the national volunteer staff (NVS) and responsibility for the development and coordination of the QMS to the NSP Education Committee.

Several levels of learners and instructors are established to deliver NSP's educational programs:

- Candidates enrolled in basic courses.
- Patrollers enrolled in courses for continued education and Senior electives.
- Instructor Trainees training to be instructors.
- Instructors members who deliver NSP educational courses to members and other stakeholders.
- Mentors (experienced instructors) who train instructor trainees.
- Instructor trainers certify credentialing and ensure quality control.
- Region, division, and national program leaders

Section 3 — Quality Management Process — Overview

The *NSP Policies and Procedures* establishes the environment for the delivery of the educational programs in the outdoor recreation community.

The QMS of the National Ski Patrol is built on the two basic elements of quality: quality control and quality assurance. The quality control section defines the national standard for educational program delivery. The quality assurance section defines the auditing process necessary to ensure that programs are being delivered at the level prescribed by the national standard.

Overview of Quality at NSP



NSP Quality Management System ensures that education programs developed have quality expectations defined and are delivered consistent with NSP Program Standards.

Section 4 — Quality Control within the NSP

Quality control is the process employed by the NSP to ensure that prescribed parameters are defined for every education program, and that the delivery of these educational programs is consistent with the prescribed parameters. These parameters are referred to as "Program

NSP Program							
Classes	ses Evaluations Refreshers						

Standards." The key products of the NSP are the education programs, and the main effort of quality control is focused on ensuring that the delivery of the programs is consistent across all venues of the NSP.

NSP Program Standards

The NSP Program Standards contain 11 elements that each educational program defines for their courses, events, or services. To ensure a consistent delivery of educational programs, these standards are documented using a common template. Defining these elements across all NSP educational programs forms the backbone of the NSP Quality Management System. National program directors are responsible for ensuring that their specific program documentation defines and contains these Program Standards.

Table I.2. Program Standards



11/29/2009

Quality Management System Proposal for NSP: J. Cripps

Eleven Elements of the National Ski Patrol Program Standard

1) **Program objective** — Defines objective(s) of program and how they will be delivered.

2) **Program structure** — Defines program requirements, such as where, when, and how the class is held (e.g., classroom, outside, on-snow, what time of year) to best achieve the program objective.

a. Venue — classroom, outside, on-snow, etc.

b. Class size — minimum and maximum number of students, as appropriate.

c. Instructor/student ratio — for training effectiveness.

d. Audit frequency — how often the event should be audited.

3) **Course content** — Defines what educational material is being taught and the level of detail that the students are expected to learn.

4) **Resources required** — What is necessary to deliver a program.

a. Instructors — how many trainers are needed?

b. Helpers — how many helpers are needed, trained and untrained assistants?

c. **Equipment** — defines what equipment is needed by the trainers and what is required of the students to bring to class.

d. Educational materials — defines material required by the student and trainer.
5) Instructor credentials — defines what instructor credentials are required for those delivering the educational program.

6) **Course prerequisites** — what other courses or credentials the student needs prior to attending this program.

7) **Evaluation format** — defines the type of format of the evaluation (e.g., written test, practical test, ski-along test, oral test, check sheet, etc.)

8) **Grade scale/structure** — defines the grade structure and what constitutes passing and failing.

9) **Reporting requirements** — defines the administration process/paperwork required.

a. Class registration — defines how to register the course with the NSP.

b. **Course completion report** — defines process/paperwork necessary to close out a course.

c. **Course feedback** — defines what feedback mechanisms are employed by program participants, (i.e. instructors, helpers, students).

10) **Risk management considerations** — details risk management considerations for all phases of program, (i.e. training, evaluation, refreshers).

11) **Conflict resolution** — defines process to follow in the event of

issues/complaints from any program participant, who to take complaint to, what process to follow.

Example — Instructor Development Eleven Elements

11 Elements of the National Program Standard for Instructor Development

- Program objective This program provides training for patrollers who wish to become instructors, establishes the means, through the Mentoring program, by which instructors are initially certified, and finally provides guidelines for continuing education so that NSP instructors will continue to teach at the high level of excellence necessary for successful NSP education programs.
 - a. The National Ski Patrol's Instructor Development Course and accompanying <u>Instructor</u> <u>Development: Training the Adult Learner</u> manual are designed to introduce people to the core tenets of teaching and coaching so they can become effective, dynamic instructors. Much of the material is now available through a newly launched online Instructor Development course that can be used in conjunction with a classroom session.
 - b. The <u>Guide to Mentoring New Instructors</u> provides information on how to mentor a patroller who wishes to become an instructor and explains the process through which this is accomplished.
 - c. The *Instructor Skills CE manual 2018* explains the requirements for recertification for any NSP discipline and outlines course requirements for recertification.
- Program structure The Instructor Development program consists of a one-time course for learning the core tenets of instruction and a series of "guides" to assist instructors with mentoring and continuing education. For the actual Instructor Development course:
 - a. Venue traditional classroom, or online modules plus classroom (hybrid course).
 - b. Class size unlimited
 - c. Instructor/student ratio 1/4 optimal; 1/8 maximum
 - d. Audit frequency at least once per three years.
- 3) **Course content** Adult learning characteristics; approaches to teaching adults; six-pack lesson planning; lesson guides, content, and delivery; and administrative procedures, plus preparation and presentation by the student of a six-pack lesson.
- 4) **Resources Required**

- a. Instructors depends on class size (1/4 instructor/student ratio is ideal)
- b. Helpers none
- c. Equipment no special equipment, room for teaching a variety of lessons is useful.
- d. Educational Materials Student: Student text: Instructor Development: Training the Adult Learner (2013); Instructor: Instructor Development Instructor's Manual (2015); Guide to Mentoring New Instructors (2015); ID Continuing Education Manual (2015)

5) Instructor Credentials

- a. Student: Hybrid Course (both online and skills components), Certificate of Completion.
- b. Instructor: Certified Instructor Development instructor (requires ID course and mentoring in Instructor Development).

6) **Course Prerequisites** — None.

7) Evaluation Format

- a. Traditional course: class participation, preparation and presentation of six-pack lesson, practice giving feedback.
- b. Hybrid course: completion of online course with a score of 80 percent or better on the final exam, class participation, preparation and presentation of six-pack lesson, practice giving feedback.

8) Grade Scale/Structure

- a. Traditional: no grading scale Pass/Fail.
- b. Hybrid course: 80 percent (with retakes) on final exam (must complete all chapters).
- c. Either course: Lesson plan and presentation: Six-pack lesson format required; addressing adult learner types required; practice giving feedback required.

9) **Reporting Requirements**

- a. Class registration Normal online registration.
- b. Course completion report Normal Course Completion Report for course.
- c. Same requirements for continuing education and recertification.
- d. Course feedback Course evaluation form completed; normal IT evaluation.
- 10) **Risk Management Considerations** Environmental and safety considerations should be stressed as part of any lesson plan presented; instructors are responsible to ensure all risks are properly addressed.
- 11) **Conflict Resolution** Appeals follow standard NSP practice; Appeals go to Instructor Development section/region/division supervisors; final appeal to national ID program director and NSP education director.

Section 5 — Quality Assurance (QA) within the NSP

Quality assurance involves monitoring/evaluating the delivery of NSP programs and services. Audit frequency is defined in the program's documentation. Quality assurance is a process to audit courses and events being delivered to ensure that it is done in accordance with the program's standards. It ensures that the program standards are being consistently applied across all programs and divisions in the NSP. The QA

function is performed by instructor trainers (ITs) and monitored by division program supervisors.

Purpose of the NSP Quality Assurance Process

- Audit the program delivery process to ensure it meets the national standards.
- Provide <u>continuous improvement</u> feedback at the region, division, and national level.

ITs Provide Evaluation and Oversight Function

Instructor trainers (ITs) are experienced evaluators in their respective discipline(s) and are responsible for completing evaluations and program oversight. Experience in the evaluation and administration of the program is important for an understanding of the flow and procedure of the program being delivered. Other ITs from outside the discipline can serve as evaluators if an IT from that specific discipline is not available. In this case, the IT is specifically assigned to that event by the discipline-specific region administrator or division program supervisor for the program of the course in question. The IT will be able to QA the course teaching/presentation, but not the course content. A critical trait of the QA auditor is the ability to communicate, both by listening and providing feedback. The individual must be confident without being confrontational.

Per the *NSP Policies and Procedures*, the ITs responsible for program oversight (auditing/evaluating) of an event are assigned by the division program supervisor. Per division policies and needs, the region program administrator may make the IT assignment, who should develop his or her auditing skills by shadowing a competent and experienced IT. The assigned IT must be familiar with the program standards of the program regarding content and evaluation criteria. One intent of the QA program is for the IT to provide information and documentation to the region administrator and division program supervisor.

Evaluation Process of an Educational Event

An educational event may be a course, clinic, workshop, or testing event in which knowledge or skills are acquired, practiced, or evaluated. A course is a body of prescribed study whereby knowledge or skills are initially taught; it may extend for more than one session. When credentialing is involved, such as in OEC or Avalanche Level 1, the assigned IT must attend enough classes and the final evaluation to ascertain that the national standard has been met consistently for that course. Furthermore, the IT shall evaluate the instructional performance of each instructor participating in the course (as needed), such evaluations being required for instructor certification and recertification.

Region program administrators and division supervisors review the submitted evaluation forms to ascertain that the national standards are being met across their region and division. Similarly, the IT must be present at a credentialing event like an OEC refresher, an OEC final evaluation, a Senior alpine OET evaluation, etc. The auditing IT will observe, certify, and only intervene in the event when activity occurs (or does not occur) that falls well outside the national standards of the program.

Following the evaluation, the assigned IT will meet with the instructor of record (IOR) and any helping instructors for the event to review the completed QA form and, if needed, provide any additional suggestions to improve the event. If appropriate, the patrol director should be included in this process, especially if deficits were found. Copies of the evaluations will be sent to the region program administrator and the division program supervisor. This step in the process is not just an "evaluation of the evaluation," but a means to give feedback toward improving the quality of the program or event or individual instructor(s) performance.

Quality Assessment/Evaluation Form

Each national program director shall design a course assessment/evaluation form that is consistent with that program's quality standards. The IT uses that form to provide an independent assessment of an event to determine if it was delivered in accordance with the program standards. The IT provides a copy of the assessment to the instructor of record (IOR), the cognizant region administrator, and the division program supervisor.

Similarly, the national program director shall design an instructor performance evaluation form consistent with that program's instructional quality standard. The IT uses that form to provide an independent assessment of each participating instructor's performance in lesson planning and delivery. The IT provides a copy of the instructor's performance evaluation to the evaluated instructor, the cognizant region administrator, and the division program supervisor.

NSP Student Feedback Form

To complete the quality assessment of an event, it is necessary to gain feedback from the participants after they complete the course/program. This is accomplished by using the NSP student feedback form. This feedback helps gauge how satisfied the participants were and helps identify any areas for improvement. This standard program feedback questionnaire is used at all educational events/courses, across all divisions.

The IT responsible for oversight of the educational event will be responsible for circulating the NSP Feedback Questionnaire at the conclusion of the event and collecting the responses. Once collected/or reported, the completed questionnaires are sent to the region program administrator for review and tabulating the results.

Division level: Copies of completed audit forms and Student Feedback Forms are sent to the region program administrator and division supervisor for review and follow up if necessary.

Quality Reporting Frequency

Division level: Program oversight, minimum frequency, and event type (classroom session and final evaluation) is determined by the national program director and outlined in each program's standards documentation.

Student feedback forms are to be utilized at all NSP educational events/courses.

Section 6 — Instructor Development and Mentoring

Education is critical to NSP satisfying its federal charter and articles of incorporation as a public service organization. The application of effective teaching methods is therefore most important and necessary throughout all its programs. These effective teaching skills are taught in the NSP Instructor Development (ID) course, which focuses on principles of adult education and the associated Mentoring Program. The ID Program also includes teaching the NSP education programs' administrative policies and procedures (paperwork). Recognition of the importance of these educational basics to NSP is demonstrated by the fact that no instructor is allowed to manage or teach any course until he or she has satisfactorily completed the ID course and has been adequately mentored for a specific discipline.

Instructor Development

The ID course covers the various areas of instruction and how instructors can apply them to create a positive learning experience for students. It also helps build a strong foundation of educational knowledge for use when planning and delivering lessons.

The essentials for being an effective instructor are taught in this manual's chapters, which include the six-pack. This is the standard for how NSP programs are to be taught.

Instructor Mentoring Program

The second component of Instructor Development is the Instructor Mentoring Program. In this phase, the potential instructor practices teaching under the observation and guidance of a credentialed instructor (mentor). The instructor trainee learns additional skills from the mentor via interactive sessions and by practice teaching real students. The Mentoring Program focuses on the practical application of teaching and assessment skills and the NSP or division-specific administrative polices for a specific program.

<u>Guide to Mentoring New Instructors</u> is the manual that describes the mentoring process. It is found under Instructor Development on the NSP website.

Instructor Continuing Education

NSP instructor certification is valid for a period of three years, at which time it expires. In order to maintain, update, and improve instructional quality, participation in at least one instructor continuing education (CE) activity during this period is required for renewal of certification. Suitable CE events are specified within each national program standard. Region administrators and division supervisors use evaluation data to help determine or develop appropriate CE content to improve the quality of program delivery.

More information on Continuing Education is available on the NSP website in the *Instructor Skills CE Manual 2018*.

Section 7 — Measurement and Analysis

QA Evaluation Forms

The IT is responsible for completion of the program's course evaluation form and for making suggestions for course and program improvement. Similarly, the IT is responsible for completing individual instructor performance evaluations and for making suggestions for improving instructional quality. Finally, the IT is responsible for distributing copies of all evaluation forms to the IOR, cognizant region program administrator, and division program supervisor, as appropriate. Each recipient uses these evaluations to guide program improvements at their respective levels.

NSP Student Feedback Form

Student feedback form results are to be reported to the region program administrator and division program supervisor at the end of each course. This allows for reviewing and implementing suggestions in a timely manner.

The questionnaire results should contain the following categories:

- Number of events where the feedback forms were collected, by program type.
- Average score for each of the 10 questions.
- A report of any variance of responses.
- Any other relevant comments and/or issues identified in the surveys.
- Continuous improvement suggestions.

NSP Student Feedback Form Examples

Program/Cours	e/Event/Clinic		Location		Reg	lion		Date
Instructor of Re	cord - print name	I	NSP ID #	QA	QA Auditor - print name		'L	NSP ID#
Number of No of Support	No of Candidates		Number of Pass/Fail			QA Auditor	- Signature	
	Childrands	Pa	is Fail					
			Quality Assurance	e Overall	Assessn	nent – cł	neck bo	x
Course met National : (+)	Standard	C	ourse needs improveme	nts	Course	Failed to n	neet Natio	nal Standard
Information below to b	be used by IT	to detern	nine how well the s	standard w	as met			
	OEC M	odule	of the Se	nior P	rogra	am		
The scenarios provided display leadership, prol	the candidates	s a fair op nent, and	s portunity to decision making sk	trongly Disagr (1) Ills.	ee □ (2)	Neutral	□ (4)	Strongly Agre
The candidate was eval patients and one scena	uated as lead (rio where the s	on one so ingle pati	enario with multiple ant had multiple inju	uries. □ (1)	🗆 (2)	□ (3)	□ (4)	🗆 (5)
The scenarios portrayed	d true-to-life ind	cidents.		🗆 (1)	C (2)	🗆 (3)	🗆 (4)	🗆 (5)
The patient/s portrayed	accurate beha	vior for th	e scenarios.	🗆 (1)	D (2)	🗆 (3)	D (4)	🗆 (5)
The patient/s behavior	was consistent	througho	ut the day.	🗆 (1)	D (2)	🗆 (3)	□ (4)	🗆 (5)
The moulages were pro	cenario.	🗆 (1)	🗆 (2)	🗆 (3)	🗆 (4)	🗆 (5)		
The moulages were reapplied as needed.				🗆 (1)	🗆 (2)	🗆 (3)	🗆 (4)	🗆 (5)
The scenario helpers w	ere correctly co		🗆 (1)	🗆 (2)	🗆 (3)	🗆 (4)	🗆 (5)	
The scenario helpers ad	ted consistent	ly through	out the day.	🗆 (1)	🗆 (2)	🗆 (3)	🗆 (4)	🗆 (5)
Recording on check she	ets was accur	ate.		🗆 (1)	🗆 (2)	🗆 (3)	🗆 (4)	🗆 (5)
Radio communication s	imulation was r	realistic.		🗆 (1)	D (2)	🗆 (3)	🗆 (4)	🗆 (5)
Total Points (out of 55	i) %(8	0% is par	ising)					
Better conformance to t	he national sta	ndard for	this course/event m	nay be achi	eved by:			
Additional commer	nts for quality	y improv	ement:					

	NSP Feedback Questionnaire "Your opinion is very important to us!"							
D	Date Event							
Ple 1 -	ease provide your answer using the following scale. - Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 – Agree,	5 – Strongly Agree						
1)	The event was well run and organized.	[](1)[](2)[](3)[](4)[](5)						
2)	The instructor/s was prepared and effective.	[](1)[](2)[](3)[](4)[](5)						
3)	The training material was easy to understand.	[](1)[](2)[](3)[](4)[](5)						
4)	The course/program's objective was explained.	[](1)[](2)[](3)[](4)[](5)						
5)	I was allowed to demonstrate my new skills.	[](1)[](2)[](3)[](4)[](5)						
6)	Program specific leaning materials were available.	[](1)[](2)[](3)[](4)[](5)						
7)	The course/program's objective was achieved.	[](1)[](2)[](3)[](4)[](5)						
8)	Instructors obtained good student participation.	[](1)[](2)[](3)[](4)[](5)						

9) Event was conducted in a relaxed positive manner. [] (1) [](2) [](3) [](4) [](5)

Additional Comments

[](1)[](2)[](3)[](4)[](5)

____%

10) I would recommend this course/program.

Summary Score (Sum of points X 2)

If you have additional comments regarding this course/program and want to be contacted, put name and contact information below.

Name ____

Phone # and/or email

Appendix J. Course Preparation Checklist

	Task	Desired Completion	Task Complete?
	TUSK	Date	(Y/N)
Scheduling	Establish the course dates.		
	Coordinate dates with patrol, section, region, or division.		
	Register course with NSP online and order		
	materials and course Certificates of		
	Achievement (See Appendix H for links).		
	Arrange for facilities/sites that match planned		
	Activities.		
	Coordinate with local recreation area		
	needs		
	Arrange for equipment		
	Determine class size and instructor needs		
			I
Notification	Reach potential students through patrol,		
	section, region, division.		
	Contact instructors and evaluators.		
	Notify newsletter editor.		
	Contact national office.		
	List course on websites: division/region/patrol.		
En a llas a st	Ensure students have somethind, and solliest	Γ	Γ
Enrollment	Ensure students have enrolled, and collect		
	Any lees not collected at the national level.		
	forms		
	Prepare attendance sheets		
	Deposit fees/funds according to local and		
	national procedures.		
		L	I
Course Outline	Outline instructional content.		
	Provide contact information.		
	Distribute to students prior to first class.		
		ſ	ſ
Lesson	Know your content.		
Preparation	Use the lesson guides and materials available		
	from NSP to develop your lesson plan.		
	Preview videos and other training tools.		
	Practice with materials and equipment.		
	be familiar with classroom and outdoor		
	Have a backup plan if weather becomes a		
	factor.		
On-Site	Set up the teaching area to match the planned		
Preparation	activity.		

	Make sure the students:	
	\circ Can see and hear you.	
	 Can be seen and heard by you. 	
	 Have enough space for themselves and 	
	their personal gear.	
	 Have enough space to move about 	
	comfortably	
	• Have enough space to practice skills	
	nresented as appropriate	
	 Have access to restroom facilities 	
	Check to make sure all equipment and	
	teaching aids are available on-site and are	
	functional	
	Provide enough equipment e.g. toboggaps	
	enlinte probas as that all learners will have	
	splints, probes, so that all learners will have	
	the opportunity to practice the specific skills	
	taught in the lesson.	
Environments !		
Environmental	Identity proper clothing and appropriate	
Considerations	equipment for the activities and notify students	
	in advance of what will be required.	
	If teaching outdoors, make sure the class	
	faces away from the wind and sun; seek	
	sheltered/protected areas when stopping to	
	talk.	
	Be aware of the physical comfort and safety of	
	the students at all times.	
	If using "patients," do your best to ensure their	
	comfort and safety.	
Follow-up	Clean up the instructional area.	
Tasks	Return all equipment, materials, and keys, as	
	required.	
	Complete, copy, and submit course records to	
	region/division/national office, as appropriate	
	(see Appendix H for links). After removal of	
	student names who did not successfully	
	complete the course, and the addition of	
	Instructors assisting with the course not	
	previously listed	
	File course schedules, materials, and lesson	
	plans.	
	Complete and distribute course Certificates of	
	Achievement.	
	Send thank-you letters to the organization and	
	staff that hosted the program, as well as to the	
	instructors and the participants.	