

## ANNEX A

### INSTRUCTIONAL METHODOLOGIES AND THEIR APPLICATIONS

The various methods of instruction commonly accepted as appropriate for cadet training is outlined below.

METHOD	DEVELOPMENTAL PERIOD ONE AGES 12 – 14 EXPERIENCE-BASED	DEVELOPMENTAL PERIOD TWO AGES 15 – 16 DEVELOPMENTAL	DEVELOPMENTAL PERIOD THREE AGES 17 – 18 COMPETENCY
Behaviour Modeling	Not applicable	Not applicable	Applicable
Case Study	Not applicable	Applicable	Applicable
Demonstration and Performance	Applicable	Applicable	Applicable
Experiential Learning	Applicable	Applicable	Applicable
Field Trip	Applicable	Applicable	Applicable
Game	Applicable	Applicable	Applicable
Group Discussion	Applicable	Applicable	Applicable
Guided Discussion	Not applicable	Not applicable	Applicable
In-class Activity	Applicable	Applicable	Applicable
Interactive Lecture	Applicable	Applicable	Applicable
Lecture	Applicable	Applicable	Applicable
On-the job Training (OJT)	Not applicable	Not applicable	Applicable
Peer Learning	Not applicable	Not applicable	Applicable
Practical Activity	Applicable	Applicable	Applicable
Problem-based Learning	Not applicable	Applicable	Applicable
Role Play	Not applicable	Applicable	Applicable
Self-Study	Not applicable	Not applicable	Applicable
Seminar Method	Not applicable	Applicable	Applicable
Simulation	Not applicable	Not applicable	Applicable
Tutorial	Not applicable	Not applicable	Applicable

General information follows on each method for its age-appropriateness, definition, application, advantages and disadvantages.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
<b>BEHAVIOUR MODELING</b> Under development			
<b>CASE STUDY</b> Cadets are given a written problem, situation or scenario, to which they respond either individually or as a group in order to achieve a performance objective. The problem situation or scenario should match the experience level of the cadets and they should be given enough time either before or during the instructional period to analyze it. Responses to the case should be recorded under four headings: Facts, Assumptions, Problems and Solutions	1. Learning principles, attitudes and concepts.	1. Effective application of teaching principles instead of "preaching". 2. Cadets can help each other learn. 3. High energy and perfect demonstrations. 4. Can be easily related to a real life situation in the past and for future applications.	1. Must be well organized and facilitated in order to ensure learning takes place.
<b>DEMONSTRATION AND PERFORMANCE</b> Cadets observe the instructor performing the task in a demonstration, and rehearse it under the supervision of the instructor. A good example of this is drill instruction, where cadets are shown a movement and given the opportunity to practice and perform it.  <b>Demonstration Method</b> A method of instruction where the instructor, by actually performing an operation or doing a job, shows the cadet what to do, how to do it and through explanations brings out why, where and when it is done.	<b>Demonstration Method</b> 1. To teach manipulative hands-on operations or procedures. 2. To teach troubleshooting. 3. To illustrate principles. 4. To teach operation or functioning of equipment. 5. To teach teamwork. 6. To set standards of workmanship. 7. To teach safety procedures.	<b>Demonstration Method</b> 1. Minimizes damage and waste. 2. Saves time. 3. Can be presented to large groups.	<b>Demonstration Method</b> 1. Requires careful preparation and rehearsal. 2. Requires special classroom arrangements. 3. Requires equipment and aids.

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
<p><b>Performance Method</b> A method in which the cadet is required to perform, under controlled conditions, the operations, skill or movement being taught.</p>	<p><b>Performance Method</b></p> <ol style="list-style-type: none"> <li>1. To teach manipulative hands-on operations or procedures.</li> <li>2. To teach operations or functioning of equipment.</li> <li>3. To teach team skills.</li> <li>4. To teach safety procedures.</li> </ol>	<p><b>Performance Method</b></p> <ol style="list-style-type: none"> <li>1. Builds confidence.</li> <li>2. Enables learning evaluation.</li> <li>3. Reduces damage and waste.</li> <li>4. Promotes safety.</li> </ol>	<p><b>Performance Method</b></p> <ol style="list-style-type: none"> <li>1. Requires tools and equipment.</li> <li>2. Requires large blocks of time.</li> <li>3. Requires more instructors.</li> </ol>
<p><b>EXPERIENTIAL LEARNING</b> Learning in the cadet program is centred on experiential learning. This involves learning knowledge and skills from direct experience. People learn best from their own experiences and can then apply the knowledge and skills in new situations. The four stages of the cycle may be considered and applied to all activities within the Cadet Program, regardless of methodology chosen. <b>Stage 1: Concrete Experience:</b> Cadets have an experience and take time to identify and define what the experience is. Sample activities: direct observations, simulations, field trips, reading. <b>Stage 2: Reflective Observation:</b> Cadets need to reflect on and examine what they saw, felt and thought while they were having the experience. Sample activities: discussion, journals / logs, and graphs. <b>Stage 3: Abstract Conceptualization:</b> Cadets work to understand and make connections from the experience to new or different situations. Sample activities: interview, discussion, model building, analogies and planning. <b>Stage 4: Active Experimentation:</b> Cadets look ahead to and plan the application of skills and knowledge acquired to future experience. Sample activities: simulation, fieldwork. Note: The cycle is ongoing as each learning experience builds on another.</p>	<ol style="list-style-type: none"> <li>1. To teach practical skills.</li> <li>2. To learn how to learn.</li> <li>3. To teach transferable skills.</li> <li>4. To teach the process or principle.</li> <li>5. To teach problem solving.</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge is shared and created by everyone.</li> <li>2. Everyone is actively involved in the teaching – learning process.</li> <li>3. Numerous resources are used.</li> <li>4. Cadet based.</li> </ol>	<ol style="list-style-type: none"> <li>1. Many resources are required (may be expensive).</li> <li>2. Needs a lot of planning, preparation and organization prior to activity.</li> <li>3. The instructor must master the subject developed.</li> <li>4. Instructor needs very good pedagogical skills.</li> <li>5. May not be a good process for learning details.</li> </ol>

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<b>FIELD TRIP</b> Theoretical knowledge is reinforced through participation in an activity in a real-life setting. Prior planning helps to ensure all pre-training and safety standards are met. Field trip activities are planned and carried out to achieve clear instructional objectives that are understood by the cadets. Examples can include trips to areas of local interest, flying / gliding, hikes or boat trips.	<ol style="list-style-type: none"> <li>1. Awareness of historical situations.</li> <li>2. Can be used in conjunction with many other instructional methods.</li> <li>3. To introduce / illustrate and confirm topics.</li> </ol>	<ol style="list-style-type: none"> <li>1. Immerse cadets in a specific environment.</li> </ol>	<ol style="list-style-type: none"> <li>1. May be difficult to control.</li> <li>2. Needs much organization and preparation.</li> <li>3. May have cost involved.</li> </ol>
<b>GAME</b> Games are used with one or more participants to practice skills, apply strategies and enhance teams. It is critical that the game supports learning through the provision of a challenging activity that allows for the skill practice or knowledge confirmation. Games are a fun and interesting way to introduce a topic, expand cadets' understanding knowledge of topic or review material.	<ol style="list-style-type: none"> <li>1. Practical situations.</li> <li>2. Discovery of concepts and principles.</li> <li>3. Review and confirmation.</li> <li>4. Games include rules and assessment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fun, interesting.</li> <li>2. Creates ownership.</li> <li>3. Highly participative.</li> <li>4. Many resources involved.</li> </ol>	<ol style="list-style-type: none"> <li>1. May stratify the group by creating a winner and a loser.</li> <li>2. May be difficult to providing instructor feedback.</li> </ol>
<b>GROUP DISCUSSION</b> Cadets discuss issues, share knowledge, opinions and feelings about a topic in small groups to a specific goal. The instructor's questioning is flexible and minimal, and aims at encouraging cadets to explore their own experiences and opinions through peer interaction.	<ol style="list-style-type: none"> <li>1. To develop imaginative solutions to problems.</li> <li>2. To stimulate thinking and interest and to secure cadet participation.</li> <li>3. To emphasize main teaching points.</li> <li>4. To supplement lectures.</li> <li>5. To determine how well cadets understand the concepts and principles.</li> <li>6. To prepare cadets for application of theory or procedure.</li> <li>7. To summarize, clarify points or review.</li> <li>8. To prepare cadets for instruction that will follow.</li> <li>9. To determine cadet progress and effectiveness of prior instruction.</li> </ol>	<ol style="list-style-type: none"> <li>1. Increases cadet interest.</li> <li>2. Increases cadet acceptance and commitment.</li> <li>3. Utilizes cadet knowledge and experience.</li> <li>4. Results in more permanent learning because of the high degree of cadet participation / cognitive involvement.</li> </ol>	<ol style="list-style-type: none"> <li>1. Requires highly skilled instructors.</li> <li>2. Required preparation by cadets.</li> <li>3. Limits contents.</li> <li>4. Consumes time.</li> <li>5. Restricts size of group.</li> <li>6. Requires selective group composition.</li> </ol>

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
<p><b>GUIDED DISCUSSION</b> Cadets are guided to reach performance objectives by drawing out their opinions, knowledge, experience and capabilities through a series of open ended lead-off questions, responses and follow-up questions. The instructor summarizes throughout and concludes effectively to ensure the performance objective is met.</p>	<ol style="list-style-type: none"> <li>1. When cadets are already familiar with the subject.</li> <li>2. When the instructor wishes the cadets to learn through a series of structured questions.</li> </ol>	<ol style="list-style-type: none"> <li>1. The sharing of information, experiences and opinions by the group leads to the achievement of the teaching points and overall lesson objective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Takes time to prepare.</li> <li>2. The instructor must ensure that the cadets stay on the subject.</li> <li>3. Off-topic questions must be handled with tact.</li> </ol>
<p><b>IN-CLASS ACTIVITY</b> In-class activities encompass a wide variety of activity-based learning opportunities that can be used to reinforce instructional topics or to introduce cadets to new experiences. In-class activities should provoke thought and stimulate interest among cadets, while maintaining relevance to the performance objectives. Examples of these activities include learning stations, videos, brainstorming / debating.</p>	<ol style="list-style-type: none"> <li>1. To reinforce instructional topics.</li> <li>2. To orient cadets to the subject.</li> <li>3. To introduce a subject.</li> <li>4. To give direction on procedures.</li> <li>5. To present basic material.</li> <li>6. To introduce a demonstration, discussion or performance.</li> <li>7. To illustrate the application of rules, principles or concepts.</li> <li>8. To review, clarify, empathize or summarize.</li> </ol>	<ol style="list-style-type: none"> <li>1. To provoke thought and stimulate interest among cadets, while maintaining relevance to the performance objectives.</li> <li>2. Permits flexibility with class size.</li> <li>3. Requires less rigid space requirements.</li> <li>4. Permits adaptability.</li> <li>5. Permits versatility.</li> <li>6. Permits better control over content and sequence.</li> </ol>	<ol style="list-style-type: none"> <li>1. Encourages cadet passiveness.</li> <li>2. Difficult to gauge cadet reaction.</li> <li>3. Takes time to prepare.</li> </ol>
<p><b>INTERACTIVE LECTURE</b> The instructor-driven methodology combines both lecture and interaction to meet lesson objectives. Lecture portions of the lesson are offset with relevant activities such as videos with discussion, games to confirm and completion of handouts.</p>	<ol style="list-style-type: none"> <li>1. To orient cadets to the subject.</li> <li>2. To introduce a subject.</li> <li>3. To give instruction on procedures.</li> <li>4. To present basic material.</li> <li>5. To illustrate the application of rules, principles or concepts.</li> <li>6. To review, clarify, empathize or summarize.</li> </ol>	<ol style="list-style-type: none"> <li>1. Saves time.</li> <li>2. Permits flexibility of class size.</li> <li>3. Requires less rigid space requirements.</li> <li>4. Permits adaptability.</li> <li>5. Permits versatility.</li> <li>6. Permits better control over content and sequence.</li> </ol>	<ol style="list-style-type: none"> <li>1. Involves one-way communication.</li> <li>2. Poses problems in skill teaching.</li> <li>3. Encourages passive behaviour.</li> <li>4. Difficult to gauge cadet reaction.</li> <li>5. Requires highly skilled instructors.</li> <li>6. Requires a high level of concentration from the cadets.</li> </ol>

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
<b>LECTURE</b> This is a formal or semi-formal discourse in which the instructor presents a series of events, facts, principles, explores a problem or explains relationships.	<ol style="list-style-type: none"> <li>To orient cadets to the subject.</li> <li>To introduce a subject.</li> <li>To give instruction on procedures.</li> <li>To present basic material.</li> <li>To illustrate the application of rules, principles or concepts.</li> <li>To review, clarify, empathize or summarize.</li> </ol>	<ol style="list-style-type: none"> <li>Proficient oral skills are required.</li> <li>Useful for big groups.</li> <li>Saves time because of fewer interruptions.</li> </ol>	<ol style="list-style-type: none"> <li>Should have a clear introduction and conclusion.</li> <li>Cadets may be passive and uninvolved.</li> </ol>
<b>ON-THE JOB TRAINING (OJT)</b> OJT prepares cadets to perform a job within the cadet program. Cadets learn job related behaviours / skills and the practice them through performance on the job. An instructor facilitates learning and coaches each cadet through the process. All cadets have the opportunity to reflect and provide feedback on their performance. Besides learning the job skills, cadets practice and refine peer and self-evaluation skills and skills in providing feedback.	<ol style="list-style-type: none"> <li>Appropriate for learning leadership positions and learning supervisory responsibilities.</li> <li>Learn to perform numerous tasks and responsibilities that would otherwise be listed.</li> </ol>	<ol style="list-style-type: none"> <li>Gives ownership to the learner to learn required skills.</li> <li>Potential for a rewarding a situation.</li> <li>Challenging.</li> </ol>	<ol style="list-style-type: none"> <li>Should be used in low risk activity or situations.</li> <li>Extensive supervision is required to ensure proper content is covered.</li> <li>May be a very challenging learning curve.</li> <li>Requires an appropriate debrief.</li> </ol>
<b>PEER LEARNING</b> Cadets in the same class teach each other. This allows cadets to learn from each other while also developing coaching, feedback and instructional skills.	<ol style="list-style-type: none"> <li>Review.</li> <li>Areas of expertise.</li> <li>Practicing instructional techniques.</li> <li>In practical situations such as leadership development, parade appointments, etc.</li> </ol>	<ol style="list-style-type: none"> <li>Teenagers can be especially receptive to learning from their peer group.</li> <li>By instructing, cadets should master the material they are presenting.</li> <li>Offers good opportunity to evaluate instructional techniques and leadership.</li> </ol>	<ol style="list-style-type: none"> <li>If cadets do not master the material presented or lack the instructional skills, the class may not be successful.</li> <li>A good debrief is often required to ensure the learning is correct and emphasis was on the right objectives.</li> </ol>

METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
<b>PRACTICAL ACTIVITY</b> Practical activities encompass a wide variety of activity-based learning opportunities that can be used to reinforce and practice instructional topics or to introduce cadets to new experiences. Practical activities should stimulate interest among cadets and encourage their participation, while maintaining relevance to the performance objectives.	<ol style="list-style-type: none"> <li>1. Review.</li> <li>2. In practical situations such as leadership development, parade appointments, etc.</li> <li>3. To introduce a subject.</li> </ol>	<ol style="list-style-type: none"> <li>1. Encourage participation by cadets.</li> <li>2. Stimulate interest in the subject.</li> <li>3. Maintain relevance to the performance objectives.</li> <li>4. Fun and interesting.</li> <li>5. Creates ownership.</li> <li>6. Highly participative in small groups.</li> <li>7. Many resources involved.</li> </ol>	<ol style="list-style-type: none"> <li>1. Extensive supervision is required to ensure proper content is covered.</li> <li>2. Takes time to prepare.</li> <li>3. Not suitable for large groups.</li> </ol>
<b>PROBLEM-BASED LEARNING</b> Cadets analyse a problem, apply the steps in the problem solving method and work toward solving the problem in small groups. Problem-based learning requires cadets to participate and interact with each other while developing critical thinking skills. Instructors choose problem that stimulate thought, reinforce learning and relate to the cadets' interest and needs. Throughout the exercise, instructors pose thought-provoking questions and guide cadets without influencing their decisions.	<ol style="list-style-type: none"> <li>1. Review.</li> <li>2. In practical situations such as leadership development, parade appointments, etc.</li> </ol>	<ol style="list-style-type: none"> <li>1. Encourage participation by cadets.</li> <li>2. Stimulate interest in the subject.</li> <li>3. Maintain relevance to the performance objectives.</li> <li>4. Many resources involved.</li> </ol>	<ol style="list-style-type: none"> <li>1. Critical thinking skills are required.</li> <li>2. Broad knowledge of the subject matter is required.</li> </ol>
<b>ROLE PLAY</b> Cadets are assigned roles requiring them to interact with others in responding to various realistic situations. The instructor identifies the purpose of the role-play, provides the cadets with enough background information to help them accurately play their assigned role, and motivates them to become more fully involved in the activity. De-brief after the role-play is essential to connect the activity with the PO / EO.	<ol style="list-style-type: none"> <li>1. Skills associated with social systems or human interactions; practical situations eg. Positive Social Relations for Youth, discipline issues, behaviour on the range, leadership, instructional techniques.</li> <li>2. Attitudinal objectives.</li> </ol>	<ol style="list-style-type: none"> <li>1. High participation, interactive delivery and may lead to discussions.</li> <li>2. Experience is developed in a supportive environment.</li> <li>3. Can be very versatile depending on application eg, introduce a topic, mid-stage learning or as confirmation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Participants can be easily side-tracked, need for good preparation and controls must be set appropriately.</li> <li>2. Competence, experience and prepared instructors required.</li> </ol>

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<b>SELF-STUDY</b> In a self-study method, the instructor provides materials and instructions to the cadets, then they learn the topic independently (learning at their own pace) often using a prepared package of information, written content, computer based learning, using videos, tapes (CDs) or models. Self-study does not need to be complex or in-depth; instructors can include self-study components as part of an interactive lesson or as a method on its own.	<ol style="list-style-type: none"> <li>1. To provide remedial instruction.</li> <li>2. To provide make-up instruction.</li> <li>3. To maintain previously learned skills, which are not performed frequently enough.</li> <li>4. To provide retraining on equipment and procedures that have become obsolete.</li> <li>5. To upgrade production.</li> <li>6. To accelerate capable cadets.</li> <li>7. To provide enough common background among cadets.</li> <li>8. To provide the review and practice of knowledge and skills.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduces failure rates.</li> <li>2. Improves end-of-course proficiency.</li> <li>3. Saves time.</li> <li>4. Provides for self-instruction.</li> <li>5. Improves efficiency and economy for group or individualized instruction.</li> <li>6. Reduces instructor implication.</li> <li>7. Allows for very personalized feedback if present.</li> </ol>	<ol style="list-style-type: none"> <li>1. Requires local or commercial preparation.</li> <li>2. Requires lengthy programmer training.</li> <li>3. Increases expenses.</li> <li>4. Requires considerable lead times.</li> <li>5. Poses administrative problems.</li> <li>6. Requires follow-up, feedback or evaluation in order to ensure learning is up to standard.</li> <li>7. Requires a great deal of discipline from the learner.</li> </ol>
<b>SEMINAR METHOD</b> This is a tutorial arrangement involving the instructor and group, rather than instructor and individual.	<ol style="list-style-type: none"> <li>1. To provide general guidance for group working on an advanced study or research project.</li> <li>2. To exchange information on techniques and approaches being explored by members of a study or research groups.</li> <li>3. To develop new and imaginative solutions to problems under study by the group.</li> </ol>	<ol style="list-style-type: none"> <li>1. Provides motivation and rapport.</li> <li>2. Stimulates active participation.</li> <li>3. Permits adaptive instruction.</li> </ol>	<ol style="list-style-type: none"> <li>1. Requires highly competent instructors.</li> <li>2. Poses evolution problems.</li> <li>3. Is more costly than most other methods.</li> </ol>
<b>SIMULATION</b> Simulation is a realistic representation of a situation (that cannot take place in the real environment) used to teach performance objectives without risk or complication. Cadets are active participants in the learning process. Instructor feedback is critical for learning. Many activities can be simulated (eg, first aid, leadership principles, dry firing).	<ol style="list-style-type: none"> <li>1. Attitudinal objectives.</li> </ol>	<ol style="list-style-type: none"> <li>1. Cadets acquired the skills to conduct activities in the real environment.</li> <li>2. Cadets receive critical feedback.</li> <li>3. Allows for exploration of solutions.</li> <li>4. Provides opportunity to practice skills.</li> </ol>	<ol style="list-style-type: none"> <li>1. Not applicable for large groups.</li> <li>2. Cadets may be self-conscious.</li> </ol>



METHOD(S)	APPLICATIONS	ADVANTAGES	DISADVANTAGES
<b>TUTORIAL</b> The instructor works directly with the cadets to ensure the successful achievements of the learning objectives. This is a useful way to teach highly complex skills, knowledge and procedures, or to provide remedial training to cadets. This method focuses on the cadet's needs and the individualized assistance provided it motivating for the cadet. Tutorials are easily adaptable to the cadet's learning pace and style.	<ol style="list-style-type: none"><li>1. To teach highly complex skills and operations involving danger or expensive equipment.</li><li>2. To provide individualized remedial assistance.</li><li>3. During a debrief where learning must take place eg. monitoring.</li></ol>	<ol style="list-style-type: none"><li>1. Permits adaptive instruction.</li><li>2. Stimulates active participation.</li><li>3. Promotes safety.</li></ol>	<ol style="list-style-type: none"><li>1. Requires highly competent instructors.</li><li>2. Demands time and money.</li></ol>

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