



The Arctic Turn



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First Tracks



Photograph courtesy of Eric Lipton/ Scott Anfang

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The Arctic Turn is a publication of the Alaska Division of PSIA/AASI. The editorial staff reserves the right to edit submissions for content, clarity and space. Please submit articles and photos, along with a short bio as attachments to Warren Souther--telewarren@msn.com

EDUCATION IS CERTIFIABLE

by Chris Kastner

Last year I brought some very controversial proposals to our Fall Board Meeting in Hood River. The proposals were drafted to add prerequisite educational clinics for each level of skiing and teaching modules. You may recall the ballots that were sent out to you explaining the proposals and asking you to vote for or against each of them. And though I was disappointed in the outcome, I applaud all of you who took the opportunity to learn about the issues and express your concerns. I thought this would be a good time for me to explain how and why myself and the other members of the ETC developed these proposals, and what the division has gained from having such debate over these issues.

“Inspiring lifelong passion for the mountain experience” is why I believe we all teach snow sports. You grew up learning how to ski/snowboard or even learned as an adult, and you long to share with others what your life has been like with our sports as part of it. This is our mission statement of AASI and PSIA. Our organization was set up to provide it’s membership educational opportunities that foster the development and refinement of teaching skills. As a result we are able to expand our ability to express our passion better. Certification is the validation of the level of understanding in which we have acquired through the educational process. But, certification has often taken away that passion for so many. It has been my goal to restore that passion in some way to the certification process and though my ideas have created controversy, it has begun to stir that passion once again.

To stand in the shoes of an examiner is not an easy task. We feel a responsibility to make sure that our exam process is fair, user friendly, gives candidates many opportunities in the time allowed, and that feedback given to each participant is constructive and accurate. We have worked very hard at changing formats in order to give candidates the opportunity to focus on one area so that their training can be specific to one module. There is the opportunity for candidates to take a module over in the same year and to pass one module at a time without concern for having to take that module again in the future. Feedback from candidates has been very positive, constructive and has helped us in providing a quality experience in an otherwise stressful setting. We continue to train our examiner staff and review our exam process to make certain that exams are as objective as they can be and if they are not, we continue to make revisions based on their feedback.

But, as hard as we work to improve the staff and our process, we can do nothing for those who come to the exam unprepared. It is frustrating to hear people say that they are going to the exam for the experience or for the educational credit and maybe I just might get “lucky”. It is also frustrating to receive letters explaining that AASI/ PSIA

does nothing for them, or how they are not willing to remain a member because they are frustrated with the certification process. Certification is not a process. Education is and it has been feedback like this that prompted the construction of those proposals. The intent has been to develop an educational framework while moving through levels of certification. It was to provide an assurance that all members have at least some exposure to our educational system. When you think about it, a new member joins AASI/PSIA and the first initial contact they have with our organization is taking a level I exam. The next step is usually the level II exam. We value our organization as an educational body, but yet the first two events new members participate in is certification. A member could potentially stay involved in the certification process and never have to go to an educational event.

I have been quoted as the Certification Vice President that I would love to see the number of exam candidates decrease. I believe that much can be gained if the attention from our membership was directed more towards education rather than certification. Having said this however, I believe that certification can still be a vital part of the educational process if you truly believe in our mission statement and believe in why you teach snow sports. Remember, “Inspiring a lifelong passion for the mountain experience”? And I have been trying to find the appropriate way of saying it.

I figured it out last spring when I attended a lecture at National Academy presented by Mermer Blakeslee, former member of the PSIA National Alpine Team, friend and author of many books including *In The Yikes! Zone*. Her lecture was about learning, the things that inhibit learning and how to overcome them. She spoke in her presentation about the “fear of failure”. Ever had that feeling? How about in an exam? Why? Because certification puts so much value to how much you know. You get a pin. You might get a raise, manufacturer discounts, and the respect of your peers. Mermer spoke about the need to desensitize failure, and how by risking failure you gain the courage to learn. She spoke about the need to value learning over knowing and how by doing so, failing becomes the goal.

In an exam you are taking the risk that you will fail which is a very uneasy feeling to have. But what if failure was the goal? What if you went to an exam to find out what more you had to learn, rather than what you already knew, even if you passed? Many people who pass the exam never stick around to find out where their sights should be for future growth. The value of taking exams, could be the value of knowing what you don’t know. I am fortunate to have been selected to the current National Alpine Team. It took me 3 tries before I was selected (to put that into perspective,

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Homer Cross-Country Event

by Megan Spurkland

The first week of December saw Homer sparkling in a blanket of snow and full of excited skiers. For the first time in the history of Homer, perhaps, we were able to have a local PSIA certification event. Three PSIA instructors, David Lawrence, Deb Willits and Ross Matlock came to Homer and examined a group of 18 skiers. We had three days of beautiful trails, good coaching and very constructive critiquing. Sixteen people attained certification at levels one, two and three. It was extremely exciting



Photograph courtesy of Debra Willits



Photograph courtesy of Debra Willits

to build the strength of the nordic programs in Homer by educating the coaches. Certification really boosted the confidence of local coaches who instruct in Junior Nordic programs, public school coaching and adult beginner lessons. It was a very big deal to have a local certification event, since the clinics are usually hosted over 200 miles away. Homer is hoping to have a clinic based around Junior Nordic level coaching next winter.

*Megan Spurkland is a head coach and ski school director for the Kachemak Nordic program. She is also a frequent contributor to the **Alaska Nordic Skier** and holds her level three cross country certification.*

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tryouts happen every 4 years, that is 12 years in human years), but I received concrete feedback that gave me direction and helped me to develop new goals. I truly, gained more from the process of learning than from the results and I was eventually able to reach my goal.

Exams play an important role in keeping professional standards high. It can also reflect a desire to have knowledge tested and given a focus for future growth. Where else in our educational system do you get feedback that is personal, accurate and as direct as in an exam? Perhaps the idea of adding educational events as a prerequisite to certification speaks to the need to change our perception of what can be gained from the certification. Risk Failure and put the value of learning ahead of the value of knowing.

Success is the ability to move from failure to failure without loss of enthusiasm.

Winston Churchill

Chris Kastner is Certification Vice President of PSIA-NW and a member of the PSIA National Alpine Team.

Alaskan Experience

by Scott Anfang

Every kid who grows up skiing or snowboarding dreams of the day they get to go to Alaska. We all get this image of the extreme skiing and snowboarding action that takes place up in the last frontier. I recently was asked to come up and join in on the action.

1st stop Fairbanks, seems like a nice frozen place, Birch Mountain to be exact. This reminded me of the little resorts in the mid west that I used to ride when I was growing up. Where it is cold, (and there is plenty of that to be had in Fairbanks) snow and an incline you can bet there will be a place to ski and snowboard. 2nd stop Moose Mountain, had to check this place out, no ski and snowboard school, no lift, no snowmaking. 2000 some vertical and none of this other stuff how could it be possible. With some candidates training for their cert 2 exam the combos deal of a day at Birch Mountain and a day at Moose mountain seemed to be the perfect option. Checking out the local flavor at the midnight mine and turtle club also helped us feel a warm welcome in Fairbanks.

Next stop Alyeska. Time to do some training with the Aly-

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LEARN, TEACH, & INSPIRE

by Garth Mcphie

Catchy slogan, eh? Well, yes, that too. But much more. I was reading the latest PSIA-NW newsletter, the NW Snowsports Instructor, and got to the back cover when it caught my eye, and minds eye. Learn, Teach, and Inspire. Why these words? What do they mean to me? To you? To PSIA? For our customers/guests? After thinking about these words for a while, maybe two, here is what they mean to me.

LEARN - Be a learner. Commit to learning forever, not just until you have passed your last exam. Or until you complete your annual PSIA educational credit clinic requirement. Learn to ski, better, more efficiently. Never stop progressing. I have been inspired by many Demo Team members and Tech Team members who are still working on their own skiing. Continuously. They, too, are still in the process of learning to ski better. They are committed to continual learning. It is this commitment to learning that directly affects their effectiveness as instructors and coaches. Learn to teach, better, more effectively. Learn from each lesson, each clinic, each student/client. What worked, what didn't work, what process or progression got us/them to achieve the desired outcome. Take coaching courses and clinics.

Immerse yourself in learning.

TEACH - Be a learner. Be a teacher/coach. To your students, co-workers, self, friends, enemies. Teach with passion, compassion and persistence. Teach because you want to, not because you have to. Teach beginners, teach instructors, teach racers, teach freestyle, teach children, teach seniors. Teach it all. Teach what YOU like, teach what you don't like. Immerse yourself in teaching. Teach because it is your duty, your vocation, your commitment.

INSPIRE - Through your example of commitment to learning and teaching, inspire others. Inspire your students/guests to want to learn. Inspire your instructors to want to learn AND teach. If you have a student that only wants to cut lift lines, inspire them to want to learn, to be taught.

I have been inspired by many individuals throughout my continuous journey; inspired by fellow instructors, coaches, Divisional Staff members, Examiners, Tech Team members, PSIA Demo Team Members, non-PSIA Demo Team Members, and students. It is my goal to maintain and share my passion for ski teaching. And it can only be supported by the recipe: Learn, Teach, and Inspire.

Garth Mcphie is the Alyeska Resort Mountain Learning Center Director.

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eska ski and snowboard school. Start from the beginning, level 1-3 teaching progression for the beginners and how to train new staff, growing and developing into upper level progression building and application. Did I mention North face opened on day 2, great opportunity to build skills on mel-lower terrain and bring them to new terrain for application.

Off we go to Hilltop, another great place that reminded me of the ski resorts across the mid west. Two days working with small groups, developing some basic freestyle skills, carving and edging skills, along with different approaches to teaching all these skills. Could have gone on for days but we had to limit it to two days.

So the Alaska trip was not all gnarly lines and big AK backcountry that you see in all the movies but it was good down home fun with a bunch of people that like to be out in the cold, playing in the white stuff just as much as me. No matter where you are in the world you can find people to play in the snow with. Please get involved and come out and play! Hope to see you at the next PSIA / AASI Alaska event.

Scott Anfang is a good friend to all AK riders. He lives in Steamboat Springs, CO with his wife and two children, where he is the snowboard school technical director and terrain park manager for Steamboat Ski Resort.

photograph courtesy of PSIA/AASI



Alaska Division News

by Warren Souther

Fall training was held in Fairbanks and South Central as well as the first ever Children's Accreditation 1. Training is now ongoing at Hilltop and Fairbanks for PSIA alpine training. Garth and his staff at Alyeska are providing education for Alpine and snowboard. Alaska Division just recently wrapped up a level 1 Alpine exam at Hillberg, congratulations to all the new level 1's! We are also looking at the possibility of having another CS1 at Alyeska for the staff of Alyeska this winter.

Snow (and wind) has come to Juneau and Eagle Crest is open as well and preparing for Jim Schnazberger for mini academy. Plans are being hammered out now concerning another Children's Accreditation in Juneau. Looking into the prospect of holding either snowboard training/ certification event if there is enough interest. An adaptive event is also on the calendar now, contact Lindsay Hallvick for information. And congratulations to Lindsay, thank you for volunteering to head up the Adaptive chair spot. The division can always use more volunteers! The membership meeting will also be held in Juneau this winter at or around the mini academy.

Website is undergoing some crucial changes. We are placing educational material on to the education tab and discipline specific information will be placed in their respective spots as it becomes available. Is there something missing? Let me know. How you ask? Go to the Face Book page and like us. Leave us your feedback there in what you like

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INSIDE SCOOP FOR PASSING A SKIING EXAM

by Mermer Blakeslee

1) Prepare for superficial inconsistencies.

I've heard many candidates complain about "inconsistency" during a skiing exam. When I've asked for details, they've often referred to the width of an examiner's wedge, or the speed of another's open parallel, or the time of match in a christie—and I thought (and sometimes said), that's great. Any exam worth its salt attempting to test a teacher's skiing skills should show a healthy variation of these superficial characteristics. As teachers, we must accommodate a wide range of students skiing an equally wide range of equipment in varying terrain and conditions. When we teach a student who skis very slowly, we don't say, "Excuse me, but you must keep up with my open parallel. I ski that skill level at only one speed." Just the same, if one examiner asks for a wedge that is a little wider and the next asks for one a bit narrower, we should be prepared to show our adaptability as we would in every lesson we give. If our exams (especially at level 3) became a series of cookie cutter final forms, they would not reflect the skiing required for the real job of teaching. Speed and width of stance are just two examples of superficial inconsistencies that a candidate should prepare for, not just to pass the exam, but to accommodate the often wildly diverse demands of effective teaching. Here are a few more:

- speed/ pace
- stance width (size of wedge, open track, etc.)
- pole use (swing the poles in this demo, or not?)
- amount of vertical motion
- time of matching in wedge (or spontaneous) christies
- radius
- amount of carve vs. amount of skid (very dependent on equipment)

When I train teachers interested in taking an exam, I ask them to modify each of these characteristics on demand in their lower level skiing. They should be able to demonstrate an open parallel that's quite skiddy, but also be able to speed it up, add more edge and approach dynamic skiing—what I call the full continuum of open parallel from sloppy to slick. This range is especially important with the advent of short, very shaped skis. Some athletic students are making snazzy railroad track turns in a week. But even if we naturally adjust our demos to the needs of the day when we teach, it is important to prepare. I have known teachers who adapt effortlessly in front of a student, get thrown by the same variations in a test. I even suggest to candidates that they ask the examiner which modification he or she prefers. (Would you like me to ski the open parallel with more skid like you did, or faster and with more carve, like we were asked to do yesterday?) In training, I often set up a circle ski so I can vary one or two characteristics each time around, asking the rest of the group to simulate what they see me change. In a spontaneous christie, let's say, I'll slow down by turning more across the hill. That means the timing of the match will naturally vary (so there's no need

to worry about it). What should not change are the underlying movements, such as the skier's stance, balancing, and steering (how the match occurs). This gets me to the next topic: what should remain consistent throughout an exam.

2) Know what examiners are really looking at.

As an examiner, I have never failed a candidate for skiing a demo with different superficial characteristics from my own, let's say, with a narrower stance, faster or with more edge. I have failed candidates, however, for not adapting their demos when asked because of a habitually ineffective movement. Or because a bad or outdated habit was revealed when a candidate did try to adapt. All the more reason to practice these variations while maintaining efficient movements. Here are some of the movements that should remain consistent (don't obsess over the wording, this is not an "official" list):

- stance (Are the hips, knees, and ankles relaxed but ready for a fluid extension/flexion?)
- balancing (Is the direction of movement toward the desired path? Are the hips or the head/shoulders retreating?)
- use of ski (Is the ski moving forward through the turns or (unintentionally) being pushed sideways? Tips first and tails following?)
- ski-snow interaction (Can both skis be turned in whatever shape is desired? Can they slip sideways when asked? Can they stop slipping and move forward again? Can they both make clean tracks in the snow?etc.)
- active legs against a relatively stable upper body

In the circle ski I mentioned (doing spontaneous christies), I will check if the tips of a candidate's skis move down the hill with the tails following or if the tail of the uphill ski is pushed back up the hill to create a stem. (I also train teachers to do old-fashioned stem christies. They can be helpful in all-terrain skiing.) In the match, I watch to see if the candidate is steering the inside ski into a parallel, with the pivot point right under the foot rather than pulling the uphill boot next to the downhill one with the pivot point at the tip. Is the candidate's torso headed in the direction he or she is going? Or does it twist about, first up the hill, then down? And most important, I will watch the candidate's stance and balancing, both somewhat different (but don't worry about the semantics). Stance is static and should be fiddled with in a recommended boot shop. With a good stance, you feel that you can jump off the snow at any moment when you're skiing, even if you choose not to. (But your boots will never be perfect, so don't make yourself crazy.) Balancing means moving forward along with your skis, so you can steer or adjust the edges of both skis at will, without first needing to make a gross adjustment, or worse, a winch from God. (If we're having fun and stretching our skills, we'll need divine winches occasionally, but hopefully not in every turn or in our lower level skiing.) If a person is "back," let's say, what

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Synchro Competition at the 50/50

by Kelly Beirsto

On April 4-9, 2011 the PSIA is observing a very special year in Snowmass, Colorado with the 50/50 Celebrations marking the first 50 years of PSIA and the next 50 to come. Join the Divas, an all women Synchro ski team since 1998, and start the party early by competing in the 10th Annual Aspen World Synchro Championships. April 1-3, 2011.

The 50/50 is a wonderful chance to look at past, present and future of the PSIA and Synchro skiing is a perfect reflection of this theme. Some of you are saying; "Those were the good old days, but didn't that die off a long time ago?" The mere mention of synchronized skiing may bring a smile to your face as it conjures up images of Instructors in one piece suits all skiing in unison, with their legs held tight, like an old clip from an 80's Warren Miller movie.

So why are a group of diehard instructors dedicating themselves to various Synchro comps? It's a BLAST!!! Year after year, our Aspen event provides a fun chance to party with fellow competitors while challenging ourselves technically. Combining with the 50/50 this year, we expect to see a record number of National and International teams.

On the day of the event, it's always a great show. With the music pumping, a crowd gathers on the deck of Bonnies' Restaurant on Aspen Mountain to enjoy the spectacle. Whether they are making fun or just having fun, guests around the mountain can be seen trying their hand at Synchro. Last year, even the Aspen Ski Patrol put in an effort on the competition hill between passes. It's definitely contagious.

Have you been to a level 3 course recently? Among the hardest maneuvers to pass the standard are the short turns. No, you don't magically improve your precision skiing with this formula, but like most things in life, you get out of it what you put into it.

What better way to improve your shorts than to practice about a million and a half of them? I still remember a teammate's comment when she admitted she had probably done more short turns during that season than the past four put together.

Besides the sheer number of turns, the challenge of trying to sync off the leader forces you to look ahead and ignore any little, or not so little imperfections in your path. It builds skills, stamina, commitment and courage with touch. Add to that, making lane changes by hitting the edge harder while keeping the same tempo, then breaking into long carving turns and then at speed coming back into shorts. Now that's a challenge for pressure management.

Sync skiers are only successful when they match mechanics, timing and blending of skills. To stay in sync you need to be getting your skis on edge at a similar time, with similar pressure, and with similar steering as the leader.

Not all of us are skiing day after day with a high level skier so skiing at performance level during Synchro practice for at least one run when the rest of your day is spent doing our bread and butter turns gives you a chance to sustain,

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I call retreating from the intended path, I will check to see when that retreat happens (Is it in the fall-line consistently?) as well as with which body part. This is important because we usually retreat in one of two ways, with our heads or with our hips. I make this distinction because the cure for each way of retreating is different. For most of us, our style of retreat will never fully disappear in our upper level skiing, it will only diminish. Still, a blatant retreat in lower level skiing is not passable. This intractable standard protects students (especially young ones) who are very susceptible to our image, what we visually communicate.

3) Train for both: maintaining helpful movements while varying (on demand) the superficial characteristics of each demo.

This is not always easy. Last winter, I asked a candidate I was training to slow down her open parallel. Each time she steered her skis a bit more across the hill, she would

draw her head and shoulders back. It was an old problem she had cured in most of her skiing, but it popped up again in this particular version of an open parallel. While practicing, she learned that whenever she attempted a rounder turn, she needed to focus on keeping her shoulders moving forward (along with her skis). Making that movement a consistent element of her demo variations helped her upper level skiing as well. She found she had that same tendency to retreat whenever she had to twist her skis quickly before a gnarly rut in the bumps. This habit often threw her so out of balance, she couldn't maintain her line. After nailing the variations at the open parallel, she eventually transferred the correction to her bump skiing.

In an exam, even the most steeled candidates can find it hard to ski as relaxed as they do when they're teaching. But preparing for both what should vary and what should not can help you better reflect the adaptability and competence you show your students.

State of the Art Technology for PSIA/AASI-A

by Mike Seiler

Members of PSIA/AASI-a will benefit from the latest video analysis technology this season. You will be able to see video of your performance at an event, and after the event the video will be in private online lockers that can be viewed any time. To view the video, go to the log-in page on the PSIA/AASI-a web site and log in with your email address; the password is password.

The video will stay in your locker until you delete it, so it is possible to compare your performance early in the season to a video taken at the end of the season. An analysis of your performance may also be done, which would include audio comments, drawings, and side by side comparisons. The analysis may be done by education staff members in other divisions or by PSIA/AASI National Team members.

Event video that is important for the whole division to see can be placed on the PSIA/AASI-A YouTube Channel and the PSIA/AASI-A Facebook page. This could include an important technical point, teaching techniques, or video of some fun moments. Video can also be delivered to your Smartphone or sent from your private locker to your Facebook page to share with your friends.

The technology is powered by V1, the leading video analy-



Photograph courtesy of Mike Seiler

sis software. V1 is also the official software of the US Ski Team's National Development System. You can download a free version of V1 software at www.v1ski.com

Video analysis is an important tool for learning; it helps the instructor see things more clearly and helps students understand what they need to improve. It is becoming the standard in many sports, and a rapidly growing number of students have an expectation that video analysis will be part of their learning experience.

PSIA/AASI-A is among the leaders bringing video analysis to skiing. Warren Souther is coordinating all the technical details to make this technology available.

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work on and even improve your skill level. At the very least, you'll share a good laugh when it all falls apart. We call that eight girls free skiing.

Another dimension is teamwork. In a sport which is primarily individual, the instances when we work together are limited to lineups figuring out splits in levels and working on multiple pro privates. For full time pros, at the end of the season, you may realize that besides a few training clinics and the odd day off you caught up with a friend or two, most of your time on skis has been spent with our guests



photograph courtesy of Eric Lipton/Scott Anfang

skiing at their pace. Synchro training can give you an opportunity to ski at performance level with a fantastic group of friends on a regular basis.

It's very motivating! Some days when the alarm goes off that early and the mercury has dropped, let's face it, an 8am lift load does not sound appealing. Then when you get treated to the most amazing morning light and you are long past that difficult wake up and you are in this magical world with a great group of friends on freshly groomed snow, you are reminded of the joys of this chosen profession. Being on a Synchro team gives you a sense of belonging where strong bonds and longtime friendships are formed. Much of our work now comes through our connections and so it is easy to see the value in Synchro as this team becomes part of your valuable network.

Have you ever found yourself on a long stretch and realized you haven't felt the wind in your face or felt that thrill of speed that helped you fall in love with the sport in the first place? I know I'm not talking to everyone out there, as there are many who are motivated to go for a run before and after work and on days off. However, if you recognize yourself at all in this description, then maybe the structure of Synchro can be that extra motivation to get you out there.

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The thrill of competition and the rush of performing under pressure can be exhilarating. It can also bring you to new levels of performance which you may not have believed possible when pushed by fellow team members. There is also the strong pride which can come from receiving the first place trophy.

Whether you are inspired to become a Synchro skier or you are a School Director, trainer or coach who would like to encourage some of your staff to form a team, we can't wait to hear from you! We can help you get started. For the rest, come out a couple of days early to the 50/50 at Aspen Mountain and cheer on the teams.

For more information on The Aspen World Synchro Championships, and other National Synchro competitions, USA

Powder 8's or Synchro Carving, visit www.aspenteamdiva.com or email teamdiva@hotmail.com.

Think Sync!

Kelly Bearsto is the Aspen World Synchro Championships Event organizer as well as the Aspen Team Diva manager. She also holds level 3 certifications with PSIA and CSIA.



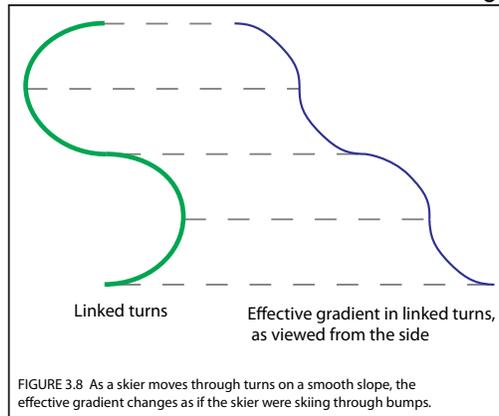
Ultimate Skiing by Ron LeMaster - A Book Review

by Duane Anderson

Ultimate Skiing (Master the techniques of great skiing) is the latest release by Ron LeMaster, published in 2010. It is a revised edition of Ron's 1999 publication of The Skier's Edge. In case you haven't noticed, Ultimate Skiing is noted as a reference in the latest 2010 Education Master Plan. Since the Alpine Technical Manual and the Core Concepts Manual are lacking in-depth information in regards to technical concepts of skiing, I decided to take a look at Ultimate Skiing. I have to admit, I haven't read The Skier's Edge. I also have to warn you that I am an engineer, so what gets me excited...might put you to sleep.

Ultimate Skiing was written to incorporate revamped concepts brought about by the new technology shaped skis. (As Warren Miller probably said, Shaped skis are the best thing to happen to skiing since stretch pants.) Ron wrote the book with the thought that every great coach he knew understood the physics of his sport. As an avid skier, you are probably your own coach. You learn by watching better skiers, by picking up tips from friends, or maybe reading books. Chances are you do not understand the sport, in physical terms, to be the best coach or skier you can be. Ron explains how the skis, the snow and the skier work together to make skiing happen. When you digest this material, you will inevitably think, "so that's what I feel when I make a turn". The book is packed with high speed images, or sequential movements of great skiing. Skiing is a highly sensual sport. We love what we feel when we ski...we watch a great skier and feel good. Skiing is a dance with gravity, influenced by the snow. In the first three chapters, Ron discusses skiing mechanics:

1. What makes shaped skis turn and how to manage it.
2. The skier's balance axis (since there is no friction on skis, the skier's balance axis is perpendicular to the ski extending from the feet through the center of mass) as opposed to our normal balance axis affected by friction from the ground. All movements on skis are made in relation to the skis on the snow, flexion and extension are relative to the plane/attitude of the ski, nothing else.
3. The relationship of the center of mass (COM) to the skis in various phases of the turn, slightly forward on turn initiation and controlling phases, sliding slightly aft in the finishing phase to fully use the skis forebody to effect the turn and the tail to exit the turn (ie. using the expensive tools we have)...with the COM always inside.



One of the coolest concepts is Ron's development of the "virtual bump". Anyone that has toyed with "carving" arcs on the mountain has probably experienced this bump in the transition phase of the turn, a bump on a perfectly groomed mountain no less. Until I read this, I thought the feeling was more from the skis hooking up a

bit more than desired, giving me a kick, but Ron explains it as a "virtual bump" and provides diagrams to enforce his findings. The diagrams are the only way you will see this as it is...hopefully. Simply putting it, as we carve down the fall line, we are going downhill, but as we carve across the fall line (across the hill) the slope is flat. Linking carved turns and plotting our vertical trajectory along the skier's path, the resulting diagram is similar to skiing directly down an

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easy mogul field. Refer to Ron's sketch below.

Taken at speed, the skier's COM may be launched into the air on the "virtual bump", that is unless we use flexion through the transition and extend into the next arc, an "ah hah" moment. Some of this virtual bump could also originate as we extend through the turn, if we don't flex through the transition as the legs cross under the body, this also raises the COM resulting in a bump effect. Knowing what is physically happening should allow us to more easily make adjustments in our technique to account for this invisible "bump". There are numerous similar "ah hah" moments throughout this read.

The first three chapters are full of force diagrams (something only an engineer could get excited about). I encourage you to at least think about them, even if you can't understand them. The next 7 chapters discuss the movements we make to control the forces of skiing, or technique, how to summon up the right forces to act in the right place at the right time. There are fewer force diagrams, but lots of sequential photos, in this section and the focus is on Balance, Edging, Rotation, Pressure and COM.

There is discussion regarding possibly the most difficult step in skiing...moving from open parallel to dynamic parallel skiing. The key to linking turns in a dynamic fashion is getting the COM to change sides with your feet by using the dynamics of the end of one turn to help start another. To progress, the skier must learn to control a short period

of imbalance ("falling" from the finish of one turn into the center of the new turn) in a controlled fashion. It's a lot like learning to walk as a child, we fell forward anticipating the floors support of the outstretched foot, you probably fell on your head a few times before you learned the timing of the foot contacting the floor...it's a learning process that takes practice to build confidence. Using this projection of the COM into every new turn (even before the feet and legs are committed) is the key to really great skiing in all snow conditions and on all terrain types. Now that you know that... just do it!

There is a chapter dedicated to boot fitting, how to determine if you have adequate forward lean, proper cuff canting, proper foot beds affecting knee alignment. Finally, there are 4 chapters discussing the use of all these skills in real-world skiing conditions: ice; moguls; powder, crud and slush (or snow we ski "in" as opposed to "on"); and steeps.

If you've wanted to learn more about the mechanics of skiing, but haven't found that info in PSIA publications, or don't have a Level 3 mentor to help you discover the "secrets of skiing", you should pick up a copy of this book. There is a lot of info, but Ron eventually boils it down to a few concepts:

1. Tune into the force of the snow and how it feels on the skis, focus on your point of balance or balance axis.
2. Ski with your feet (active) and balance with your body (quiet).
3. Focus on function, not form, the latter will follow.
4. Do drills and exercises to develop consistency. Use terrain to develop spontaneity and looseness. Be playful in your skiing, ski like a child.

Why do we ski? Skiing makes us feel healthy and happy, so we ski to enjoy skiing itself. The most important reason to improve is you'll enjoy it more.

Ultimate Skiing is 200 pages of great skiing info, perhaps a skiing bible. You can't get this in-depth info on modern skiing from a single source. You can purchase a large format paperback book at Amazon for about \$15, perhaps finding a good used book for \$12. I highly recommend it.

(PS - I noted that PSIA does not have a treatise of this sort on skiing mechanics; that is not completely true. On the PSIA.org web site, under education resources, you can download a free publication A Ski Instructor's Guide to the Physics and Biomechanics of Skiing. The hard copy is \$9.95 but you can get a PDF file for free. It is 100+ pages and was published in 1995. Tho much of the info is still current, it was written before the advent of shaped skis, thus some of the concepts are revised. It too has a lot of force diagrams, but not as elegant as Ultimate Skiing.)



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and what changes you want to see. Post your ski pictures and tell us what you love about your area! I will be adding certification material separately under the Certification tab respective to each discipline as well.

Congratulations to the coaches in Homer! In December eighteen coaches signed up for a three day certification course. We sent Deb Willits, Ross Matlock and David Lawrence to Homer and they all came away truly exhilarated by the energy and enthusiasm!

The 50/50 reunion is being held at Aspen Colorado in April and that is affecting availability of trainers for exams. The 50/50 event will also be taking the place of National Academy usually held at Snowbird. National is rolling out more new products as a result of the Customer Relation Management software coming online. For instructors who are noticing that educational clinic is not on your record, please contact National right away to get that taken care of. The older IMiS system did not transfer over very accurately and national staff has asked what was missed. Records were provided as accurately as possible but your help is greatly appreciated to ensure accuracy of your records.

Educational credit. Instructors are responsible for continuing the educational training. The standard is at least two days of training every two years. Alaska has been very lax in enforcing this standard in the past but with the CRM software this will start being tracked and enforced in the future. You might see something with your renewal notice this

summer. Prepare now and think about what educational opportunities you would like to participate in.

I would like to say thank you to National Team Members who have been up to and are coming up to Alaska this year. Alaska division had the largest usage of the national team out of all nine divisions. Considering we are the smallest, that is a huge benefit to you the member. Take advantage of this and come out to learn more about the sport you love!

That is all that I can think of to date. Thank you for your membership and participation!



photograph courtesy of Eric Lipton/Scott Anfang

PSIA/AASI Alaska Division
PO BOX 243491
Anchorage, AK 99524-3491

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