

ALPINE CANADA



ACA SKILLS COMBINE

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U16 SKIING SKILLS
COMBINE





2024
ACA U16 SKILLS COMBINE
ACA U16 REGIONAL CHAMPIONSHIPS
 MARCH 2024

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CREDITS

The ACA Skills Combine is produced by Alpine Canada Alpin in partnership with the provincial and territorial technical coaching leads.

ACA U16 Skills Combine working group: Jennifer Stielow, Josh Bengé, Johnny Crichton, Kip Harrington, Eric Prefontaine, and Jeff Thompson.

Cover Photo Image: GEPA





PURPOSE

To reemphasize the importance of executing fundamental skiing and physical fitness skills at this age level, as identified within the new athlete development matrix (ADM), by including a Skills Combine competition at the ACA U16 Regional Championship program inclusive of awards. The identified skills for the Combine do not include all the skills listed within the ADM, just a select few. The introduction of a Skill Combine emphasizes the skill proficiencies required at elite-levels of ski racing while increasing awareness of the attributes that significantly contribute to long-term ski racing success.

SCORING AND CALCULATIONS

Overall results to determine the overall ACA U16 Regional winners will be based on performance in competition using World Cup points utilizing race performance only. This follows historical methods as it relates to the SG, GS, and SL performance.

The overall ACA Skills Combine winners will be based on placement in the skiing skills combine.

The ACA U16 Regional Skills Combine winners will be calculated by combining composite scores from the skiing skills only for the top 3 athletes per gender. Example presented in Appendix D.

- Top 3 each gender
-



ACA SKILLS COMBINE PART A

SKIING SKILL COMBINE

The ACA Skills Combine intends to evaluate and reward a skier's skill development separate from the traditional U16 Championship racing events. There are five skiing skill exercises that make up the ACA Skill Combine, and no skiing skill exercise is ranked more important than another. Therefore, clubs and coaches should be setting aside time to practice the skills identified below and other skiing skill-based activities before attending their respective ACA U16 Regionals.

| Skiing Exercise | Skiing Skill Component | Maximum Points Possible |
|---|--|-------------------------|
| Timed Skating Starts | Start technique with skating: all joints working sequentially: ankle, knee, hip | 200 |
| Outside Ski Turns | Edging, platform, balance w/poles or w/o poles | 200 |
| Speiss | Edging, rotary, pole plant, timing, coordination, all joints working sequentially | 200 |
| One Ski Skiing | Edging, lateral stability/mobility, balance, all joints working sequentially, global movement coordination | 200 |
| Timed GS Turns in wave track <i>(supplement one ski skiing when wave track is not possible)</i> | Movement over terrain while maintaining dynamic balance to carve GS turns | 200 |
| Timed Skating without poles | All joints working sequentially: ankle, knee, hip | 200 |

*Skills evaluated can be subject to change due to weather or unforeseen circumstances, five skills to be evaluated will be confirmed at the Team Captain Meeting prior to the skills evaluation portion of the event.

PROCEDURE

Athletes will be placed into manageable groups with assigned leaders, no larger than ten (10) athletes per group. Each group will start at a different station using a shotgun start format (like a golf tournament). Leaders will be provided with a start time for each station to reduce congestion. Videos can be taken for future reference and personal coach review with their athletes.

Athletes will wear bibs during the skills assessment like a regular race event. Their score is recorded on a scoring sheet that lists only their bib number, no names.

SCORING

In collaboration with the PTSO, ACA will assign a leader at each station to lead the individual skill stations with multiple PTSO club coach representatives.

Scoring for the quantitative events (timed) will use a WC point ranking system with the fastest time gaining the greatest number of points possible, up to 200 points.



Scoring for the qualitative event, outside ski turns, will be calculated using this grading rubric. At the qualitative evaluation stations, at least 3 coaches will score at each station with different viewpoints required to evaluate skill execution (front, back, side views).

Athletes are graded on the execution of the essential elements in each skill. The three observation judges will mark a score down based on the grading scale after evaluating the appearance of the essential elements listed in the skiing skill procedure. Scores from the three (3) judges will be combined to calculate an average score.

For more information related to the scoring rubric associated with skill assessment, review Appendix A.

| Stages of Skill Acquisition | Presence of Essential Skill Elements | Scoring Rubric |
|------------------------------------|---|-----------------------|
| Cognitive | Elements were not observed or are not present | 33 |
| | Elements are beginning to appear | 67 |
| Associative | Elements appear, but not with necessary consistency | 100 |
| | Elements appear regularly at a satisfactory level | 133 |
| Autonomous | Elements frequently appear above required level | 167 |
| | Elements continuously appear at a superior level | 200 |

COMPOSITE SCORE CALCULATION

The scores from all five (5) skiing skill events will be combined to calculate an overall skiing skill composite score. The information provided by the five (5) skiing skills individually can provide valuable information on an athlete's ability to execute the specific skill component. This information can drive specific training program interventions resulting in a more informed training prescription from their coach.



SKILL DESCRIPTIONS

TIMED SKATING STARTS

Skating on skis reinforces dynamic balance, ankle engagement, independent leg action, edging movements, triple flexion and extension movements, joints working sequentially. We can skate to warm up, to propel ourselves out of the start, to propel ourselves from one point to another and to gain speed.

Goal

On groomed, mild terrain with a start ramp and timing start gate, double pole pushes off and moves all weight to one ski. Flex ankle and knee, pressuring the front of the ski, and engage inside ski edge. Push off onto new ski, using lateral and forward extension. Bring trailing ski back underneath body and glide. Repeat until the timing eye has been crossed.

Equipment Required

- Start ramp with a proper start gate with wand
- Brushes or gates 2-3 turns and to mark finish
- Timing system(s)

Scoring

The athletes' time will be used to establish the athletes' overall ranking in this event. A world cup points ranking system with the fastest time gaining the greatest number of points possible, up to 200 points will generate the number of points the athletes score in this event. Their point result will be added to the other scores in the other skiing skills events to calculate an overall skiing skill composite score. If an athlete DNF's or DSQ's they will not receive a score.

Essential elements for perfect execution

- During initiation, 100% of the weight is transferred to one ski, dynamic flexion and edging originating from the ankle and knee, plants pole at the same time.
- During transition, push off the weighted ski via dynamic extension in coordination with double pole push, move the centre of mass forward and laterally to new ski.
- During completion, balanced athletic position over new ski facilitates gliding, the trailing ski is lifted off snow and brought parallel, then repeat the sequence as required.
- Create a balanced platform on one ski prior to engaging the skis edge
- Control pressure on skis through flexion and extension of the ankles, knees, and hip
- Increase or decrease edge angle as needed by rolling of ankles and knees
- Coordination of double pole push with drive to new forward ski is critical element of the drill
- Actively re-centre to a balanced athletic position over new forward ski, allowing ski to glide.

Coaches Eye

- **Dynamic Balance/Platform** Does the athlete have a solid platform to extend off, is the centre of mass over the base of support/platform?
- **Glide** Does the athlete move their centre of mass forward onto a flat ski and glide forward in a balanced position?
- **Timing** Are the legs and poles moving in a coordinated fashion (flex, plant, extend and push)?
- **Forward propulsion** Are these movements being done in a coordinated and fluid fashion.



OUTSIDE SKI TURNS

The ability to ski on the outside ski is essential to optimally maintain balance against extreme external forces created by a tight turn radius and/or high speeds. Without an inside ski to assist with lateral balance and regulate pressure, the ski racer is limited to their options with regards to what they can do with the ski.

Goal

To ski solely on the outside ski prior to, during and after the ski turn during eight (8) medium radius highly carved turns connected with a traverse on one ski.

Equipment

- 4 GS panels to establish a start and finish
- 20 brushes to outline the evaluation corridor

Scoring

The scoring rubric will be used in coordination with the essential elements of perfect execution checklist to establish the athlete's score.

Slope

Easy intermediate groomed terrain.

Description

- Athlete makes eight carved medium radius turns with weight entirely on the outside ski
- The inside/uphill ski is kept entirely off the snow during the turn
- Athlete concludes turn by remaining on the old outside ski for two ski lengths
- Athlete will make an identifiable weight transfer to the new outside ski
- Athlete will initiate the new turn after a traverse of two ski lengths on the uphill (new downhill) ski
- Pole may only be used to swing and touch the snow, not for balance support against the snow

Essential elements for perfect execution

- Inside/uphill ski carried off the snow 100% of the time
- A deliberate weight transfer can be identified when the athlete transfers pressure to the new outside ski
- Prior to the turn, the new outside ski is skied for two ski lengths to indicate balance is solely on the new outside ski
- After turn completion the outside ski is skied for two ski lengths to indicate balance is still 100% outside ski dominant
- Turns are carved
- Speed is consistent throughout entire maneuver
- Turn shape is round
- Ski poles are kept off the snow except if used for a pole plant



Coaches Eye

- **Dynamic Balance** Is dynamic balance demonstrated by keeping the uphill/inside ski entirely off the snow during turn initiation through completion?
- **Initiation** Are the athletes' hands forward and always remain in the athlete's visual path? Are the ankles and knees flexed and do the ankle and knee move sequentially to roll the outside ski on edge?
 - Outside ski performance: ski is rolled onto edge, ski tip flexes, edge engages and begins to carve.
- **Turning** Does the inside/uphill ski remain lifted throughout the turn?
 - Outside ski performance: ski's turning edge is engaged, ski is bent and carving
- **Completion** Edge angulation is decreased, upper body remains squared and in the direction of travel, wrist moves to enable pole touch.
 - Outside ski performance: ski's edge is released
- **Transition** Does the athlete demonstrate a deliberate and smooth weight transfer when the skier transfers pressure to the new outside ski?

Athlete Instructions

- Ski eight round, carved turns with all your weight on your outside ski
- Lift the inside ski off the snow for the whole turn
- Between turns, step onto the uphill ski and lift the old outside ski as you traverse before you start into the turn
- Your poles are only used for pole plants, do not drag them, or use them for balance
- Your speed is the same for all the turns



SPIESS (HOP TURNS)

Spiess turns performed correctly reinforce strength, and when performed poorly they can indicate weakness.

Performing a proper Spiess turn requires the athlete to maintain:

- dynamic balance along with proper fore/aft positioning on the skis
- lower leg and ankle engagement
- move the joints sequentially using triple flexion and extension during the jump phase
- maintain a quiet upper body, core stability and vigorous pole plant

Goal

Athletes link 15 rhythmic, Spiess turns landing on and hopping off clean edges without skidding on intermediate groomed terrain. The athlete performs a series of small jumps (hops) and turns the skis perpendicular to the line of travel while keeping hips and shoulders facing down the fall line. The athlete uses a pole plant on each jump to help stabilize the upper body while maintaining timing and coordination between reps.

Equipment Required

- Gate panels to establish a start and finish
- 20 brushes to outline the evaluation corridor(s)

Scoring

The scoring rubric will be used in coordination with the essential elements of perfect execution checklist to establish the athlete's score.

Slope

Intermediate groomed terrain

Description

- Athlete starts from a traverse stance with skis perpendicular to the line of travel
- Athlete jumps with both skis pivoting the skis under the body in the opposite perpendicular direction for 15 jumps
- Upon landing the athlete jumps in the opposite direction
- The track left in the snow resembles a series of "Z's" with the tip of the previous track almost coinciding with the tail of the next track
- A distinct pole plant is present with each jump or change of direction
- The drill concludes with an edge set that coincides with a pole plant that the athlete holds motionless for 3 seconds.



Essential elements for perfect execution

- The skis are always parallel to snow surface in the air (no tips or tails up in the air)
- Equal distance, parallel position, is maintained between the skis
- Skis must come perpendicular to the line of travel
- Skis land on edge lightly and take off immediately from same position
- Athlete maintains balance and core stability with upper body facing down the fall line
- Skis are not displaced laterally (do not skid)
- Spiess turns are performed with continuous flow and rhythm with no pauses or stops
- The last Spiess concludes with an edge set that coincides with a pole plant that the athlete holds motionless for 3 seconds.

Coaches Eye

- **Dynamic Balance/Platform** Does the athlete use all joints when jumping? Are the skis always equal distance between the left and right ski? Does the athlete maintain core stability and a quiet upper body with a distinct pole plant?
- **Timing** Does the athlete maintain continuous flow and rhythm while performing Spiess? Do both skis land, take off and rotate simultaneously?
- **Lower Body** Does the athlete maintain lower leg and ankle engagement? Does the athlete move joint sequentially during the jump phase of the turn? Do the skis remain equally parallel to the snow surface (no tips up/tails up)?
- **Edging** Does the athlete land and take off on the edges of ski without skidding? Does the athlete complete the exercise with an edge set and pole plant lasting up to 3 seconds?



ONE SKI SKIING

One ski skiing promotes edging control, balance, and the development of global movement coordination. Skiing on one ski eliminates the balance advantage of being able to move from ski to ski. The drill demands that the athlete adjusts their center of mass over one ski only, requiring the athlete to adjust their fore/aft body position while regulating pressure throughout a carved turn.

Goal

On groomed flat to moderate terrain, the athlete removes one ski and starts to ski with one leg, linking medium radius turns (12 – 15m, dependent on ski utilized) with consistent shape. This skill can be evaluated with timing by skiing around brushes or stubby gates. This skill can also be evaluated using the scoring rubric in coordination with the essential elements of perfect execution checklist to establish an athlete's composite score.

Slope

Beginner to intermediate groomed slope

Equipment Required

Option A Timing:

- Timing system – if using timing to evaluate
- Brushes or stubby gates for course if using timing to evaluate

Option B Scoring Rubric:

- If timing is not used, 20 brushes to outline the evaluation corridor and panel gates to mark the finishline and start area.

Scoring

Option A Timing:

- The athletes' time will be used to establish the athletes' overall ranking in this event. A world cup points ranking system with the fastest time gaining the greatest number of points possible, up to 200 points will generate the number of points the athletes score in this event. Their point result will be added to the other scores in the other skiing skills events to calculate an overall skiing skill composite score. If an athlete DNF's or DSQ's they will not receive a score.
- If timing is used the athlete's time from the left leg and right leg will be combined resulting in an athlete's overall time used to rank the athlete fastest to slowest.

Option B Scoring Rubric:

- The scoring rubric will be used in coordination with the essential elements of perfect execution checklist to establish the athlete's score. The composite score from the left leg and right leg will be combined and then divided in two to create an average composite score.



Description

- Athlete makes eight carved medium radius turns with weight entirely on the one ski with the non-skiing foot held entirely off the snow and the non-skiing leg is not used for balance.
- The athlete can choose to maintain skis on both feet, lifting one ski off the ground. Best practice is to take one ski off. Coaches should carry skis that are not in use.
- The drill is performed with the left and right leg separately.

Essential elements for perfect execution

- The non-skiing boot never touches the snow
- The non-skiing boot is not used for balance adjustment and maintains a stable non-swinging position
- Speed is consistent turn to turn with a fluid transition from one turn to the next
- Turns are round, carved, and of consistent radius
- Ski poles are not used for balance

Coaches Eye

- **Dynamic Balance** is dynamic balance demonstrated by keeping the free ski boot off the snow and stable next to the skiing foot?
- **Initiation** the athletes' hands forward and do they remain in the athlete's visual path at all times? Is the athlete looking ahead? Is the ankle and knee flexed and do they move together to roll the ski on edge?
 - Ski performance – the ski is rolled onto edge and the ski tip flexed to produce edge engagement to begin to carve.
- **Turning** does the athlete keep the non-skiing stable, held off the snow and next to the skiing foot? Does the athlete maintain an upright quiet upper body and angulate the ankle and knee?
 - Ski performance – the turning edge of the ski is engaged, and the ski is bent and carving.
- **Completion** does the athlete decrease angulation while maintaining their upper body square down the fall line? Does the athlete decrease edge angle by releasing the pressure from the ski edge? Does the athlete execute a proper pole touch?
 - Ski performance – the ski's edge is released, and the ski flattens in preparation to transition into the next turn.
- **Transition** does the athlete transfer their weight in a fluid and controlled manner, minimizing upper body movement to maintain balance and control? Does the athlete gradually release the pressure and edge angle to exit the turn smoothly and prepare to transition into the next turn?



Athlete Instructions

- Ski eight round, carved turns using one ski with your non-skiing foot held completely off the snow in a stable and balanced position.
- Start with a solid balanced stance on your single ski with your weight centered over the ski, knee and ankle slightly bent.
- Begin the turn by gently rolling your ankle and knee into the turn. This action engages the edge of the ski with the snow, which is critical for carving a turn.
- Shift your weight, center of gravity, to increase pressure on the ski to carve and maintain edge grip throughout the turn. The pressure should increase as you move through the turn and then gradually decrease as you prepare for the next transition.
- To transition to the next turn, gradually release the pressure from the ski edge to flatten the ski under foot. Repeat the above steps to begin the next turn.
- Remember to keep your upper body stable and face down the hill. Your shoulders should remain level and minimize upper body movement to maintain balance and control. You can in a pole touch/plant, but your poles should not be used for balance.
- Always look ahead, not down at your ski to maintain balance and prepare for transitions.



CARVED TURNS THROUGH WAVE TRACK

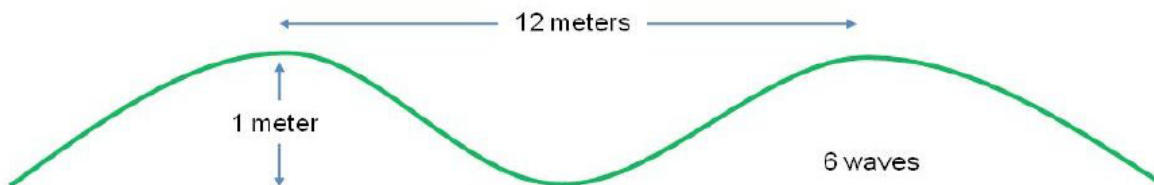
Athletes will use flexion and extension of the lower body to manage pressure against the snow over undulating terrain while making linked medium radius turns through a course. Ski racers must constantly adjust to terrain changes and focus on building speed.

Goal

Athletes maintain ski/snow contact throughout the entire run while carving medium radius turns through a course set in wave track consisting of 8-10 waves. Athletes must develop the ability to manage terrain changes while managing ski/snow pressure to build speed while turning.

Slope

Beginner to intermediate slope



Equipment needed

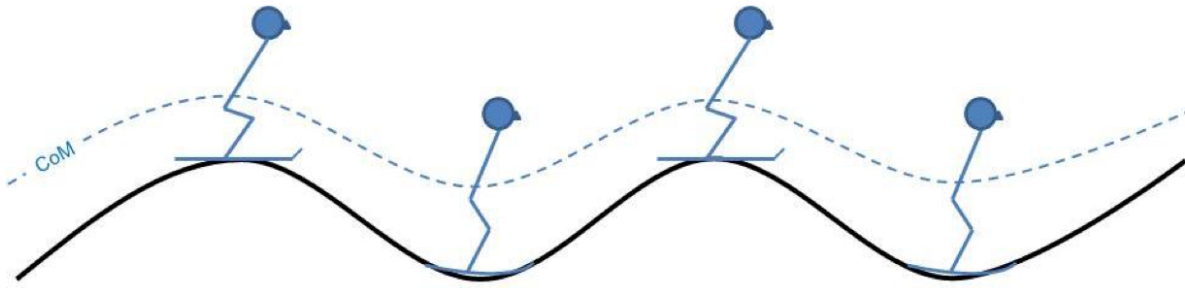
- 6-10 waves constructed by a snow cat that are one meter high when measured from the bottom of the trough to the apex of the roll. Waves are perpendicular to the fall-line and spaced 12m apart from crest to crest. The width is two (2) to three (3) cat grooming widths or about 10m – 15m.
- Timing system

Scoring

The athletes' time will be used to establish the athletes' overall ranking in this event. A world cup points ranking system with the fastest time gaining the greatest number of points possible, up to 200 points will generate the number of points the athletes score in this event. Their point result will be added to the other scores in the other skiing skills events to calculate an overall skiing skill composite score. If an athlete DNF's or DSQ's they will not receive a score.

Description

- The athlete enters the wave track at GS speed, so the start with timing wand should be placed well in advance of the first turn in the wave track. The athlete then makes carved turn, round linked turns around the gates.
- The athlete flexes the lower body on the upside of the bump to absorb and extends the lower body into the trough between the rolls. The dashed line seen in the graphic below indicates the path of the skier's centre of mass.
- The turn apex is randomly placed on each wave, the turn apex can be on the backside, upslope, top or trough of the wave.



Essential elements

- The athlete's upper body remains at same relative elevation above horizon consistent with the hill's pitch.
- Lower body absorbs the rolls and increases pressure on the downside of the rolls
- Skis always maintain snow contact
- Athlete demonstrates carved turns while navigating the placement of the gate relative to the rolls
- Athlete adjusts fore/aft pressure to generate speed.

Coaches Eye

- **Platform** Does the athlete have a solid platform to extend off, is the centre of mass over the base of support/platform? Does the athletes upper body remain at the same
- **Pressure Control** Does the athlete absorb the rolls with their lower body and increase pressure on the downside of the rolls? Does the athlete maintain snow contact?
- **Turning** Does the athlete carve their turns while navigating the placement of the gate relative to the rolls to generate speed?



TIMED SKATING WITHOUT POLES

Skating on skis reinforces dynamic balance, ankle engagement, independent leg action, edging movements, triple flexion and extension movements, joints working sequentially. We can skate to warm up, to propel ourselves out of the start, to propel ourselves from one point to another and to gain speed.

Goal

On groomed, flat terrain, athletes will be timed to determine how long it takes them to skate without poles from point A to point B by flexing the ankles and knees to pressure the front of the ski to engage the inside ski edge. This action is followed by a push off onto new ski, using lateral and forward extension. Bring trailing ski back underneath body and glide. Repeat until the timing eye has been crossed.

Equipment Required

- Brushes or gates for 2-3 turns and to mark finish
- Timing system

Course Set

Skiers should not be able to rely on gravity alone to help them complete the course. The course can be as simple as skating from a start area in a straight line to a designated finish line, or it can include varying turn shapes using GS panels to create short chicanes to 180 turns and figure 8 patterns to skate around the GS panels. This is a timed event.

Scoring

The athletes' time will be used to establish the athletes' overall ranking in this event. A world cup points ranking system with the fastest time gaining the greatest number of points possible, up to 200 points will generate the number of points the athletes score in this event. Their point result will be added to the other scores in the other skiing skills events to calculate an overall skiing skill composite score. If an athlete DNF's or DSQ's they will not receive a score.

Essential elements for perfect execution

- During initiation, 100% of the weight is transferred to one ski, dynamic flexion and edging originating from the ankle and knee.
- During transition, push off the weighted ski via dynamic extension to move the centre of mass forward and laterally to new ski.
- During completion, balanced athletic position over new ski facilitates gliding, the trailing ski is lifted off snow and brought parallel, then repeat the sequence as required.
- Create a balanced platform on one ski prior to engaging the skis edge
- Control pressure on skis through flexion and extension of the ankles, knees, and hip
- Increase or decrease edge angle as needed by rolling of ankles and knees
- Coordination of skating action while actively re-centering to a balanced athletic position over new forward ski, allowing ski to glide.



Coaches Eye

- **Stance and Balance** Does the athlete have a solid platform to extend off, is the centre of mass over the base of support/platform?
 - **Glide** Does the athlete move their centre of mass forward onto a flat ski and glide forward in a balanced position?
 - **Timing** Are the legs moving in a coordinated fashion (flex, extend and push)?
 - **Forward propulsion** Are these movements being done in a coordinated and fluid fashion?
-



APPENDIX A

STAGES OF SKILL ACQUISITION

To understand the three different stages of skill acquisition it is necessary to examine the processes involved in learning a new skill, like juggling or kicking with the non-dominant foot.

| Stage | Process | Characteristics | Another name |
|--------------------|--|---|--|
| COGNITIVE | Gathering information, known as the thinking stage, athletes need feedback from coaches and visual demonstrations | Large gains, inconsistent performance (mechanical) | Verbal-motor stage Thinking stage |
| ASSOCIATIVE | Putting actions together, athletes will need time to practice during this stage, athletes begin to learn what errors they are making, can be the longest and most frustrating stage before beginning to master a skill | Small gains, disjointed performance, conscious effort (can perform with flow on occasion) | Motor Stage Practice stage |
| AUTONOMOUS | Occurs after much time and practice (time on task), skills are recalled when needed, athletes can recognize when the skill is performed incorrect and adapt the execution on demand | Performance seems unconscious, automatic, and smooth (performs with flow) | Automatic stage Athletes can focus on the task and recall the skill when needed |

COGNITIVE STAGE

The cognitive stage is the beginner's level of skill acquisition. This stage is appropriately named as the focus is on mental concentration and the thought process involved in understanding and processing new information, before a new skill can even be attempted.

Something as simple as catching a ball must be clearly explained, broken down and demonstrated; simply throwing the ball at an individual and hoping they will catch it is not an effective strategy.

During the cognitive stage, an athlete might also rely on their prior experience, transferring their knowledge of other sports to the process of understanding and learning new skills. People at this stage are likely to perform poorly; they require regular encouragement and feedback to ensure they progress and learn from their mistakes.

At this stage, the execution of the skill will be uncoordinated and inconsistent. Individuals may lack confidence and many people find learning a new skill to be very frustrating. It is important that coaches or trainers give regular, positive, and constructive feedback when the learner does something correctly. Comments must be as specific as possible to help the learner understand what they have done correctly and where they need to improve.

Cognitive learners cannot self-assess what they are doing wrong and rely on external feedback to correct errors. The aim of a cognitive learner is to execute the skill to a basic level and to have a rough idea of the proper technique. Depending on the complexity, some skills will take longer to learn than others.



ASSOCIATIVE STAGE

Once an individual can execute a skill to a basic level and understand proper technique, instruction can progress to the associative stage.

The focus here is on refining the skill through repetition and rehearsal. During this process, errors will still occur, although they should not be as significant or as frequent as those in the cognitive stage. With increased practice, errors will become less common.

When individuals practice, they develop their ability to identify and self-correct errors as they refine their kinesthetic sense or awareness of their body parts in relation to their environment.

When execution of the skill becomes successful in a closed environment (where the learner is in full control), coaches and trainers will encourage the learner to perform the skill in an open-ended environment. This involves applying the skill within a specific sporting context, like a drill or mock game.

Progressing from a closed setting to an open one can be difficult because instead of being in control, the individual is exposed unpredictable environment and must focus on many more variables, like opposition players, positional play and timing whilst also executing the skill accurately. As the individual becomes more confident and successful, the difficulty of the training drills should increase to further challenge and refine the learner's ability and adaptability.

However, if a learner struggles in an open skilled environment, they may need to go back down to the cognitive stage again before they can progress further.

Some learners may take weeks, months, or years to progress from the associative stage. It is not uncommon for individuals to plateau, due to the high difficulty of the skill or the lack of frequency with which they practice.

AUTONOMOUS STAGE

The autonomous stage is achieved when the learner has mastered all sub parts of a skill and is able to combine them to perform the whole sequence automatically with precision. This means they can perform with full kinesthetic awareness while also identifying and correcting any errors quickly and independently. They can also easily process and adapt to external feedback.

A person at the autonomous stage can confidently execute a skill whilst focusing on multiple factors at the same time. A rugby player passing the ball in gameplay is a prime example. Not only do they have to receive the ball, they need to also be spatially aware of the location of opposition players trying to tackle them, their own support players and decide who to pass to, while still throwing the ball with accuracy, perfect timing, and optimal tactical advantage. This scenario may take place in just 2 to 3 seconds. When a sports person can execute a skill effortlessly without stress, they are at the autonomous stage.

While elite athletes at the autonomous stage can perform skills automatically, they will still need to practice these skills indirectly. Practice during this stage is usually comprised of a real time competition-based scenario drill which challenges the individual by forcing them to multi-task. If the drill becomes too easy, the coach can increase the difficulty by adding more speed, increase slope difficulty, snow surface or having the individual to perform the skills in the drill under greater fatigue.

One potential issue for individuals who have reached the autonomous stage is that it can be difficult to alter their technique if it occurs automatically. This will require the individual to breakdown the technique adjustment and practice it until it once again becomes autonomous. For example, the rule change in professional golf has forced Adam Scott to alter his now banned technique of pressing his long putter against his body for extra support in the putting motion.



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APPENDIX C

WORLD CUP POINT DISTRIBUTION

| WC Point Distribution | |
|-----------------------|--------|
| Place | Points |
| 1 | 200 |
| 2 | 180 |
| 3 | 160 |
| 4 | 150 |
| 5 | 140 |
| 6 | 136 |
| 7 | 130 |
| 8 | 120 |
| 9 | 110 |
| 10 | 100 |
| 11 | 90 |
| 12 | 89 |
| 13 | 88 |
| 14 | 87 |
| 15 | 86 |
| 16 | 85 |
| 17 | 84 |
| 18 | 83 |
| 19 | 82 |
| 20 | 81 |
| 21 | 80 |
| 22 | 79 |
| 23 | 78 |
| 24 | 77 |
| 25 | 76 |

| WC Point Distribution | |
|-----------------------|--------|
| Place | Points |
| 26 | 75 |
| 27 | 74 |
| 28 | 73 |
| 29 | 72 |
| 30 | 71 |
| 31 | 70 |
| 32 | 69 |
| 33 | 68 |
| 34 | 67 |
| 35 | 66 |
| 36 | 65 |
| 37 | 64 |
| 38 | 63 |
| 39 | 62 |
| 40 | 61 |
| 41 | 60 |
| 42 | 59 |
| 43 | 58 |
| 44 | 57 |
| 45 | 56 |
| 46 | 55 |
| 47 | 54 |
| 48 | 53 |
| 49 | 52 |
| 50 | 51 |

| WC Point Distribution | |
|-----------------------|--------|
| Place | Points |
| 51 | 50 |
| 52 | 49 |
| 53 | 48 |
| 54 | 47 |
| 55 | 46 |
| 56 | 45 |
| 57 | 44 |
| 58 | 43 |
| 59 | 42 |
| 60 | 41 |
| 61 | 40 |
| 62 | 39 |
| 63 | 38 |
| 64 | 37 |
| 65 | 36 |
| 66 | 35 |
| 67 | 34 |
| 68 | 33 |
| 69 | 32 |
| 70 | 31 |
| 71 | 30 |
| 72 | 29 |
| 73 | 28 |
| 74 | 27 |
| 75 | 26 |

| WC Point Distribution | |
|-----------------------|--------|
| Place | Points |
| 76 | 25 |
| 77 | 24 |
| 78 | 23 |
| 79 | 22 |
| 80 | 21 |
| 81 | 20 |
| 82 | 19 |
| 83 | 18 |
| 84 | 17 |
| 85 | 16 |
| 86 | 15 |
| 87 | 14 |
| 88 | 13 |
| 89 | 12 |
| 90 | 11 |
| 91 | 10 |
| 92 | 9 |
| 93 | 8 |
| 94 | 7 |
| 95 | 6 |
| 96 | 5 |
| 97 | 4 |
| 98 | 3 |
| 99 | 2 |
| 100 | 1 |



APPENDIX D EXAMPLE SCORE CALCULATION



ACA Skills Combine Result Profile

For: **ATHLETE, Test**

YOB 2009
Sex Female
ACA Number 888888

Province/Territory BC
Club SAMPLE
Combine Location Lake Louise AB



OVERALL ACA SKILLS COMBINE RESULTS

| | Skiing Skills Combine WC Points Earned | Skiing Skills Combine Placing | Spiess Raw Score | Spiess Placing | Spiess WC Points Earned | Outside Ski Turns (OST) Raw Score | OST Placing | OST WC Points Earned |
|--|--|-------------------------------------|---------------------|----------------|----------------------------|---|-------------|-------------------------|
| | Top Score | 738 | 1 | 3.67 | 16 | 85 | 4.67 | 1 |
| | 738 | 1 | 5.00 | 1 | 200 | 4.67 | 1 | 200 |

SKIING SKILLS COMBINE RESULTS

| | Timed Starts Time (sec) | Timed Starts Placing | Timed Starts WC Points Earned | Timed Skating no Poles Time (sec) | Timed Skating Placing | Timed Skating WC Points Earned |
|--|----------------------------|-------------------------|-------------------------------------|---|--------------------------|--------------------------------------|
| | Top Score | 3.49 | 48 | 53 | 4.60 | 1 |
| | 3.16 | 1 | 200 | 4.42 | 1 | 200 |

SKIING SKILLS COMBINE RESULTS

| | One Ski Time (sec) | One Ski Time Placing | One Ski Time WC Points Earned | One Ski Eval Raw Score | One Ski Placing | One Ski WC Points Earned |
|--|-----------------------|-------------------------|-------------------------------------|---------------------------|-----------------|-----------------------------|
| | Top Score | 3.49 | 1 | 738 | 3.67 | 16 |
| | 3.49 | 1 | 738 | 5.00 | 1 | 200 |

NOTES

For more information please review the protocol here in both French and English <https://ltd.alpinecanada.org/news/aca-skills-combine>

Note: In the table above, you will only see the scores for the skills evaluations that the athlete actually completed.

The athletes scores in each skill evaluation completed are added up to provide an overall skiing skill combine result.

The top score is not always the same athlete in each event, the top score is the top score awarded to an individual athlete in that skill.

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ALPINE CANADA

Alpine Canada is the national governing body for alpine, para-alpine and ski cross racing in Canada. With the support of valued corporate partners along with the Government of Canada, Own the Podium and the Canadian Olympic Committee, Alpine Canada develops Olympic, Paralympic, world championship and World Cup medallists to stimulate visibility, inspiration, and growth in the ski community.

Alpine Canada Head Office
Suite 302 – 151 Canada Olympic Road SW
Canada Olympic Park
Calgary, AB T3B 6B7
403-777-3200
info@alpinecanada.org