

Ontario Ski Team
Provincial Coaching Experience Report
December 3-13, 2010
Silver Star and Sovereign Lakes, B.C.
Report by Anthony Story, assistant coach

In May 2010, I applied to take part in a Provincial Coaching Experience (PCE) assignment with the Ontario Ski Team (OST). Cross Country Ontario provides these PCE opportunities so that developing coaches are able to gain expertise by working with more experienced coaches like provincial coach Kateri Mills, and also to expose coaches to increasingly challenging situations (e.g., training at altitude, travelling outside the province or country etc.). In June, I received an e-mail from Kateri, offering me a position as assistant coach on the 10-day OST trip to Silver Star, B.C. in December.

The athletes taking part in the trip included: Adam Birosh (North Bay Nordic), Aidan Lennie (Nakkertok), Alannah Maclean (Walden), Evan Odell (Team Hardwood), Jack Carlyle (Soo Finnish), James Taylor (Nakkertok), Jennifer Jackson (Highlands Trailblazers), Nicholas Monette (Team Hardwood), Scott Hill (Team Hardwood), Shelby Dickey (Highlands Trailblazers), Stephanie Drost (Big Thunder), and Victor Hopper (Walden). Athlete ages ranged from 15 to 21. Coaches for the trip included OST head coach Kateri Mills, Graham Longford from Team Hardwood, and Anthony Story from Temiskaming Nordic.

Most OST athletes and coaches travelled to British Columbia on Friday, December 3. I accompanied a group of five Northern Ontario athletes, who departed from North Bay, Sudbury, and Sault Ste. Marie in the early morning. We arrived at the Kelowna airport in the early afternoon, where we were met by Kateri. After picking up our rental vehicles, our first stop was for grocery shopping in the city of Vernon, which is roughly half-way between Kelowna and Silver Star. The athletes got their first workout (strength and flexibility) of the trip by packing some \$1500 worth of groceries into our mini-van.

The Northern Ontario crew arrived at Silver Star in mid-afternoon, and moved into the 16-bed monster house named "Great Escape". After un-packing the groceries, most of the skiers went for a run, while others stayed in the house and did a core strength workout or school work. The remaining OST skiers who flew out of Ottawa and Toronto later on Friday arrived with Kateri and apprentice coach Graham Langford at 10:00 p.m. that evening.

Saturday morning, all athletes did a short wake-up run at 8:00 a.m. These wake-up runs were a part of the daily routine for the rest of the camp, although they started at 7:00 a.m. on most subsequent days. The morning wake-up runs had at least three purposes: 1) encourage athletes to adjust more readily to any effects related to jet lag; 2) stimulate the appetite prior to breakfast; and 3) maintain "running legs" throughout the on-snow training camp.

The first weekend of ski training included video sessions on both days. On Saturday morning, the OST athletes did short double-pole and skate sprints. Reviewing the video of these sprints provided significant entertainment value to the group, as many skiers found their agility and balance skills were a bit rusty. Spills and collisions

were displayed very effectively by Graham's video work, especially in slow motion! On Sunday morning, video work focused on diagonal stride on a gradual uphill.

For meal preparation and clean-up, Kateri had divided the athletes and coaches into four teams, which alternately prepared breakfast, lunch, and dinner on a rotating schedule. All OST athletes were required to maintain detailed daily "monitoring worksheets" in Microsoft Excel throughout the camp, which included information on their adjustments to training at altitude, daily training hours, waking heart rate Rusko tests, energy levels, technique focus and feedback, as well as information on hydration and nutrition.

On Monday, December 6, the athletes' blood lactate concentrations were analyzed during an easy distance skiing workout at Silver Star. The purpose of this testing was to confirm that the athletes were actually skiing in Zone 1 (i.e., to be sure that heart rates were providing an accurate indication of training zones and that blood lactate levels were not disproportionately elevated due to altitude effects). After skiing for 40-60 minutes, all but one of the skiers tested had blood lactate concentrations of 1.9 millimols per litre or lower, indicating that they were indeed skiing at Zone 1 intensity.

On the evenings of December 6-9, Kateri organized after dinner educational presentations and discussions for the OST athletes. On Monday night, Kateri asked all OST athletes and coaches to identify one or two of their favorite motivational quotes, which they wrote out on construction paper and presented to the group. These quotes were then displayed prominently throughout the house for the remainder of the camp.

On Tuesday night, Eric Bailey and 10 athletes from the Thunder Bay National Development Centre (NDC-Thunder Bay) joined the OST group for dinner and a post-dinner discussion/presentation. After dinner, Eric described the benefits, purpose, and structure of NDC-Thunder Bay and the NDC athletes outlined their 10/10 Workout concept. This 10/10 concept is a report-card like approach that can be applied formally or informally to evaluate the benefits accrued from daily workouts. The over-arching point being that two athletes can complete identical workouts but take away very different benefits depending on steps taken before and after the workout(s). Because of the importance of this 10/10 concept, which was alluded to in both subsequent evening discussions by Sheila Kealey and Dave Wood, I outline below the key aspects of the checklist or report card:

- 1) Workout Objectives Every workout should have 3 goals/objectives which are well understood by the athlete. The goals could/should include tactical, technical, mental, and physical components. Without setting these 3 goals, the maximum workout score possible is 7/10.
- 2) Workout Preparation For morning workouts, wake-up time should be a minimum of 1.5 hours before start of workout, to allow time for a balanced breakfast and adequate hydration. Preparing training equipment and organizing clothing (including extra dry clothes) the night before is advisable, as is thinking about the workout focus during this preparation phase (e.g., do I need to sharpen roller-ski tips or clean my grip zone?). Finally, be on time for the workout to show respect for your teammates and coaches.
- 3) During Workout Focus on your personal goals and needs. For instance, train at your appropriate training intensity, without worrying about your training partners' speed(s). Try to avoid comparing

yourself to others and focus on the positives. Hydrate with a sport drink during the workout – drink at a minimum frequency of every 20-minutes, for a total minimum of 500 mL/hour. For technique goals and refinements, athletes need to develop the ability to recreate the physical sensations of good technique, so that these technical changes can be reproduced in workouts *after* working with a coach. To effectively retain technical changes, new movements need to be repeated thousands of times (something like 10,000 to 20,000 repetitions), meaning that skiers need to be able to reproduce the movements on their own without constant feedback from the coach.

- 4) Immediately Post-Workout a) Hydrate with a recovery drink, b) put on dry clothes – clothes against the skin (socks and underwear) are most important, c) within 20-minutes, eat solid foods including carbs and some protein, d) reflect on, and evaluate the workout.
- 5) Later phase of Recovery a) nap if possible, b) stretch within 3-4 hours of the workout, c) use active recovery methods such as recovery jogs or other light exercise, d) get adequate sleep at night (REM sleep is key for regeneration) – 8 hours + 1 hour sleep per hour of training, e) must have interests outside of skiing to allow you to forget about skiing and training sometimes.
- 6) Keep if FUN Scoring “10/10” on a regular basis will be more readily achievable if you enjoy spending time with your teammates and have a passion for the sport.

Beginning on Tuesday, December 7, the OST group skied at Sovereign Lakes Nordic Ski Club every morning, in preparation for the NorAm races to take place there on the weekend of December 11-12. Sovereign Lakes is approximately a 10-minute drive from the Great Escape house at Silver Star. Silver Star and Sovereign Lakes are also connected by ski trails, which the athletes took advantage of on several occasions, depending on their training plans for particular days.

On the morning of Wednesday, December 8 (the day following the evening visit from NDC-Thunder Bay), NDC coaches and skiers worked with OST athletes on the Sovereign Lakes classic sprint courses that were to be used for the December 11 races. Due to the many quick changes between steep uphill and downhill sections, the NDC racers emphasized the importance of putting lots of effort into cresting the uphill with maximum speed to maintain or increase momentum moving into downhill sections. The NDC racers also emphasized the importance of carefully planning and practicing technical transitions between downhill's and up hills (e.g., to use two or three sequential double poling movements after moving out of tuck, but before switching to diagonal stride). These decisions about technique transitions need to be made before the race, so that any thoughts during the race itself can focus on tactics rather than technique. Additional time was also spent on a tricky downhill corner near the finish of the sprint course.

On Wednesday evening, Ottawa's Sheila Kealey visited the OST house after dinner. Sheila has a master's degree in public health, with expertise in nutrition and is also a very competitive master skier (she competed admirably at the NorAm races on Dec. 11-12, with finishes in the top-half of the Open women's category). The topic of Sheila's talk was nutrition for training and racing at altitude. At altitude, the metabolic rate is always higher than at sea level, although appetite is often slightly depressed. In addition, drier air at altitude leads to quicker

dehydration – athletes may require 1000 mL/hour of fluids to adequately hydrate during training. Sheila’s talk reinforced aspects of the NDC presentation from the previous evening. For instance, she highlighted the importance of using sport drinks during training, and consuming carbohydrates (with a bit of protein) shortly after finishing training – muscles act like sponges for glycogen replenishment within the 20-minute to 2-hour timeframe after training. Sheila also emphasized that “real foods” are almost always a better choice than energy bars. For instance, fruits, dates, nuts and muffins are good choices for training snacks. Potatoes are also a good choice for replenishing glycogen stores due to their very high glycemic index. In terms of supplements, Sheila suggested that fish oil capsules are a good choice for non-fish eaters. Other supplements worth considering are vitamin D and iron.

On Thursday evening, one of Canada’s most experienced cross country ski coaches visited the OST. Dave Wood worked with the national ski team (NST) from 1996 to 2010 and was team leader and/or head coach of the NST during the Olympic and world-championship triumphs of Beckie Scott, Chandra Crawford, and Sara Renner. This spring, Dave stepped down from the NST and is now head coach of the Blackjack ski club in Rossland, B.C. Key points from Dave’s talk on achieving skiing excellence are captured below:

- 1) Embrace the challenge of becoming a top ski racer. Recognize that the journey will be hard and long. “Keeping at it” is one of the main determinants of becoming a top racer.
- 2) Is it really a sacrifice to become a top skier? Not really, in Dave’s view. For instance, look at the opportunities to travel that the young OST skiers have.
- 3) Be coachable. Ask your coach or coaches “what can I do to improve x?” It’s fine to challenge a coach to explain “why”, but mutual respect is key. If the coach’s explanation makes sense, do the workout, or make the technique change etc.
- 4) Recognize the importance of a strong support network, including teammates, family and coaches.
- 5) Being a team player is vital. Selection criteria do not necessarily select your friends – instead they select the fastest skiers. You have to be able to get along with and help your teammates, whether travelling to races together or living together at training camps. (This was a point that was also raised during the NDC presentation on Tuesday night – the NDC motto for teamwork is “One helping hand reaching out leads to nine other hands helping back.”)
- 6) Be cautious about information on the internet – it often should not be trusted. At junior levels, training is not complicated – train hard and train smart.
- 7) In terms of training smart, Dave emphasized the importance of simple steps that add up over time, much like the NDC’s 10/10 concept: get lots of sleep, eat right, and always have goals for your workouts.
- 8) From Dave’s experience with top athletes like Sara Renner, a key factor in long-term success is an unwavering personal belief in one’s ability to succeed. But he also believes that this strong belief can be

learned – it is not necessarily innate. For instance, reviewing training diaries and long-term testing results can be a way of re-affirming the efforts and progress that have been made in training.

- 9) “Baby steps.” For Dave Wood, one of the fascinating aspects of ski racing is the multitude of factors that contribute to a skier’s success. Aerobic capacity, physical strength, technique, equipment, and mental skills (to name a few major categories) are important factors. By making incremental improvements in several of these categories through the medium-to-long term, skiers can gain significant overall improvements in speed. A 0.5-second per kilometer improvement in four separate categories will lead to a 2-second per kilometer improvement in total pace, which amounts to 20 seconds over 10-kilometres. This example shows the importance of cumulative “baby-step” improvements in multiple aspects of ski racing.

Dave finished his presentation with a question-and-answer period. One of the OST athletes asked about Dave’s views on the options for combining skiing and school after secondary school. Dave talked about the strengths of the various NDCs across Canada. He was critical of the U.S. NCAA system because he believes it prioritizes instant results over the long-term development of the athlete. Dave also suggested that Canadian ski clubs need to continue to develop so that the clubs can provide stronger services to skiers beyond the secondary school level. In his view, Scandinavian ski clubs provide services that are comparable to what the NDCs do in Canada.

Another question from an OST athlete addressed the relative merits of ski-specific (roller-skiing and ski-striding) training versus non-ski-specific (cycling and running) training. Dave began his answer by emphasizing that there is a need to vary the proportion of ski-specific training through the year: i.e., in the fall, ski-specific training is more important and it should make up a greater fraction of the training. In terms of non-ski-specific training, Dave is a big proponent of running and cross-country running in particular. In general, he sees running as effective and efficient training because the body doesn’t get as much rest on downhill as in other activities like roller skiing and cycling. Cross-country running is particularly valuable because it mimics the variable terrain and intense difficulty of cross-country skiing. Finally, Dave emphasized the importance of including endurance training with the upper body (i.e., not just weights) during dry land training using activities like paddling, swimming, and roller skiing.

Dave also gave a few points of advice for the weekend races. It is important to do a very thorough warm-up at altitude, including adequate intensity work (in general, skiers can’t warm-up too much, because they have strong endurance training preparation). Like NDC coaches and athletes, Dave also emphasized the need to know exactly what you’re going to do where in terms of technique on the course.

To finish up the presentation, Kateri asked Dave if he had a favorite motivational quote. Dave’s quote was “It’s not the size of the dog in the fight; it’s the size of the fight in the dog.”

After the talk, Dave told Kateri that he was quite impressed by the engagement and questions that the OST skiers brought to the discussion. Overall, the OST athletes were indeed a pro-active group, and they generally showed signs of being relatively advanced on their journey to becoming strong, independent athletes. For instance, many of the skiers regularly took an active role in recovery/regeneration. This included prompt

snacking and consumption of recovery drink immediately after workouts, as well as stretching, use of massage roller, and wearing of compression socks later after workouts. The OST athletes regularly did school work in the scheduled times, especially the older athletes in grade 12 and beyond.

OST skiers maintained their own equipment throughout the week, including regular grip and glide waxing as necessary. The athletes applied and scraped the base coat of glider on their race skis in the evenings before the Saturday and Sunday races. Coaches and waxing volunteers (Jon Monette and Don Hill) applied grip wax and glide “top coats” and structured the skis as necessary on the race days.

The race weekend on December 11-12 provided OST racers with their first opportunity of the season to test their abilities, after a high volume week of training at altitude. Highlights of the OST results included Jennifer Jackson’s bronze medal in the Juvenile/Junior Girls classic sprint on December 11. Jennifer also finished in third place in the aggregate Juvenile/Junior Girls’ standings for both weekend races. Adam Birosh finished in third place in the aggregate Juvenile/Junior Boys’ standings for both weekend races. Scott Hill also had strong results on both days. In particular, Scott had a strong finish in the 15-km free technique event in the Open/Junior Men’s category. Competing against skiers who were up to 2 years older, Scott finished 7th of 23 skiers in the 1992-1993 year-of-birth age group.

Cross Country Ontario and head coach Kateri Mills deserve many thanks for providing this excellent training and competition opportunity to OST athletes, as well as superb learning experiences for developing coaches.