



What DACUMs mean to ITP

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WHAT IS A DACUM AND WHY IS IT IMPORTANT?

THE WORD DACUM is derived from 'Developing A CURriculum,' and is a foundation upon which Industry Training Program (ITP) courses are built. A DACUM is a course profile that outlines the course goals and accompanying learning objectives. For each course goal, there are a number of learning objectives geared toward accomplishing that goal.

Breaking it down further, a goal is a general description of what students will learn. A learning objective is a specific description of what the learner will be able to do with new competencies, knowledge and attitudes following instruction.

Each ITP course has a DACUM. Here is an example from the CAA Avalanche Operations Level 1. A course goal is that by the end of the course/lesson, learners will be able to collect and record snowpack data. In order to collect and record snowpack data, students must be able to meet the following learning objectives: observe and record snowpack layer boundaries; observe, classify and record layer properties; observe and record snowpack temperatures; demonstrate and record snowpack tests; plot snow profiles; and identify significant profile properties.

Learning objectives are usually listed in sequence; they may be listed from simple to complex, general to specific, or chronologically. The words used to describe goals and learning objectives are essential for indicating the depth of knowledge, skill or attitude expected. For instance, having to "observe and record" (Operations Level 1) is far simpler than having to "observe and evaluate" (Operations Level 2). Fig. 1 is an example of verbs used to describe different levels of learning based on three learning domains. A simplistic way of looking at these domains is to consider cognitive=thinking, psychomotor=doing and affective=feeling.

Good learning objectives consist of observable behaviour (i.e. what the learner does in order to demonstrate what has been learned), are clearly defined (i.e. describing the performance expected of the learner at the completion of instruction), and are appropriate to the scope and scale of the course (i.e. expectations are reasonable given the course duration). From learning objectives come lesson plans, teaching activities, course schedules, and assessment methods, so you can see that they are truly the foundation for course curriculum and delivery.

Industry representatives reviewed each and every course DACUM last winter during the curriculum development project. These were then sent to the CAA's Education Committee for approval, so we now have current DACUMs that reflect industry needs.

Be sure to look at your course DACUMs more closely the next time you are attending a CAA course. They provide a good outline of what level you are expected to reach by the end of the course, and show a clear progression of training from the CAA Avalanche Operations Level 1 to 3 courses. 

FIG.1: EXAMPLE OF VERBS USED TO DESCRIBE DIFFERENT LEVELS OF LEARNING BASED ON THE LEARNING DOMAIN

	Cognitive		Psychomotor		Affective	
Novice	cite	name	grasp	pull	accept	name
	define	outline	hear	push	ask	recognize
	identify	select	identify	set up	describe	respond to
	label	specify	locate	select	follow	see
	list	state	move	show	identify	select
	match	translate	press	sort	listen	use
Advanced Beginner	apply	explain	adjust	insert	account for	discuss
	convert	illustrate	assemble	locate	accumulate	follow
	discuss	practice	copy	loosen	assist	perform
	distinguish	prepare	disconnect	remove	choose	practice
	draw	summarize	draw	rotate	commend	share
	estimate	use	fasten	slide	comply	study
Competent	analyze	explain	Activate	manipulate	approve	join
	compare	modify	calibrate	measure	complete	justify
	contrast	plan	construct	operate	display	propose
	criticize	predict	duplicate	perform	form	verify
	diagram	schedule	fix	trace	initiate	work through
	discriminate		load		invite	
Expert	assess	formulate	adapt	diagnose	adapt	mediate
	compose	generate	combine	generate	defend	organize
	create	organize	compose	organize	design	revise
	critique	propose	design	repair	influence	solve
	design		devise		integrate	