



# 32 DEGREES

THE JOURNAL OF PROFESSIONAL SNOWSPORTS INSTRUCTION | FALL 2011

## ROCKER LOGIC

How to choose  
the right ride

pgs. 26, 108

From Austria  
with Love

This Issue is Chock-Full  
of Interski Insights

Kids on  
Skinny Skis

Make it All About  
the Fun! pg. 104

## Teaching Tip

Add Freestyle to the  
All-Mountain Mix

pg. 90





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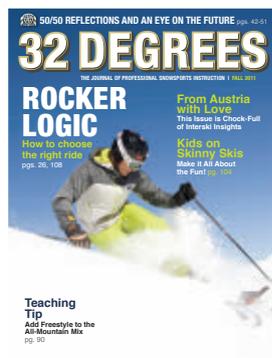
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**COVER SHOT:** Rocker skis help PSIA Nordic Team member Ross Matlock make quick and floaty work of the powder at Colorado's Crested Butte Mountain Resort. Photo by Sherri Harkin.



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# The Evolving Value of PSIA-AASI

By Eric Sheckleton

PSIA-AASI Chairman of the Board



**V**alue n. 1. An amount regarded as a fair equivalent for something, esp. goods or services. 2. Material worth. 3. Worth in importance or usefulness to the possessor. 4. A standard or principle regarded as desirable or worthwhile.

I've been thinking a lot about value and what that means to PSIA-AASI members. Reflecting on my own experiences, I've seen the value I place on the association change as my needs have changed, and I suspect the same is true for many members.

I started teaching at Montana's Big Mountain, attracted, like many young snowboarders, by the free pass and the perceived lifestyle of riding around all day with friends. I certainly didn't expect to develop the passion for the profession that I have now.

Shortly after being hired, I learned of an upcoming Level I certification exam and, not knowing much about PSIA (AASI didn't exist yet), asked a veteran snowboard instructor what he thought about the association. He said, "PSIA is okay—if you like standing around *talk-ing* about riding." That made me hesitate, but I was still new and felt myself improving in almost every clinic. I had a great snowboard trainer in Michael Shaw, who was a member of the PSIA Snowboard Team and coached Olympic hopefuls. That assured me I had something to learn from him and PSIA.

This history highlights my initial feelings about PSIA's value. Early on, I weighed the cost of the exam and dues against the coaching I'd be given during the exam process and the small raise I'd receive after getting my pin. Becoming a better rider was important to me, so I felt it was a fair equivalent for my hard-earned dollars.

The next summer, Red Lodge Mountain—where I'd first learned to ski and ride—was hiring a new snowsports

school director. I have a business management degree, so I applied. I didn't get the job, but was hired as the snowboard program supervisor and trainer. There were very few certified snowboard instructors at the time, so I know my Level II certification is the main reason I got that job.

Clearly, membership in PSIA-AASI has opened a lot of doors for me. The people I've met and training I've received has led to management positions in various snowsports schools, volunteer leadership opportunities in my division, a position on the national snowboard team, involvement in task forces and committees, and, obviously, an opportunity to serve on the national board. With each step, the access to new ideas and challenges helped me grow as an instructor and a person.

My career serves as one example of how members can evolve in the profession. As we evolve, so do our needs, expectations, and the ways we value our membership. A new instructor might look at the array of education materials, potential raise, or pro deals as the main value. The primary value for another member may be the access to high-level training—by National Team members and top-notch division educators. The new online registration process certainly makes that easier. And don't forget about our nationally recognized certification system that gives employers helpful insight into their instructors' professional development (which is getting a boost through the Strategic Education Plan).

Other waypoints along the value spectrum include international opportunities enhanced by our affiliation with the

International Ski Instructors Association and Interski and efforts to increase public awareness of snowsports instruction (think of the *Go with a Pro* television program and Learn to Ski and Snowboard Month, to cite initiatives taken on in coordination with National Ski Areas Association, Snowsports Industries America, and other industry partners).

This just scratches the surface of PSIA-AASI programs and services. There's also an ever-more robust website, The Community online networking site, the *Movement Matrix*, and *32 Degrees* to name just a few. All of these elements of value represent steps toward being the place members and consumers go to learn everything there is to know about snowsports, gain access to great resources and people, and get more from the winter experience. These are lofty goals but ones the PSIA-AASI Board of Directors believes are necessary for an association devoted to members' personal and professional development.

We have the dedicated staff, exceptional National Team members, and insightful national and division leaders that will help us achieve these goals. These services and others on the horizon can't be done on the cheap, though, so after analyzing the association's financial outlook and its goals, the PSIA-AASI Board of Directors approved a dues increase to take effect next year. More information about the logistics and implementation will be provided in the months to come.

Know that PSIA-AASI works hard to continually improve its value to you, the resorts, and the rest of the industry. It can be difficult to meet the needs of a diverse membership, especially as the industry evolves, but if we stay focused on our overall mission to get people excited about snowsports, our value will be understood—and celebrated—by the industry, area operators, and members. ❧



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## Confessions of an Event Junkie

By Christina Anderson

**T**he PSIA-AASI staff and National Team members deserve highest commendations for providing a marvelous experience at the 50/50 Celebration at Snowmass this past spring. I participated in the education track, similar in nature to the National Academy, and was treated to another premier event loaded with fun and knowledge.

On my departure from Aspen, however, I was already feeling the vast hunger for more of the same . . . Gimme the learning! Why? After all, I'm not planning a route to the next level of certification, or attempting to try out for any coaching team. It certainly isn't just to fulfill PSIA-AASI requirements of taking one continuing education event ev-



Christina Anderson

Freddie Anderson

ery two years. (I seem to average more than two events per year.) Yup, I confess, I am an event junkie.

I approach every event with excitement, hoping to gain new insight into my own movement patterns, to make each turn feel more balanced, to give my feet a better feel for the snow. I don't even wear my PSIA pin at training events; I want to be just another individual learning something that will

make me a better skier and trainer.

I have found that attending multiple events allows knowledge to build in layers and spirals. The spiral of learning is apparent when I hear some of the same tech-talk several times and from different coaches; it takes on into new meaning each time I review it with a new coach, finally translating the knowledge to physical change in my movements. It doesn't always settle in the first time,

## What PSIA-AASI Has Done For Me

Skiing has always been an integral part of my life. During college, it was nothing to ski 125 days a year while carrying a full class load. One of the things that attracted me to my wife, Kelly, was that she was an enthusiastic skier.

Our oldest daughter, Jenny, was born with cerebral palsy. Jenny is just like any other kid; she just can't walk. Our family has never let Jenny's disability be a limiting factor for the family's activities—we just adapt activities to suit our family's unique needs. For example, when we camp, we merely have to make sure it is someplace that is accessible by vehicle. Once at the camp site, we do activities just like any other family—Jenny is quite the fisherwoman.

When Jenny wanted to start skiing we had to search for programs that would accept a three-year old with a disability—



Courtesy of Doug Sato

Unfortunately there were none. Most adaptive programs at the time had an age restriction of about 10 years old. Through PSIA-AASI, we were able to start a sit-down ski program for very young children—PSIA-AASI provided

resources—both in educational materials and clinicians that enabled our local adaptive ski school to evolve to include young children, such as Jenny.

Skiing for people with disabilities is called adaptive for a reason—we adapt alpine/snowboard techniques for use with our clients. We don't reinvent the wheel—rather we modify it to suit our client's purposes. PSIA-AASI's continuing education programs have allowed me and others to develop and refine programs/techniques for people with disabilities.

So when I think about the question, "What has PSIA-AASI done for me?" I think about my family and other families in a similar situation that now look forward to the winter. PSIA-AASI has helped to provide access to a cold and unforgiving season that was once avoided and dreaded by people with disabilities. The supportive and collaborative spirit of PSIA-AASI has created innovative and forward-thinking programs—for which I and my family shall be eternally grateful.

Douglas Sato  
Bogus Basin, ID



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### WORLD CLASS PEOPLE

The Spring 2011 issue of *32 Degrees* includes a message from our chairman letting us know that two skiing icons had joined PSIA-AASI—Glen Plake and Daron Rahlves. This same issue of our professional journal featured a letter to the editor from a member stating “imagine what fun it will be to clinic with them.”

I am excited to report to the membership that at my Level II orientation clinic at Schweitzer Mountain in March

2011, I had the pleasure of skiing all day with Glen and his wife Kimberly.

I found them to be kind, gracious, giving, and totally fun! They are both world-class skiers and world-class people. Welcome to our new members—they are exactly the type of instructors that our organization represents.

*George Bailey, Northwest Division Board Member  
Saint Regis, MT*

### THROWING IT DOWN

I was thinking just the other day that *32 Degrees* did not throw up enough gangsta signs. Thanks for correcting the oversight in the Spring 2011 issue. But, I am curious whether the Crips or the Bloods sent more members to Interski...

*Jim Foley  
Alpine Ski Instructor  
Squaw Valley Snowsports School*

because my layered foundation might not be deep enough yet, but I’m certainly in a different learning place with each event. As I come around the next spiral, suddenly my body feels what my brain was trying to wrap itself around last time. Each event adds another layer of foundation in mind and body.

At various stages in our lives I think we can all slide in and out of goal-driven and process-driven phases. Both phases are productive at the proper times; attaining degrees and pursuing greater status, whether in academics, business, sports, or professions is always beneficial and rewarding. I believe it is important to recognize which motivation (goal or process) can bring the greatest result at the proper time.

Sometimes people attend events solely to prep for exams. They tend to be in a goal-driven phase as opposed to purpose-driven; exam-driven as opposed to learning-driven. I have met individuals at events who indicate that they are with a particular snowsports school mainly because the school has a program

in place to “help me pass my exam.” For these individuals it seems that teaching the sport is almost incidental to the goal of passing the next exam.

Approaching events by looking for the silver bullet that you fantasize will instantly fix your movement pattern for the next exam, or for the next critical review, could potentially block the layered learning process. Instead, see it as an opportunity to add another knowledge layer, to complete another spiral; let yourself gain full benefit from the learning process.

If an individual is an event junkie already, and has attended multiple events in recent seasons, attending an exam with education at the front of the mind might alleviate some performance anxiety. The exam can become one more layer in the knowledge-building process. I met an individual at the 50/50 Celebration who takes an exam every other year just because he feels he learns so much in the exam environment!

An “unsuccessful outcome” at an exam can be turned into a successful knowledge

gain, especially with a timely debriefing conducted by one’s trainer at home. If approached from a personal learning orientation, success in the exam will (eventually) be an outcome of the learning motivation.

All our great coaches, who learn through a knowledge-layering process, share this craving for the spiral of learning. Even at the top, I’m sure our National Team members are still entering their own training with this layering process in their minds. Every top-end trainer has great knowledge and a different personality, so there will always be a different synergy in the learning process at all levels.

As I left Aspen after the 50/50 I found myself wishing I could do it all again the next month. The “craving” for my next event is already beginning, and I’m mentally planning dates; I’m a true event junkie, and just can’t seem to shake the habit! ☺

*Christina Anderson is a Level III-certified alpine instructor and is the co-director of New York’s Schenectady Ski School.*

## REACH OUT IN ‘YOUR SPACE’!

*32 Degrees* welcomes your views! Feel free to write a letter to the editor, opine on a topic near and dear to your heart, or submit an essay on “What PSIA-AASI Has Done for Me.” Submissions to the Your Space department may be sent by fax (in care of *32 Degrees*) to 303-987-9489, by e-mail to [32Degrees@thesnowpros.org](mailto:32Degrees@thesnowpros.org), or by conventional mail to *32 Degrees*, 133 South Van Gordon Street, Suite 200, Lakewood, Colorado, 80228. Please include your full name, address, and daytime telephone number.

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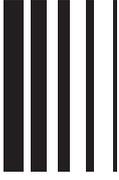


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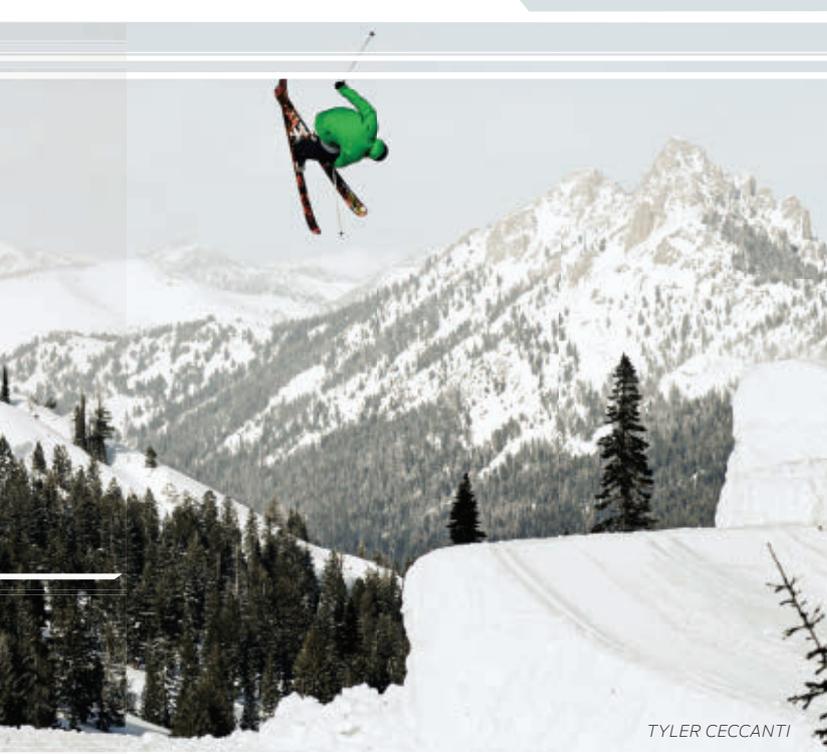
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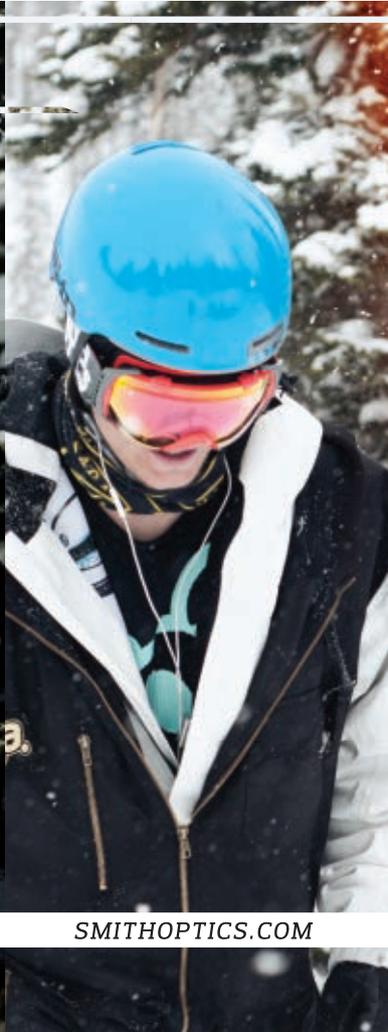


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## NEWS OF NOTE

### Team Selection on the Horizon

It's that time again! Every four years PSIA-AASI selects the top talent within the association to serve on the PSIA-AASI National Teams, representing the teaching disciplines of adaptive, alpine, nordic (telemark and track/skate), and snowboarding. All PSIA-AASI members in good standing who meet the candidate requirements may apply, with applications accepted until 5 p.m. (MST) December 9, 2011.

What does it take to be a team member? Feedback from members like you tells us that team members truly exhibit the best qualities of PSIA-AASI snowsports instructors by being inspirational educators, lifelong learners, and inspirational athletes. To be selected to the teams, candidates go through a rigorous application process and, if accepted, an on-snow selection event where they'll show and share their "stuff" with the other aspirants and selectors. All applicants will be notified on or before February 15, 2012, whether they have been invited to a selection event—which will include Snowboard and Alpine Freestyle Specialist selection at Copper Mountain, Colorado, in early April and Adaptive, Alpine, and Nordic Telemark and Track /Skate selections slated for Snowbird, Utah, later in the month.

For the requirements and more information, log on to [TheSnowPros.org](http://TheSnowPros.org) and check out the 2012 PSIA-AASI Teams community in the PSIA-AASI Community.

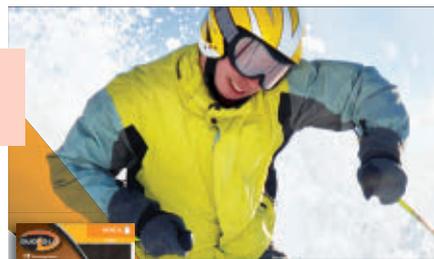


Cesar Piatto

### Former PSIA President Bill Hetrick (1936–2011)

PSIA-AASI and the greater snowsports community lost a devoted friend and advocate with the passing of former PSIA President and Chairman of the Board Bill Hetrick, who lost a battle with cancer on May 6 in State College, Pennsylvania. He was 74.

After joining PSIA in 1970, Hetrick went on to fulfill many leadership roles within Eastern Division—and served as PSIA president from 1987 to 1994. It was during Hetrick's time on the national board that PSIA made significant structural, governance, and administrative strides that enhanced the stability of the organization. Among other things, Hetrick is credited with embracing compromise to help resolve issues among divisions and promoting



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**WHAT YOU MAY NOT KNOW:** Beginning in Fall 2011, Duofold will transition its consumer communications to the new name of *Duofold by Champion*. Both brands are owned by HanesBrands, Inc. and as industry leaders and longtime category innovators in cold weather gear, *Champion* and *Duofold* will collaborate to continue to bring consumers the latest innovations in cold weather performance apparel. The partnership with *Duofold* will focus on the base layer category only; *Champion* Athleticwear will continue to use the *Champion* brand name in the athletic apparel category.

administrative consolidation with the National Ski Patrol that, at the time, served to put both associations on more solid financial footing. Both he and his wife Norma were honored with Lifetime Membership in the association.

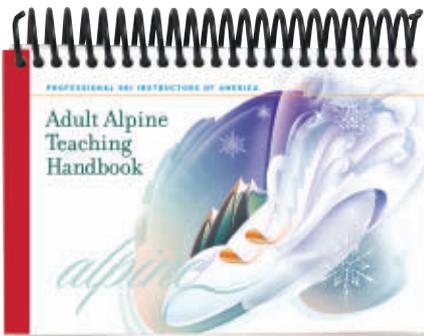
Most recently Hetrick served as editor of *SnowPro*, the Eastern Division newsletter that, under his guidance, won a 2006 Association Award for Excellence in Publications from the Empire State Society of Association Executives. In his honor the PSIA-Eastern Board of Directors has created the William Hetrick Editorial Scholarship, which, starting in 2012–13, will be awarded to help defray education–event expenses for five contributors to the publication to which he devoted so much care and skill over the years.

Of Hetrick's impact upon the

association, PSIA-AASI Executive Director and CEO Mark Dorsey said, "Bill was a fierce champion for PSIA-AASI as well as personal friend and mentor. His ideas and energy fueled the success we enjoy today, and he leaves a proud and enduring legacy."

## REASON TO GET EXCITED: AMERICAN SNOW!

IT'S NEARLY HERE! THE PSIA-AASI BOOK AMERICAN SNOW—WHICH CELEBRATES 50 YEARS OF INDUSTRY IMPACT—IS BEING PUBLISHED THIS WINTER, WITH PRE-ORDERS NOW AVAILABLE THROUGH THE PSIA-AASI ACCESSORIES CATALOG. DON'T BE LEFT OUT! READ ABOUT THE HISTORY OF HOW PSIA-AASI CAME TO BE AND CONTINUES TO GROW!



### Adult Alpine Teaching Handbook Hot Off the Presses

Instructors who teach adults learning to ski—or learning to ski better—now have a new resource in the PSIA *Adult Alpine Teaching Handbook*. Produced in cooperation with the Vail and Beaver Creek Ski and Snowboard Schools, the handbook is a go-to source for inspiration and useful ideas for enhancing skiing proficiency while keeping students engaged and having fun. Progressions, exercises, and helpful tips for all skill levels and a variety of terrain options help round out this comprehensive on-hill tool. Available through the new PSIA-AASI *Accessories Catalog*.

### Where Do You Read 32 Degrees?

Katherine Hayes Rodriguez, who is a PSIA-certified Level III alpine and a Level III adaptive instructor from Truckee, California, takes a mandatory play-break in Nevada.

"We always carry things in our trailer to do when there is no wind on the Playa. There is always dirt biking, arrowhead hunting, reading, visiting friends . . . when we get "skunked" (no wind). I was waiting for the wind to come back up and my son brought out *32 Degrees* to read while we waited."

For her efforts she'll receive a \$25 gift certificate for the brand-spanking-new PSIA-AASI *Accessories*



# WIN!

*Catalog*. Send us a shot that features you, the magazine, and an out-of-the-ordinary spot and you'll become a contender for our next gift certificate. Send us a high-resolution image and info on how you came to be there to [lineup@thesnopros.org](mailto:lineup@thesnopros.org).

## ↑ HOT

Slopestyle skiing and snowboarding & halfpipe skiing. All will debut as medal events at the 2014 Winter Olympic Games in Sochi, Russia.

Deep winter snowpacks. Crystal Mountain, Snowbird, and Squaw Valley all set new snowfall records last season, with powder that was perpetually deep.



Helping your students choose the right gear. Check out this issue's feature *All Rocker Isn't Created Equal* on page 26 for info on how to make gear recommendations based on student proficiency and preferences.



U.S. ski racing superstar Lindsey Vonn, who won her second straight ESPN ESPY for best

female athlete. Vonn, who barely lost the World Cup overall title to Germany's Maria Riesch, won her fourth straight World Cup downhill title last season.

## ↓ NOT

Lockouts. The NFL spent the summer arguing over how to divvy up the megabillions. Now it's the NBA's turn. The upside . . . Fewer games on TV = more time on the slopes!

The heat. In July, record highs were also reached, prompting many flip-flopped shredders to wonder, When's that snow coming back?

Putting your students on whatever gear they think is prettiest in the rental shop. Make sure their equipment is a good fit for their ability level!



Canadian downhiller Manuel Osborne-Paradis, who was hospitalized

with severe road-rash to the buttocks after falling from a party bus and, according to the *Calgary Herald*, was dragged for more than 250 feet.



Georgie Bremner

## PRO FILE:

# JIM SCHANZENBAKER

## PSIA Alpine Team Member

**You didn't start skiing until age 18; tell us how you got started and what made you interested in the sport.**

Yeah, I was a late bloomer. My skiing got started late but took off quickly. A few close friends who taught skiing part-time, like many of our pros around the country, encouraged me to join them for some skiing on the weekends. Each weekend for a season in Southern California I went up with these friends and whoever of them didn't get a lesson took me out for a ride. So I had outstanding tutoring from the beginning.

Growing up with tons of sports to choose from, skiing was just another challenge for me. The best part about this was that it happened in such a different environment than anything that I was used to, having grown up in Iowa.

After one season of skiing on weekends my friends encouraged me to apply for a job. This seemed like a laugh to me since I was just an athletic Level 5 skier. Their response was that

the skiing was not the most important part of teaching. They imparted one of the most valuable life-long lessons for me to carry forward into my teaching career, that one's personality is much more important to creating a great experience for your guests.

So I applied for a job the next fall and was hired. I soon realized that one of the best perks was free clinics every morning that I was working. And, as my friends would tell you, I needed help.

**How did you become a member of PSIA and eventually join the PSIA Alpine Team.**

I must admit that I have a bit of a competitive bug in me. So that, and a seed planted by a clinic leader in my early days, sent me on a journey that I certainly didn't understand until much later.

**Tell us how you got into golf.**

Golf came to me as a youngster. Iowa, which had very little skiing, did have some great golf. Near our hometown

there was a nine-hole course that cost juniors \$4.50 for a day rate. We would go out with our next door neighbor, who was like a second grandfather to us, and often play 54 holes. This seemed to keep us out of trouble.

**How are teaching golf and teaching skiing the same and how are they different?**

Well, as my physical therapist says, "your body isn't going to last long with these two sports." But really I wouldn't trade it for the world. The two sports complement each other's seasons very well, and I really like being outdoors all the time. Teaching the two sports isn't that different. You develop an eye for how to move your body to best manipulate the tool that you are using. Probably the biggest difference is the fear factor always being an issue in skiing. In golf there is a similar mental hurdle for most players of wanting to hit the ball hard.

**Are there certain instruction techniques you use in both sports?**

I like to balance or bounce between mental, physical, technical, and tactical. I feel that if you get stuck focusing too much or too long on any of these you get poor outcomes. If you can recognize where someone is then you can give them information from another point of view that complements the existing focus.

**How does your love for skiing translate to your love for golf, if at all?**

The beauty of enjoying both sports is that neither one of them gets old. By the time the season of one is over I am looking forward to the next sport starting.

**What's something most people may not know about you?**

I have two young children. Lachlan is our three-year-old boy and Britta is our new one, born in early May.

**What do you do for fun when you're not teaching?**

My wife and I enjoy taking the family camping, just to get outdoors. We also really like to travel abroad. This is a bit more difficult with young kids, but we like to drag them everywhere. ☺



**bolle** 

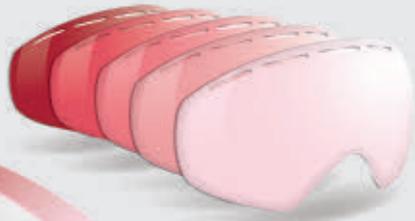


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Matt Phillipi

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\* More shown comes with Verillion Gun Bag. Modulator lens sold separately.

# LINEUP FROM TALK

	NAME/ CREDENTIALS	MEMBER SINCE/ DIVISION	GOAL FOR THIS SEASON	STRANGEST PLACE YOU'VE SLEPT FOR FRESH TURNS	BEST PSIA-AASI MEMORY	SKIING/ RIDING ON
	<b>Peggy Erickson</b> Hyland Snowsports Academy, Bloomington, MN Alpine Level II	2002 Central	Kick butt and clinic to get my skiing up to Level III quality.	A very cold, hard, basement floor with no blankets or heat.	Women's clinic with Robin Barnes and Jennifer Simpson.	Volkl Fuego
	<b>K.C. Gandee</b> Killington Mountain School/Killington Winter Sports Club Killington, VT Snowboard Level III	1998 Eastern (East- side!!)	Stay healthy after a broken wrist and back in 2010-11 and a herniated cervical disk this summer!	Crooked RV hallway without power at 25 degrees.	Tie between dropping in the deepest steepest run of my life at the '05 Rider Rally at Jackson Hole and hearing my name called at the '04 AASI Team Tryouts.	Rossignol Jigsaw 157 or Rossignol One Magtek MW 157
	<b>Stacey Gerrish</b> Beaver Creek Ski & Snowboard School, Vail, CO Alpine Level III	1989 Rocky Mountain	Attend PSIA Alpine Team Selections in April at Snowbird.	In my car in the parking lot at Timberline Lodge in mid-summer for first ride up the Palmer.	National Academy in Chamonix!	Atomic



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**SNOWPRESS★**

# 'WHAT'S IN YOUR QUIVER, AASI SNOWBOARD TEAM MEMBER ERIC ROLLS?' Home Area: Canyons, Utah

## STEEP TREES AND CHUTES

The **RED Mutiny** helmet helps with those noggin knocks on low-lying branches as I duck into slashes where others might not. I also like the function of the brim, which keeps falling snow out of my goggle vents when it's dumping the light and fluffy that we get here in Utah. (The brim also helps keep the snow out when I tomahawk from a failed attempt at a spin off a cornice.)



## POWPOW AND BIG MOUNTAIN RIDING

Canyons gets the goods and has the terrain to match. On a big-dump day the **Premier F1** by Never Summer gets me down the mountain fast and with confidence. When the snowboard school lineup supervisor says, "Go get some pow laps before lineup so you can give me the full report," I don't argue; I try to get in as many laps as I can to fulfill my duties. The F1 can handle the high speeds and has a stiff, springy tail that's good for poppin' pillows or popping off cliff drops.



## ON-HILL TEACHING AND COACHING

To me, good boots are one of the most important pieces of gear. My **Burton SLX** boots can't be beat, and have all the features I need for a full day on the hill. The lacing system is ideal for on-the-spot tightening and a low-profile shape. Teaching is active; my feet sweat. The heated liners are key for warming up the toes during an 8-hour day in boots.



## SIDECOUNTRY

Sometimes riding the sidecountry takes work, but not enough to warrant packing accessories for that ridge hike or traverse. My **Anon Realm** goggles have a removable vent if the temperature kicks up during the trek. The lenses switch out with ease as I always pack an extra low-light lens in case a snowstorm rolls up. The interchangeable straps let you trade out for personal raddness.



## PARK

For park sessions I love the adjustability options and feel of my **Burton Prophecy** bindings. The baseplate and disc design lets the binder flex naturally underfoot while still being responsive toe to heel. The cushioning provides good absorption to lessen impact on my joints and decrease vibrations overall, which makes for less fatigue. It's also easy to clear snow out of the binding before strapping in, reducing snow build-up and saving my gloves from scraping across the bolts. The Prophecy binding is also wicked light and, I think, the most technologically advanced binder for four-hole-pattern boards.



## NATURAL HALFPIPES

Canyons has many little canyons (dun) that form fun, rideable, halfpipe-like terrain with all sorts of transitions and jibs. The **Never Summer SL 158** provides powerful edge response and control for this type of terrain. The SL handles a variety of transitions while providing a stable platform for landing hip jumps and tree jibs.



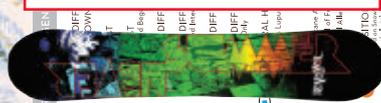
## THE TRAVEL DECK

Many times my clinics evolve into topics and riding styles that the participants want to cover. ("No I never get distracted... Look! A squirrel!") Therefore, I need to adapt to changing conditions and riding tasks. For an all-around board when conducting clinics or doing demos at exams, I rock a **Never Summer Revolver 156**. Their RC technology (rocker/camber hybrid) is great for all-mountain and park laps. Dependable and predictable, the Revolver is a mid-wide board that I can rail high on edge, surf pow lines in the trees, ride pipe, or slide boxes. "Look! A tree jib!"



## BUMPS

Call me odd but I enjoy riding bumps in the spring slush, midwinter pow, and even sometimes on scratchy ice for speed control. I like a shorter, wider board like the **Never Summer Revolver 153** to smear around in the moguls. The short length allows for agile, greasy turns that work well for sneaking around bumps. The wider platform makes it fun to surf the board flat to the multiple surfaces that all bumps have to offer.



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The new Experience 88 is the superhero of all-mountain skis for advanced to expert skiers. This new breed of wide all-mountain ski, equipped with Auto Turn rocker, will let you float through the deep pow like a big-mountain rock-star and charge the groomers like a racer for a true Do-It-All-One-Ski-Quiver.

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NS.

The Experience 88 is the perfect pro ski, modern sidecut, well-balanced chassis and subtle tip rocker to increase versatility in varying snow conditions. I've put the Experience 88 to the test in every condition, from rock hard ice to a foot of powder and can honestly say I have never been on such a well rounded and versatile ski, it truly does everything. -- Nick Herrin, PSIA Alpine Team



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# All Rocker

## GEAR OPTIONS DEPEND ON SKIER TYPE AND TERRAIN PREFERENCES

**R**ocker is the rage in today's ski design and is widely hyped on the Internet and in the ski press as the new revolution. In reality "rocker" is a broad category name and actually represents many different variations of a ski's baseline design—from shallow early tip rise/low rocker, high-tip rocker, and tip-and-tail rocker all the way to full reverse-camber rocker.

This article and the accompanying chart describe the different types of rocker—along with skiing characteristics and related waist widths and turn radius—and offers some general recommendations relative to skier ability, terrain preferences, turn shape preferences, and snow conditions. All with the intent of giving you a better idea of what to look for when selecting gear or advising those students who seek your expertise before making their own choices.

### **EARLY RISE OR TIP ROCKER**

This is a traditional camber ski in which 70–90% of the running surface is traditional camber but the final 10–30% toward the tip rises up slightly. If you place the ski on a flat surface and flatten it you will see the front bit of the ski angle upward, with the tip being about 1 centimeter (early or low rise) to 5

*Photo courtesy of Marker Folkit USA / Scott Markewitz*

**BY MIKE PORTER**

# Isn't Created



# Equal

centimeters (high rise) in the air.

- ◆ The traditional camber of the ski provides power underfoot, precision, rebound, and edge hold.
- ◆ Traditional cambered skis are the quickest for turn initiation and provide the strongest tip pull into the turn but are more demanding and require more effort and accuracy of movement than early rise skis.
- ◆ Early rise allows easier and more forgiving turn initiation than a traditional ski while providing smooth transitions between turns. It also offers good turn versatility.
- ◆ The smaller the early rise the faster and more precise the turn initiation. Conversely, the longer and higher the rise the slower the initiation. The longer the rise the easier and more forgiving the ski will be.
- ◆ The longer and higher the rise the more the ski will float in variable and soft snow conditions. It supports easy turn initiation but, again, the turn initiation will be slower because the tip will take a little longer to engage.
- ◆ These types of skis still boast plenty of performance but they represent more ease and forgiveness for all-day performance.

### TIP AND TAIL ROCKER WITH TRADITIONAL CAMBER UNDERFOOT

This ski profile has the same tip characteristics as the early rise models, but the tail also rises up. The all-mountain skis in this category often feature 70% traditional baseline camber with 15% tip and 15% tail rocker, while the more powder-specific skis have 50% camber and 50% tip and tail rocker.

- ◆ Easy turn initiation and turn completion, requiring less energy to drive it.
- ◆ Very forgiving.
- ◆ Transitions easily between turns but lacks the power and rebound that a traditional tail provides.
- ◆ Good flotation in soft snow, powder, and variable snow conditions.
- ◆ Traditional camber provides edge grip, power, energy, and all-mountain versatility.

*continued on page 30*

## THE GOODS ON GEAR: EQUIPMENT CONSIDERATIONS BASED ON STUDENT PROFICIENCY AND TERRAIN PREFERENCES

SKIER PROFICIENCY	IDEAL SKI CHARACTERISTICS	HOW THE CHARACTERISTICS WORK	THE RIGHT CHARACTERISTICS	MANUFACTURER OPTIONS (For more details see the "Web Extras" for 32 Degrees at TheSnowPros.org)	WAIST WIDTH (MILLIMETERS)	TURN RADIUS (METERS)
<b>BEGINNER</b>	Early tip rise; tip and tail rise. Well-tuned traditional camber with 1-2 degree base bevel, detuned tip and tail.	Rise can make it easier to steer or guide the ski, which is an easier skill to learn than tipping and carving the ski. Easy turn initiation helps reduce tip-crossing in a wedge. Because the tips don't pull into the turn, there's less risk of them crossing and overturning.	Most important is a well-tuned and waxed ski.	Two companies make beginner skis with rocker.	72-80 mm	15-18 m
<b>INTERMEDIATE</b>	Generally, the ski features 70% traditional baseline camber and 30% rise. Tip or tip-and-tail rocker.	Easier to initiate, more forgiving, and less demanding. The tip rise allows the skis to be steered or guided through the turn (rather than require tipping) and permits an easy release to initiate the new turn. Turns are more shaped — rather than carved — at initiation. Full rocker and reverse camber are excellent powder skis as they provide maximum float and easy steering at slow speeds.	Place the ski bases close together, then see how much the tips "open" (1-3 cm) and how far back the opening goes (15-20 cm is best). Tails should be about 1-2 cm open and start 5-10 cm back.	Almost all major companies.	72-86 mm (lower level) 86-120 mm (upper level)	15-34 m
<b>ADVANCED</b>	Match rocker type and waist width to specific preferences (see the specific tabs).				68-140+ mm	15-21 m

<b>TERRAIN PREFERENCES</b>									
<b>GROOMERS</b>	Early rise tip or tip-and-tail rise. The more you like to carve and do short-radius turns the less rocker you'll want. For longer turns or cruiser turns, opt for more rocker.	Ease of initiation and less demanding transitions between turns. More energy efficient for all-day skiing.	Check to see if there is tip or tip-and-tail rocker. Tip rocker should be shallow (1-3 cm) and gradual toward the bindings. The more radical the bend the less the tip will pull into the turn.	In this waist width some companies have only tip-rocker while others have only tip-and-tail rocker.	72-86 mm	12-18 m			
<b>CARVING</b>	Traditional camber or slight early rise in the tip. If you favor short turns, go with no rocker or minimal rocker; for medium-radius turns a slight early rise is good. For advanced skiers especially, traditional-rise skis offer the best performance for carving.	The less early rise the quicker the tip engages. More performance but less forgiveness. Early rise will make turn consistency easier and add more forgiveness.	Traditional race ski, or a ski with shallow early rise (1-2 cm) and a flat tail.	All manufacturers. Some are recreational race, others speed rocker or carving-specific skis.	68-80 mm	12-18 m			
<b>BUMPS</b>	70% traditional baseline camber and 30% rise, either tip or tip-and-tail.	Early rise helps keep the tip from catching on the downside of the bump and causing over turning. Tail rocker can help keep the tail from getting caught as you finish the turn. Easier to hold line and maintain speed control.	Lots of skis work here. Some skiers favor a wide ski with a large turn radius to slide through the bumps, while others prefer a narrower ski with sidecut that can arc through the bumps. Generally an all-mountain ski will work just fine here.	Most manufacturers have either early rise tip or tip-and-tail.	72-86 mm	16-21 m			
<b>STEEPS</b>	70% traditional baseline camber and 30% rise, either tip or tip-and-tail. Traditional camber underfoot is desirable for edge hold and as a platform from which to link turns.	In steeps, skiers generally favor short-radius turns with an emphasis on speed control. Early rise helps the initiation, allowing easier, consistently linked turns, while traditional camber offers a strong base of support, edge grip, and rebound. Consistency and speed control are enhanced by rocker.	A proper tune is important, and the tips and tails should be detuned so they don't hang up and cause you to lose your rhythm.	Most manufacturers have either early rise tip or tip-and-tail.	72-86 mm	16-21 m			
<b>PARK</b>	Twin tips with traditional camber underfoot to full rocker. Range of mounting points—from traditional to center mount—determined by how much you ride switch.	Tip and tail rocker make for easier initiation, smearing, and skidding for tricks and airs. Camber underfoot creates a solid platform for landing tricks and turn shape if desired.	There are three types of twins, depending on how much switch you want to ride: directional (the tip is wider than the tail) Bi-directional (the tail is closer to tip width), and symmetrical (tip and tail are the same width).	This is an evolving category, so innovation is constant. All companies have something going on here.	80-105 mm	18-22 m			
<b>PIPE</b>	Twin tips with a little tip-and-tail rocker and traditional camber underfoot.	To hold on the walls and support the landings, camber is usually desired underfoot.	Look for either directional or bi-directional ski taper. This is evolving, so anything goes.	See "Park."	80-105 mm	18-22 m			

Continued from page 28

- ◆ Small tip and tail rocker can be good for all-mountain skiers, but it foregoes a little short-turn quickness and the precision and accuracy of a traditional ski. On the plus side, the ride takes less effort. This ski is good for longer-radius turns and shaped—rather than carved—short turns.
- ◆ Large tip and tail rocker offers a very surfy feel in soft conditions and powder snow, but on the groomed your arcs will be less carved. A round, skidded arc is more common.
- ◆ This is a broad category with ski sidecuts and widths from narrower all-mountain shapes to wide, powder-specific options.

### FULL ROCKER

This is a ski with no camber. Its shape resembles a banana or rocking chair.

- ◆ Very easy to initiate turns. Extremely maneuverable and playful. The most float of any ski shape in softer conditions.
- ◆ Different versions—from twin tips to more traditional shapes and sidecuts.
- ◆ Full-rocker twin tips are good for powder, tricks, park sessions, skiing switch, and just being innovative.
- ◆ Traditional sidecuts are very good in powder, junk, crud, and variable conditions. Easy to initiate, very forgiving. Best in bigger arcs.
- ◆ Best off-piste. Reverse camber makes arcing turns on groomed terrain a challenge, but the design is capable of making long and stable cruiser turns. The more ski you have up in the air at the tip and tail the more it will just bounce around.

### DON'T FORGET ABOUT WAIST WIDTH

Just as the type and amount of rise/rocker plays an important role in ski performance, so too does waist width—especially with regard to turn quickness, edge grip and hold, and the ability to float in soft, cruddy, or loose snow conditions. Here's how:

- ◆ The narrower the ski underfoot the less mass (swing weight) it has, which makes for easier and faster

*continued on page 32*

## THE GOODS ON GEAR: EQUIPMENT CONSIDERATIONS BASED ON STUDENT PROFICIENCY AND TERRAIN PREFERENCES (con't)

TERRAIN PREFERENCES	IDEAL SKI CHARACTERISTICS	HOW THE CHARACTERISTICS WORK	HOW TO LOOK FOR THE RIGHT CHARACTERISTICS	MANUFACTURER OPTIONS (For more details see the "Web Extras" for 32 Degrees at TheSnowPros.org)	WAIST WIDTH (MILLIMETERS)	TURN RADIUS (METERS)
<b>SIDECOUNTRY</b>	Early rise, tip-and-tail rocker.	Tip rocker or tip-and-tail rocker helps the ski float, making turn initiation easier in the variable conditions found in the sidecountry. Full rocker can be a challenge to use if traversing is required or you need to use skins to hike in or out of the terrain.	Do you plan to use skins to hike or traverse out to your lines? Tip rocker works for skins, while full rocker is a challenge. Traversing is easier with tip rocker whereas full rocker can be more work. Your choice here.	Broad range. If you are hiking or skinning you might want lighter skis made without metal. All have wide skis that will work.	90 mm and up	21-34 m
<b>OFF-PISTE</b>	70% traditional baseline camber; 30% rocker to full rocker.	Wide waist and rocker help the ski float, providing easier turn initiation and more consistent for/aft balance. The more challenging the snow conditions or variable the powder, the more float and more consistent the ride. Tip rocker allows the strong arc associated with groomed turns while full rocker allows for all varieties of smeared, pivoted, and skidded turns—plus a decent arced turn.	The wider the ski the more the weight and energy needed to drive it all day. For most, 100 to 110 mm waist is all you need. Tip rocker makes nice arcs while tip-and-tail rocker allows for easy short turns and the ability to skid in the powder.	If you want lighter skis look for ones without metal. For high-speed charging you probably want metal and can put up with the extra weight.	98 mm and up	18-34 m

<b>CHUTES</b>	70% traditional baseline camber and 30% rocker, either tip only or tip-and-tail.	See "Steeps."	See "Steeps."	See "Steeps."	18-23m
<b>ALL-MOUNTAIN</b>	70% traditional baseline camber and 30% early rise or tip and tail rocker.	Here you are looking for skis that do everything: short to long carving to cruising. Groomers to powder. The more you prefer ski performance and precise arcs the less rocker you look for.	Where do you spend the most time? If groomed, use the 74-78 mm waist width; 50/50, try 78-82 mm; more off-piste, go for 83-98 mm. The same goes for rocker. In groomed use less; off-piste, go for more. Weight here can become an issue. The wider the ski the more the weight and the slower the turn initiation.	Ski weight is an option. You will find skis with no metal to metal top and bottom. For normal speed and those who like to link turns, a ski with no metal should be fine. For higher speeds and or large turn radius, metal will give you the dampness and stability you need.	74-98 mm 15-21 m
<b>FOR THE CONDITIONS PACKED</b>	Tip early rise to 70% traditional camber and 30% tip and tail rocker.	See "Groomers."	See "Groomers."	See "Groomers."	See "Groomers."
<b>ICE</b>	Traditional camber, early rise; 70-30% tip-and-tail. Traditional is generally the best for really hard snow (ice); if you are on ice you need to learn to engage the tips.	Traditional camber gives you the largest ski surface for edge grip and power, and allows the tip to engage to create edge grip from initiation. Early rise makes the turn initiation easier, which can create more consistent linked turns, allowing better control. However, it does promote steering to initiate, which limits initial edge grip. Tip-and-tail rocker allows for a more pivoted or skidded arc. Easier control but less performance and pop out of the turn.	A narrower-waist ski gets the best edge purchase and is quicker edge-to-edge. The smaller the turn radius the more responsive the ski will be, but also the more demanding to control. The ski tune is really important. Do you want high performance or controlled, linked turns? This is the difference between using race skis or tuned all-mountain skis.	Look for race skis or groomed category skis. Some manufacturers have skis with progressive sidecut that work well here and on groomed slopes.	68-78 mm 12-18 m
<b>POWDER, CRUD, WET OR VARIABLE</b>	Tip rocker to full rocker. The tip rocker is longer, closer to the binding, and is more pronounced. Tip-and-tail rocker models can have either traditional camber underfoot (to help with traversing and skiing on groomed runs) to full rocker, which becomes more powder specific. The tip rocker or full rocker with camber is more versatile, while the full rocker skis are more one-dimensional but fun.	All rocker helps the skis float. The more rocker the more the float but the less arc you will have in your turn shape in short- to medium-radius turns. Full rocker allows easy speed control and the ability to actually skid turns in powder while the early rise tip allows more traditional turns with easier initiation.	Longer tip rocker with flat tails are the norm here for traditional turn shapes and lines. Large tip and tail rocker allows a surfy feel and innovative turn shapes, from smearing to skiing powder the tip and tail of large rocker skis bouncing around as they work their way around the mountain. It's a trade-off, so you make the call.	Lots of choices here.	100 mm and up 21-34 m



Sherri Harkin

the tip to play an active role in pulling the ski into the turn and creating power and energy through turn completion. This category is home to the highest-performance groomed/hard snow carving skis, requiring high performance, high energy, and high mental and muscular output.

- ◆ 80–95 millimeters (mid-fat or all-mountain category): Rocker skis in this category make for easier turn initiation since they are more steered than carved. You give up some edge hold and carving performance for all-mountain

*Continued from page 30*

turn initiation. The smaller the waist the quicker you can roll the ski from edge to edge. Conversely, as you go wider the weight increases, quickness decreases, and it takes longer to roll from edge to edge.

- ◆ Narrower waists provide better edge grip since the edge is under your foot in the middle of the turn. In other words, the closer the waist width of the ski is to the sole width of your boot the more the edge is under your foot in a turn. The wider the ski the longer it takes to roll onto the edge, and since the edge is farther away from your boot sole it takes more leverage/energy to keep the ski on its edge.
- ◆ As the ski width increases there's obviously more surface area, which allows the ski to float higher on the snow. Skis in the realm of 102–145 millimeters can be wide enough to actually let you skid or pivot on top of soft snow just as you would on the groomed.

Recognizing the close relationship that exists between waist width, turn radius, and rocker, ski manufacturers have come up with some general performance guidelines regarding waist width:

- ◆ 68–78 millimeters: These skis are carve-oriented, thanks to the combined edge grip and quickness of a narrow ski. Carving- or race-inspired skis usually have a traditional camber or, at most, a small amount of tip rise to allow

versatility. Those who favor these skis can still lay down some tracks but, with a turn radius of 15 to 20 meters, they mostly have a medium to long turn shape. Generally, the wider the waist the longer the turn radius.

- ◆ 100+ millimeters: The emphasis here is on off-piste skiing, where flotation and smooth turns are the order of the day. The larger and more pronounced the rocker the more the ski floats—at the expense of the tip pulling through the turn. With these skis, turns are more guided and shaped versus carved, except for long-radius turns where you can potentially lay them on edge. The width, combined with reduced edge surface due to rocker, makes for less edge grip in harder snow conditions. Turn radius goes from 21 to 40-plus meters, since in this category you don't really want to make quick turns—or have the ski tip “hook up.”

### SUMMING UP

Today's skis represent a very good blend of performance, forgiveness, and versatility, so it's hard to make a poor choice. The decision should be based on what terrain and conditions you want the skis for. Are they your main daily ski or are they for more specific conditions? Selecting ski width and rocker profile is as much a matter of function as style and image in many areas.

A general trend I'm starting to see is less emphasis

## AS FOR WOMEN AND JUNIORS...

**T**he information in the accompany chart generally applies to women as well as men, except for the fact that women-specific skis have flex profiles, sidecut dimensions, and mounting points that do make a difference for female skiers. Within lines of women's models, skiers have the same options with regard to construction (metal or no metal), ski weight, waist widths, and rocker options.

Skis made for the junior market may feature similar rocker choices, but it depends on the manufacturer. There will be less choice of waist widths relative to the type of rocker. That said, the waist widths in the chart are quite close to the offerings in junior skis, which run from 65

millimeters underfoot to approximately 100 millimeters.

The logic holds true of narrower waist widths being quicker, more responsive, and lighter. The wider you get the better the float and more all-mountain versatile the ski is—with the 100 millimeter waists being more off-piste driven.

The skier's weight plays some role here but, in reality, juniors like the wider skis more because they are cool, not because they boost actual performance. Tuning is very important. A good tune and proper wax makes more of a difference than actual waist width, except for carving/race situations, where a narrower-profile ski is a definite advantage. —*Mike Porter*

on “wider is better,” as rocker has had a big impact on the skis’ ability to float, reducing the need to always go wider for good performance in off-piste, variable snow. That said, width is often a matter of the skier’s location and preferences for snow type and terrain. In the West, many ski with a waist width of 86 to 100 millimeters as an everyday ski, while on the East Coast the daily go-to ski is usually in the neighborhood of 74 to 86 millimeters. In powder-specific gear, I’m finding skis from 95 to 120 millimeters underfoot are the norm, with specialty skis going all the way up to 145 millimeters underfoot.

If you want more float you can either go wider or select a ski with more rocker. The wider the ski the slower the initiation, and the additional weight at tip and tail requires more energy to steer it over the course of the day. Powder-specific and specialty skis are still getting wider but become less versatile and more terrain-specific.

For those favoring more groomed and hard-snow performance, early rise/low rocker provides more forgiving initiation and consistency in transitions between turns while coming close to the performance of a traditional camber ski. Remember, too, that ski design and performance is directly related to how well the skis are maintained and tuned. Traditional skis are usually tuned with 1–2 degrees of base bevel, plus the tips and tails are detuned to minimize the risk of the

tips hooking at initiation and the tails catching at the completion of the turn. Rocker skis have this built into the design.

And now for one last bit of advice before you or your student makes that new ski purchase. The best option is to demo some of the models to get a first-hand feel of the ski’s performance or talk to someone who has the models you are looking at and read the reviews to see if the traits you are looking for are there. The good news is that ski quality is really good, so it’s hard to miss.

If you take the time to get informed, you (and the students you advise) will be in for a great ride—whatever rocker option gets the nod. **32°**

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*Mike Porter was on K2’s product development team for 29 years, and from 1988 to 2002 served first as the training director and then the director of Colorado’s Vail and Beaver Creek Ski Schools. He was a member of the PSIA Alpine Team from 1974 to 1996, serving as head coach for 16 years.*



For more specifics on rocker offerings from various manufacturers and an article on how to teach rocker-equipped students, log on to [TheSnowPros.org](http://TheSnowPros.org) and check out the “Web Extras” for *32 Degrees*.



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# AN NEW BLEASE ON FUN

**As youth market grows, long-term equipment rentals speed kids to the snow.**

In the Winter 2011 edition of *32 Degrees* we discussed the potential for a new Golden Age in skiing and snowboarding. Key to the equation, we found, are Millennials, that 70- to 100-million-strong demographic of U.S. kids and teens. If only we could turn them on to snowsports the same way we turned on their parents and grandparents, we reasoned that then we could almost certainly look forward to a future of unprecedented growth.

Well, apparently the future is now. Because not only did U.S. snowsports sales crest the \$3.3 billion mark for the first time ever during the 2010–11 season, but skier visits hit 60.54 million, marking the best season ever, just barely nudging ahead of the previous record 60.5 million skier visits of 2007–08. After averaging between 50- to 54-million annual skier visits between 1978 and 2000, the industry has now seen six seasons in the 57- to 59-million visit

By Peter Kray

Sherri Harbin



Meet the  
future of the  
snowsports  
industry.



Lease programs for gear are on the rise.

Sherri Harkin

sales were absolutely excellent last season,” Davis said. “The youth market is showing strength in snowsports. Dollars sales were up 15 percent and participation grew in every discipline. Alpine skiing was up 5.4 percent, and snowboarding grew more than 10 percent in 2009–10.”

Even cooler? According to Davis, the next generation of shredders is just as happy riding two planks as they are on one. “They want to do both now, and there is a huge amount of crossover between the sports,” Davis said. “Anywhere between 26 percent to 32 percent of the kids at ski areas both ski and snowboard, which only increases our chance of turning them into lifelong participants.”

### MAKING IT EASY TO RIDE

During the 2010–11 season, junior sales overall grew more than 14 percent, according to Davis, up \$37.8 million to nearly \$296.2 million in sales over 2009–10. And junior equipment sales alone grew from \$53 million to more than \$58 million in that same time period.

But those numbers only tell half the story; along with junior ski and snowboard sales, the kids’ lease market is also ratcheting up. More parents are opting to outfit their fast-growing shredders with leased gear, rather than buy new boots or boards that lengthening feet or heightening bodies can quickly make obsolete.

A kind of season-long rental program, the practice of offering equipment leases is growing rapidly among U.S. retailers, precisely because it offers parents a low-cost way of getting their kids the gear they need to hit the slopes. “The junior lease program growth has been incredible,” said Willy Booker, president of Nordica USA. “Our junior business has been growing rapidly over the past few years, almost beyond our capacity to produce. I’m not entirely sure what is driving the growth, but the junior lease programs are definitely a major contributing factor.”

Along with getting kids low-cost gear, lease programs also create an effective hook for getting moms and dads into the ski and snowboard shops. That’s an important benefit, because very few retailers are actually making much margin on leases, as they expend manpower and resources on inventory that continues to return at the end of each season, often in the kind of well-used condition that significantly diminishes its worth.

“Everybody who buys junior equipment in my store is automatically enrolled in my buy-back program,” explained Greg Klein, owner of Pennsylvania’s chain of Willi’s Ski and Snowboard Shops. “If they bring the equipment back after one year, I buy it back at 50 percent of cost. And after two years, it’s at 25 percent. So I never really know until the end of each season how much equipment is coming back.”

Klein, like many retailers who are creating a steady stream of business with equipment leasing programs, tends to speak of his buy-back plan as an ongoing investment strategy that he hopes will pay off with parents now, then again when the kids become adults. “What I’m really trying to do is get the parents and the entire family into the shop,” Klein said. “I also have a couple of instructors who work for me on the sales

range in the past decade, and has broken the 60 million skier visit threshold twice.

Figure in a forecast for a continued surge in population rates in the Rockies and Pacific Northwest, and researchers at the U.S. Forest Service and the University of Georgia predict that by 2060, demand for “developed and undeveloped skiing,” (i.e., lift-served and backcountry) could increase by as much as 50 percent. Bob Berwyn, who first reported on these findings for Colorado’s *Summit County Voice*, wrote that if the findings are even close to correct, “Skiing could see another boom in the next few decades, perhaps equalling the growth spurt of the 1960s and 1970s.”

While that number may seem incredible, something positive is definitely happening on the slopes. And according to Snowsports Industries America (SIA) Director of Research Kelly Davis, a lot of it has to do with kids. “Kids’



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The Millennial market is already having a deep impact on ski and snowboard demographics in the U.S., according to SIA. This is how the new youth movement is mixing up the market on the slopes:

**21%** of 11.5 million alpine skiers are between the ages of 6 and 17

**31%** of 8.2 million snowboarders are between the ages of 6 and 17

**17%** of the 4.5 million cross country skiers are between the ages of 6 and 17

**15%** of 1.8 million telemark skiers are between the ages of 6 and 17

Source: Kelly Davis, SIA Director of Research

floor, so if the family is interested in getting the kids into lessons then they can also talk to them about that.”

The Willi's shop at Seven Springs Mountain Resort is actually right above the children's ski school. And although the retailer doesn't have a direct relationship with the school, Director of Mountain Operations Ivan Fuchs said Klein's leasing program does drive a lot of business to his ski and snowboard class. "It is definitely catching on," Fuchs said of Klein's leasing success. "But I think the industry overall still has a way to go as far as streamlining the connection between the ski shop and the ski school, and tying it all together in a way that can help us raise the conversion rate."

Of particular concern to Fuchs is what he calls "The Lost Generation" of tweeners and teens who are 12-years-old and up. "If we don't offer them more programs, and more equipment options, then they will become lost to us," Fuchs said. "Along with teaching concepts like ATML and Smart Style, I would love to see us pairing our instructional ideas with the new technology that is coming out. For us, offering leasing programs that tie into lessons, such as how to use twin tips more efficiently, or taking rocker into the terrain park could really be significant."

### FROM SHOP TO THE SLOPES

From coast to coast, several shops and ski areas are doing exactly that, whether it's through partnerships, or by leveraging the resources they already have on the slopes. Colorado retail giant Christy Sports, for example, does a booming business in what Director of Front Range Operations Dan Fox calls its "seasonal rental" program, while also partnering with nearby Eldora Mountain Resort on a lesson package to help kids learn how to rock what they rent.

"Seasonal leases have a lot more traction in the city than in the mountains. Not only because there is so much more used gear available in mountain towns like Vail and Steamboat, but because the kids who live there use their boards so much more that it often makes more sense to buy," said Fox. "For our shops overall, seasonal rentals make up maybe nine percent of our total rental business. But in the city, it's anywhere from 25 up to 30 percent."

Fox said Christy Sports has a menu of offerings from \$89 kids' ski equipment packages all the way up to \$199 seasonal

rentals for brand-new gear right out of the box. Two tune-ups also come with the deal, as does the opportunity to swap out gear—even from skis to a snowboard—whenever the mood strikes. Through its Gear and Grow partnership with Eldora, Christy Sports also offers an equipment-and-season-pass package for 6- to 12-year-olds, all for only \$189.

"I really can't release the actual numbers of the quantity we sell," Eldora Marketing Director Rob Linde said when asked just how many pass sales the program generates. "What adjective would you like to use?" he asked, "Significant, countless, numerous, or a whole bunch?"

Linde did say that a number of the Gear and Grow passes are sold in the Boulder area, and that he believes up to 30 percent of the kids who get them also participate in the area's six-week-long Learn to Ski or Snowboard Trek programs, which offer a series of multiple weekend alpine, snowboard, and cross-country ski classes. "Gear and Grow has been a significant contributor to growing the sport and keeping it affordable for families. It also encourages a high frequency of participation," Linde said.

In Chicago, the Williams Ski and Patio Snowflake Club puts the instructors right on the bus, packaging the equipment, instruction, and transportation that gets the kids to the slopes at Alpine Valley, Devil's Head, Chestnut, and Wilmot. Company President Mark Williams launched the business in 1965 and said he has noticed an uptick in business of late. "We run the trips and the leasing programs as separate options, and don't force anyone to buy them, but it certainly makes it easier from the start," Williams said. "It's a good way to get kids into the sport, and it has definitely increased our seasonal rental business."

Williams said he encourages all of his instructors to obtain PSIA-AASI certification, although his first criteria for hiring anyone is "their enthusiasm for the sport." He thinks having the right gear, instruction, and a way to get to the mountains is a necessity, and it's even more important for kids to be introduced to the community of the sport. "We certainly see a lot of kids in our club whose parents also started out with us. And a lot of our instructors were also members of the club in the past," Williams said.

In Vermont, the Smugglers' Notch Snow



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Sport University also added a leasing option to its on-mountain Mitey Mites and Mini Mites classes two seasons ago, then watched as both programs quickly sold out. In offering boards, boots, and a helmet for the whole season, along with lessons and lift tickets, Director of the Snow Sport University Harley Johnson said, "I think just adding the ability to pair the lessons with the equipment put it over the top."

"Even when the economy went south, the program

an enclosed, family-focused environment.

As for the long-term benefits of offering any kind of kids program—and in particular one that pairs low-cost equipment options with on-hill instruction—Johnson said that the industry can still only offer anecdotal evidence. "A lot of the kids who have been in our Snow Sport University have become lifelong skiers, or entered the racing program, or have even come back to teach," Johnson said. "And as for

**"Even when the economy went south, the program helped grow the local market," Johnson said. "Over the last couple years, by adding the value of an equipment lease we have seen the numbers continue to develop."**

helped grow the local market," Johnson said. "Over the last couple years, by adding the value of an equipment lease we have seen the numbers continue to develop." Johnson said 'Smuggs' has always partnered with local schools and industry-wide initiatives such as the 5th Grade Passport Program to encourage local kids to try snowsports. They have also developed their own Mom and Dad and Me program for teaching kids with their parents. And this season the area will introduce the "Riglet Park," a snowboard playground (developed in conjunction with Burton Snowboards) for parents and kids, as young as three, to get introduced to boarding in

Smugglers' own learn-to-ski programs, I am a product of that. My parents were snowmobilers, but every Christmas I knew that hanging on that tree would be my new season pass. I have to thank them for that, because it really helped set my whole life path." ❄️

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*Peter Kray is the special projects editor for 32 Degrees, focusing on emerging snowsports trends and on-snow innovations. Kray skis, telemarks, and snowboards out of Santa Fe, New Mexico, and is the founder of Shred White and Blue ([www.shredwhiteandblue.com](http://www.shredwhiteandblue.com)), a media and apparel company celebrating American boardsports.*

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Clockwise from top left: PSIA co-founders Bill Lash and Doug Pfeiffer; 50-year member Hoagy Carmichael; PSIA Alpine Team Captain Michael Rogan; and education event participants get a photo opp with Alpine Team member Nick Herrin (in green jacket). For more event photos, check out the online gallery at <https://picasaweb.google.com/thesnowprosphotos>

# PSIA-AASI 50/50 CELEBRATION: THE HIGHLIGHT REEL

By Peter Kray

There were all of those glittering tables at the 50/50 Banquet in Snowmass on April 6, all those suntanned faces filling the room, and the constant ripples of laughter from the ski and snowboard stories being swapped. Outside, a spring



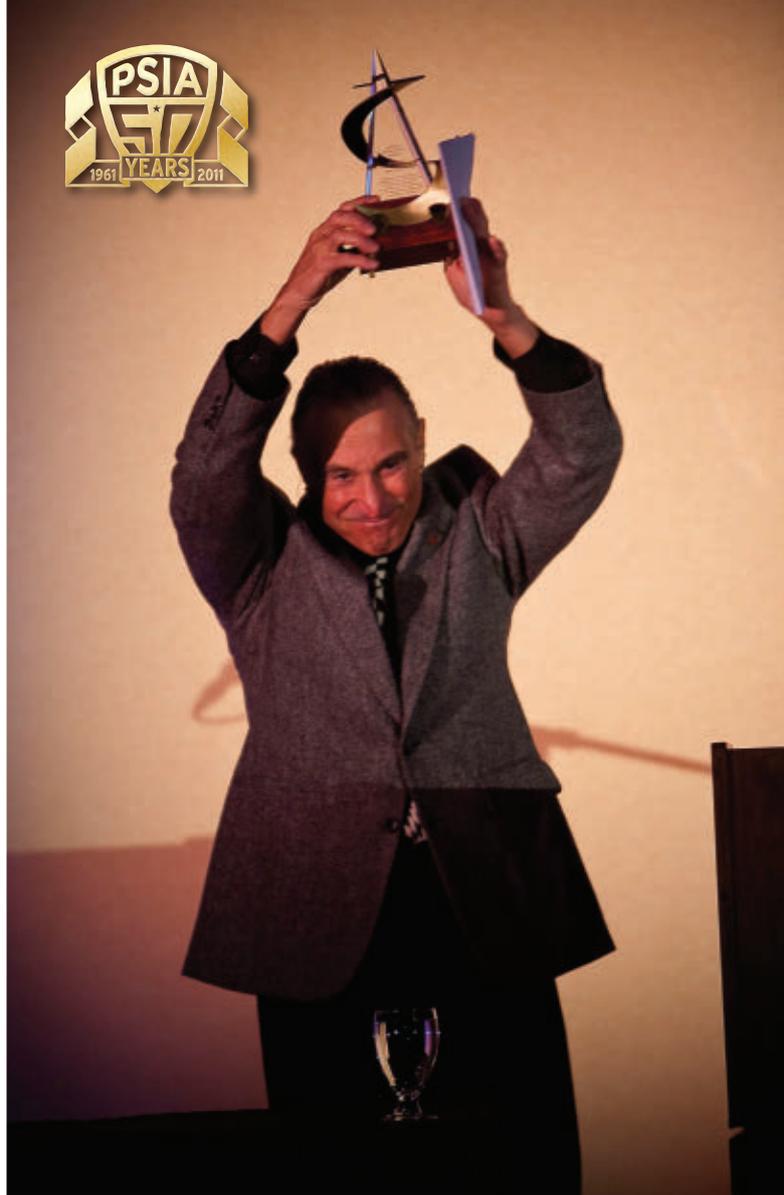
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 Stephan Drake takes a turn for the better in the short and steep near Haines, Alaska. OSKAR ENANDER



**Clockwise from top left: former Alpine Demonstration Team members Carol Levine, Mermer Blakeslee, and Dee Byrne; Lifetime Achievement Award recipient and former PSIA-AASI President Mark Anderson; and attendees Rusty Cook (a 50-year member) and Dave Sutherland.**

snowstorm was blotting out the stars, bringing powder and a little lightning and a beautiful, crisp white morning to come. And as I looked around at the hundreds of instructors who had come together to celebrate their profession, and their association, and their impact on U.S. snowsports, I wondered how many powder days they had all seen, and how many lessons they had taught.

Bud Keene provided the keynote speech. With PSIA's Lowell Hart, he was one of America's original snowboarders, and original snowboard instructors, hiking up Stowe Mountain in the early 1980s before boarders were allowed on the lifts. In the past two Winter Olympics, he has coached Shaun White to two gold medals in the superpipe, and said it was what he learned as an instructor that directly led to those airy levels of competitive success. "It was the same tools and philosophy that I learned from PSIA that helped put an athlete on the top of the Olympic podium," Keene said. "So thanks for that, PSIA."

But compared to the likes of Frederica "Freddie" Anderson, Hoagy Carmichael, Joy Lucas, Jean Mayer, and the dozens of other 50-year PSIA members who were honored that night,

despite his impressive milestones Keene could still be considered as someone who is just starting out. For example, PSIA co-founders Curt Chase, Bill Lash, and Doug Pfeiffer, who were also in the room, had already been teaching for years before that day in 1961, when they sat down with Don Rhinehart, Max Dercum, Jimmy Johnston, and Paul Valar in Whitefish, Montana, and created PSIA with a single historic vote.

Lee Perry was already working with adaptive skiers in the Northwest in the 1950s, sharing the freedom of flying down the mountains with kids and wounded military veterans alike. And at the same time, Otto Ross was creating a legendary legacy of instruction that continues to this day at Wenatchee, Washington's Mission Ridge. "I can't imagine anything more life-affirming and life sustaining than teaching and being outdoors," said Ross while catching a chair the next day for a sun-streaked run down Snowmass with the likes of other 50-year members such as Al Voltz.

All over the mountain, the weightless rush of great arcing turns, the beautiful weather, and the latest innovations in technique were shared by some of ski and snowboard instruction's most important pioneers and new PSIA-AASI

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members alike. Instructors with as little as four and five years of experience came up for the celebration from as nearby as Vail, and as far away as Alaska and New Jersey's Mountain Creek. Meanwhile, former Alpine Team coaches Max Lundberg, Mike Porter, and Dave Merriam all went speeding down the slopes, and at the end of the day stood basking in the alpenglow on the deck.

Former Alpine Team members Dee Byrne, Carol Levine, and Ellen Post Foster, those three hard-skiing athletes who keep pushing the importance of women on snow to the forefront, were there, forever improving their turns like masters of a timeless art. Also attending the 50/50 Celebration were former PSIA-AASI presidents Mark Anderson, John Armstrong, and Ray Allard, current Alpine Team Captain Michael Rogan, former Snowboard Team Coach Randy Price, and current Snowboard Team member Scott Anfang, who was in such a hurry to get to the party that on the drive up I-70 he got a speeding ticket. Former Nordic Team Coach Tony Forrest was also there, searching for powder all day with current Nordic Team member Ross Matlock, and then helping to steer the après scene deep into the night.

It was amazing to ski and sit and speak with them all, hearing each great tale from the past 50 years unfold, then openly wondering what marvels the next 50 years could expect. It was interesting to play a little math game in my head, figuring that if each of the 350+ instructors at the banquet taught

500 people in a year, that represented a quarter of a million students learning, improving at, or finding a brand new way to enjoy skiing or riding. And, hypothetically, if every instructor there taught for 50 years, the grand total would soar past 8 million snowsports enthusiasts unleashed upon the world.

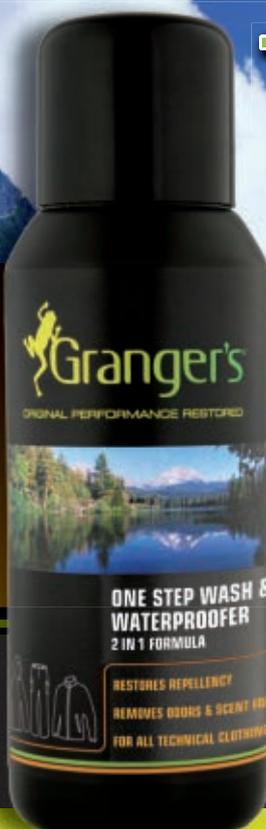
I thought of that while watching PSIA co-founder Curt Chase and former PSIA-AASI President Mark Anderson receive Lifetime Achievement Awards, wondering just how many skiers and ski instructors they had inspired by themselves. And how many more Chase might still inspire, as he took the stage to accept his honor and told the crowd, "When I grow up, I want to be a ski instructor," earning a standing ovation in response.

It felt as if even with all of that pride of history reverberating through the room, everyone there still couldn't wait to see what happens next. **32°**



*Peter Kray is the special projects editor for 32 Degrees, focusing on emerging snowsports trends, on-snow innovations, and the PSIA-AASI 50/50 Project. His book on PSIA-AASI's contributions to the legacy of snowsports, "American Snow: The Snowsports Instruction Revolution" is being published this winter, with pre-orders available through the PSIA-AASI Accessories Catalog. Kray skis, telemarks, and snowboards out of Santa Fe, New Mexico, and is the founder of Shred White and Blue ([shredwhiteandblue.com](http://shredwhiteandblue.com)), a media and apparel company celebrating American boardsports.*

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ROCKER



Photos by Cesar Pioletto

POV

# WHERE DO WE GO FROM HERE?

## GO

### Snowsports Instruction in the Next 50 Years

By Peter Kray



At the 50/50 Celebration in Snowmass, Colorado, this past April, memories swirled like snowflakes. Half a century of good times, good lessons, on-snow innovations, and instructional breakthroughs were celebrated on chairlifts, invoked in speeches, and cheered in toast after toast.

The accomplishments of the first 50 years of PSIA-AASI were well earned. From the formation of the association in 1961, to the creation of the Skills Concept, commitment to student-centered teaching, and the leading role in defining and streamlining how nordic and adaptive skiing, and every discipline of snowboarding are taught, American ski and snowboarders have a lot of reasons to be proud of themselves.

But there were two half-centuries being honored at that celebration—the one just finished, and the one that’s next. And while no one really has any idea where snowsports instruction will be in 2061 (riding zero-gravity boards in the halfpipe?; leading adaptive extreme expeditions?; teaching in urban areas, at indoor terrain parks?), for anyone who has been watching—or more likely, actively helping build the future of PSIA-AASI—there are a few clear signs pointing toward what the next 10 years might look like. Here are a handful of *32 Degrees* top crystal-snowball picks:

#### KIDS

The importance of kids to the future of skiing and snowboarding cannot be overstated. Maybe even more than total snowfall, the Millennials—also known as Generation Y, Echo Boomers, and the Net Generation—will almost certainly be the single biggest

defining factor in the success of snowsports over the next 50 years, as well as in everything from the media to the food and fashion markets in the U.S.

Comprising somewhere between 70 million and 100 million U.S. kids and teens on-snow (as we report in the “New Lease on Fun” article on page 34), Millennials are already making a positive impact, particularly at retail shops and in terms of the number of kids in lessons on the slopes. Among these students, lifelong customers, and future instructors as well, several emerging trends are already helping PSIA-AASI members build on that initial success.

### FAMILY LESSONS

One thing about kids is that they don’t come to the mountain by themselves. They arrive with any number of friends, siblings, parents, or grandparents, representing a mind-boggling array of demographics, skill levels, and equipment.

As PSIA-AASI CEO and Executive Director Mark Dorsey noted in his excellent keynote address at Interski 2011, “there are four to five generations on snow right now,” representing up to a 100-year potential age difference.

One way to bring those 100 years of experience together is in family lessons, where kids, moms, and grandpas can all ride—and learn—in the same class. Representing a new opportunity for snowsports schools in the kinds of programs they can create, family lessons could very well be setting the standard for the increasingly fluid nature of how, and to what kinds of groups, snowsports lessons are being taught.

Over the long-term, though, the most lasting legacy of family lessons will more than likely be how they serve to introduce kids to the extended family of snow, through the family itself.

### SESSION LESSONS

As Dorsey also noted in that keynote address, research shows that someone who enters snowsports at the age of 25 will spend, on average over their lifetime, a little less than \$20,000 on lessons, lodging, lift tickets and equipment. Someone who enters at the age of 10 will spend more than \$68,000



Sherrri Harkin

### KIDS



Cesar Piotto

### SESSION LESSONS

on snowsports. And one thing that is almost guaranteed to get more 10-year-olds stoked on snow is the addition of slopestyle skiing and snowboarding—as well as halfpipe skiing—to the 2014 Sochi Winter Olympics.

According to U.S. Ski and Snowboard Association President and CEO Bill Marolt, the additions are aimed directly at engaging the youth market. “The sport is going where the kids want it to go,” said Marolt. “You go to any mountain in America and see all the kids in the halfpipes and it’s obvious, and both the USSA and the IOC have recognized that.”

So has PSIA-AASI, which at Interski hosted an on-snow workshop on “Session Lessons,” a style of instruction that came directly from how snowboarders and freestylers encourage each other when practicing tricks. As PSIA-AASI Professional Development Manager Earl Saline explains it, the very idea of session lessons owes a lot to snowboarding, where the ever-present element of

freestyle is inherent from the moment someone first straps a snowboard to their boots.

“In a beginner ski class, if you accidentally spin a 360 the impulse would be to correct that,” Saline said. “If a student accidentally spins a 360 in a snowboard class, everyone would celebrate.” Saline said this style of instruction, where the instructor is less of an assignment-giving taskmaster than an encouraging and supportive coach, can easily make kids’ lessons feel less like class and more like camp.

PSIA Alpine Team member David Oliver thinks that kind of mentality can also create a more supportive, interactive, and spontaneous environment for how any lesson is taught. “I think this is really the next big step in student-centered teaching,” Oliver said. “The fact that it comes from the roots of what U.S. teaching is all about only makes it that much cooler for me. It’s really just taking it to the next level in the guest experience.”

## ROCKER CLASS

One place the give-and-take of session lessons is certain to have immediate appeal is with regard to the number of skis and snowboards featuring rocker technology currently cropping up all over the slopes.

According to Snowsports Industries America (SIA), reverse-camber ski sales jumped 134 percent in units sold last season, with 54,000 pairs of rockered skis sold in the U.S. Reverse-camber snowboard sales were up 42 percent in units, and accounted for 45 percent of the total snowboard market.

“Rocker is the future,” said PSIA Nordic Team member Tom Marshall, when asked at the 50/50 Celebration what he thinks will have the biggest impact on where snowsports go next. Marshall, who wrote an insight-filled overview of how rocker and tele bindings are “complementary designs” in the spring 2011 issue of *32 Degrees*, said the sheer sensation of riding on rocker certainly lends itself to a more experiential type of class.



"It just feels so much different underfoot," said Marshall, who believes that because rocker makes turning in all conditions easier at slower speeds, it will make it easier to teach new techniques. As PSIA Alpine Team member Bobby Murphy said during the rocker presentation at Interski, "It feels like the equipment has finally caught up to the way we teach."

### SAY CHEESE

The other important way technology will rapidly change instruction is in the number of handheld, cell phone, and POV helmet cameras being used.

Video posts from the slopes are exploding on YouTube, Facebook, Twitter, Vimeo, and dozens of sites we haven't even heard of yet. And at Slopefillers.com, a website devoted to ski area marketing stats, those videos are having a dramatic affect on how ski areas present themselves, and how they are presented by their guests.

According to Slopefillers.com, on YouTube alone the top three overall "total

video view" grabbers last season were Jackson Hole (850,571 views), Sunday River (837,858 views), and Canyons (706,664 views) through May 23, 2011.

While video has long been a staple of instruction and coaching, and forms the backbone of PSIA-AASI's own *Movement Matrix* instruction modules, it still seems to be finding its way with regard to how it can help create a more immediate impact on a ski and snowboard class. The obvious first benefits would be in the ability to sit on a chair, or in the lodge with a student right after a run, and be able to show them video of themselves.

But long-term capabilities could also include having students e-mail videos of themselves on snow from across the country, so that instructors can send back suggestions and drills, and even videos of themselves demonstrating how to improve technique. "The instructional value is powerful," snowboard instruction pioneer Lowell Hart said of the possibilities. "And it's also so

inspirational to show someone an image of themselves."

### THE STOKE

Of course, whether it's with cameras, rockered skis and snowboards, session lessons, family lessons, or even by helping kids emulate, and maybe even become the next generation of Olympic heroes, the basis of great instruction is still about getting people stoked on snowsports.

Creating smiles, new memories, and turning more and more people on to the joy and culture of snowsports are guaranteed to be right at the heart of the next 50 years of instruction. Anyone with a passion for teaching wouldn't even need to consult a crystal snowball to tell you that. **32°**

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*Peter Kray is the special projects editor for 32 Degrees. His book on PSIA-AASI's contributions to the legacy of snowsports, American Snow: The Snowsports Instruction Revolution, comes out this winter, with pre-orders available through the PSIA-AASI Accessories catalog.*

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# FROM TEAM MANAGER'S PERSPECTIVE, INTERSKI WAS EPIC!

**BY KATIE ERTL**

**H**ow awesome was Interski 2011? It was epic! When you develop clinics and presentations on what impassions instructors throughout the United States and get together with 2,000 foreign folks who love to teach skiing and riding as much as we do, you can't help but have a great experience. Interski was the place to be! Trekkies have their Star Trek conventions, Master Casters gather with other talented fly fishers, and those who clamor for more cardiac knowledge can take their pick of medical conferences nationwide. So whatever it is we do in work and play, there is an opportunity to get aligned with others who are in the same industry.

Interski 2011, held in St. Anton, Austria, was the pinnacle of conferences for the snowsports instructor associations of the world. PSIA-AASI sent its four national education teams to the January event, and we put PSIA-AASI's most current information up for viewing on the international stage. We also gained a lot of insights into the inner snowsports workings of other



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countries, which we're sharing online in the PSIA-AASI Community and in the pages of *32 Degrees*.

The Austrian hosts put on an amazing six days of keynote lectures, indoor workshops, on-snow workshops, nighttime demonstration shows, and many celebrations. They were able to highlight the extraordinary history of teaching snowsports in the Alps while ushering in current technology and teaching methodology. It was a blend to be admired, and a conference that ski teaching legend Hannes Schneider would have been proud to attend.

We hear so many times that face-to-face interaction is powerful, and that was so true at Interski. The energy of togetherness is unique, and should not be overlooked when sharing information that is important to our growth in the industry. Conversations are engaging when passions are being shared, challenged, and shaped through interaction. From a PSIA-AASI perspective, we were inspired to represent our beliefs with clarity and confidence, and held to a higher expectation since the world was watching. When there's a chance that material and words will be interpreted differently by various audiences, there also exists a responsibility to work hard to represent the U.S. message clearly.

Some of the highlights I was able to witness, with a global perspective, were as follows.

- ◆ Snowboarders and alpine freestyle experts connected on a daily basis to discuss present-day successes and challenges, as

## CONVERSATIONS ARE ENGAGING WHEN PASSIONS ARE BEING SHARED, CHALLENGED, AND SHAPED THROUGH INTERACTION.

well as plan for a stronger future on the communication front. They explored everything from teaching methods to park and jump structures. They also discussed the importance of progressions in *how* they teach, as well as in *where* they teach.

- ◆ The PSIA-AASI Adaptive Team was able to lead the charge and show the world what's possible in the world of teaching students with disabilities. The information that Bill Bowness and Geoff Krill presented to the other nations will certainly help others reach a higher level of possibility. We covered the area of equivalencies in the exam process and were able to introduce adaptive snowboarding ideas to the several nations that attended our clinics.
- ◆ Nordic and telemark nations connected more informally, pulling all nationalities together each day to share information. Norway and Finland made a strong showing in all things tele, while the U.S. found itself most in line with the German and Swiss teaching philosophies—especially with regard to technical foundations and teaching approaches. Most of the nations are still carve oriented and were not taking on the innovation in technology (rocker and early rise) quite yet. Cross-country had a smaller turnout, with seven to ten nations representing that discipline. A highlight was the German presentation on games and drills that enhance readiness for learning new movements.
- ◆ Alpine instruction was hugely represented and delegates engaged in lively conversations centered upon technology, methodology, guest service, and the future of the sport.

Although many European nations accept that rocker technology is present in skis and boards, we perceived some resistance to the idea of introducing it into teaching methodologies and progressions. Each alpine clinic drew upwards of 30 people daily and the groups explored new ways of teaching across diverse populations and several generations.

- ◆ One particularly special element was the Interski School, which brought local kids from nearby valleys to the resort to be taught for a full day by members of the various national teams attending. We were able to demonstrate our ability to connect with a local population, and many delegates saw each session as a “real-time” scenario of the power of connection.
- ◆ The lectures and clinics were extraordinary. In terms of overall preparation and quality of presentations and workshops, I believe we—along with Sweden, Finland, and Canada—were among the top nations present. The PSIA-AASI Team provided cutting-edge information about the state of our industry, and we remained steadfast in emphasizing the importance of the relationships and emotional connections that teaching snowsports can offer. PSIA-AASI has worked this message of connection into the last five Interski conferences we have attended and it rings as true today as it did 20 years ago: The bonds that develop in a student-centered approach to teaching snowsports are what help connect each person, each family, and each generation to the mountain environment. Interski 2011 fostered curiosity at an intense level. The

delegates and team members from all nations have spent much of their lives immersed in the industry and the profession, and being able to share information in such a talent-filled atmosphere is an engaging and, yes, challenging experience. Of course, attendees used any extra time they had discussing how their participation can be even greater at the 2015 Interski in Ushuaia, Argentina.

Interski is truly an inspiring event. The process of performing—on the stage in Austria and now on the page and at upcoming clinics at home for the membership—pulls the best out of the national staff and the team members. We owe it to you, the membership, to give our best and to represent our highest level every time we step out the door to share information and facilitate conversations.

How awesome was Interski? If there is ever an opportunity that you can go, make it happen! 32°

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*Katie Ertl spent eight years on the PSIA Alpine Team and is currently the manager of the PSIA-AASI Teams. She also works out of Aspen/Snowmass as the managing director of the Ski & Snowboard Schools.*



For more information on Interski 2011, including overviews on the teaching methodology of other nations, log on to [TheSnoPros.org](http://TheSnoPros.org) and check out the “Web Extras” for *32 Degrees* and the Interski 2011 section of *The Community*.

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# UNDERSTANDING THE INTERSKI MESSAGE

**BY ROB SOGARD**  
**PHOTOS BY CESAR PIOTTO**

**T**he exchange of information at Interski is mind-boggling—from indoor lectures to on-snow workshops, and from lift rides to bar stools the stream of consciousness is endless. Over the course of a week, you hear every possible opinion, theory, concept, and philosophy about sliding on snow.

For the PSIA-AASI National Teams the goal for the 2011 Interski in St. Anton, Austria, was to gather as much information as possible, to compare and contrast, and ultimately borrow anything of value to drive the evolution of our organization.

For our membership, there is an incredible amount of information from St. Anton that can be found on the internet; just Google “Interski 2011” and you can get everything from YouTube videos and a Facebook page to material posted on PSIA-AASI’s Interski 2011 Community and blogs. Insights also abound in this issue of *32 Degrees* and the Web

Extras on PSIA-AASI's website (TheSnowPros.org). As you explore these resources, you will find it all, and in doing so, you may experience the same types of enlightenment and confusion we did.

This article is intended to provide a little perspective as your sort through all of the material compiled from Interski. It is less about anything in particular than it is an observation of the entire process of watching, reading, and listening to the worldwide variety of skiing theory, some of which may be foreign, no pun intended, or even contradictory to the "American" perspective of our sport and our way of teaching skiing.

I focus here on my observations from the alpine presentations, but the message of process applies to the adaptive, nordic, and snowboard disciplines as well.

## CURRENT STATE OF MIND

If our goal at Interski had been to simply validate the American system, we could easily accomplish that task. In fact we did. Many countries—including the United States—share a very common set of technical, tactical, and methodological values, and while it is reassuring to find a similar message in other parts of the world, the real benefit lies in challenging your beliefs and taking your understanding to a different place. To accomplish this, you need to have a strong awareness of your current point of view, and how your understanding is influenced by the benefits and limitations of the American Teaching System.

There is a Taoist saying, "You don't see things the way they are, you see things the way you are." In ski teaching, we all carry the bias of the system in which we are trained. As an organization, our mechanical understanding of skiing is shaped by the guest-centered approach of the American Teaching System. The needs, motivations, and desires of our guests drive our understanding of our sport. These personal factors not only shape our teaching methodology, they also influence our understanding of the mechanics of skiing and our technical message. In other words, our understanding of how to *ski* is influenced by our philosophy about how to *teach*. As we experienced the presentations of other nations, this connection became very clear—the technical beliefs of any nation are directly related to "how" they present the information.

## OUR ADVANTAGE

Within the American Teaching System, technique and the mechanics of skiing are discussed in terms of skill blending; and good skiing is defined by an appropriate blend of skills, which depend on certain personal and environmental factors. This approach is very different from that of nations in which a strict interpretation of technique defines skiing to a very specific outcome with very little gray area. In these systems, words like "appropriate" and phrases like "it depends" are not used when it comes to technique. (For an example, see the accompanying article, "The Science of Slovenia." More overviews of other Interski nations can be found in Web Extras.)

The flexibility of our technical system provides a great opportunity in an environment such as Interski, where

some of the best skiers in the world demonstrate obvious differences in skill blend and movement patterns. Within a more rigid system defined by strict technical definitions, these differences in movements and outcomes require a value of correct or incorrect; they demand a judgment of right or wrong. In a system with more technical flexibility such as ours, these differences can be valued on a sliding scale, relative to a range of desired skill blends, movements, or outcomes. This is particularly useful when it comes to considering terrain variations, differing snow conditions, a variety of equipment choices, or simply applying personal preference in speed or turn shape.

## OUR LIMITATION

There is another saying, which states "Your greatest strength can be your greatest weakness." In the American Teaching System the very nature of our guest-centered approach can lead to the type of technical "gray area" that other countries work so hard to eliminate when training instructors and defining the mechanics of skiing. In considering all of the different motivational, emotional, and physical traits of our students; as well as all of the possible combinations of snow condition, terrain, and equipment, we accept a broader range of performance outcomes. This adds a greater degree of variance to our definition of good skiing.

On the surface, the technical message of the American Teaching System seems less definitive than that of other nations, and in a way it is. We recognize more acceptable performance outcomes, from racing, to freestyle, to powder. Our technical processes also appear to be more complicated, which may be true. There are more decisions involved when you consider all of the personal and environmental factors we consider relevant to the mechanics of skiing.

But that doesn't mean we should abandon our guest-centered approach in an effort to be perfectly clear, or limit the options our technical model affords. It simply means we need to learn from our more structured counterparts from other corners of the world. We need to build clarity and well-defined technical paths through our maze of personalities, equipment, terrain, and snow conditions. Correctly identify the desired or most effective outcome and you can identify the best path to achieve that outcome.

## LESSONS IN TECHNICAL 'DIFFERENCES'

To illustrate the variety of "good skiing" at Interski I encourage you to check out the "Interski 2011 St Anton Technical Comparison" videos the Canadian Ski Instructors' Alliance (CSIAAMSC) has posted on YouTube (go to YouTube.com and type "Interski Technical Comparison" in the search field). You will easily identify a variety of skill blends and movement patterns between nations. You will also notice some differences in the ski-to-snow interaction. For example, the movement pattern of the Koreans is obviously different than the movement pattern of the Swiss; or the Canadians; or the Australians, Americans, French, or Austrians . . . You can compare the skiing of any country to that of any other country and identify differences, not only in movement patterns, but also in the way the skis work on the snow. As you watch these skiers, I challenge



interact with the snow depending on the terrain, equipment, or attitude.

## HOW YOU TEACH INFLUENCES WHAT YOU TEACH

A mantra of the American Teaching System has been the principle that “we teach people, not a system.” It sounds a bit cliché, and may be slightly pretentious, but to experience the opposite—on the grandest stage in snowsports instruction—was eye-opening.

The principle of putting the needs, desires, and motivations of the guest ahead of the mechanics of the sport was highlighted by

the stark contrast in the technical messages of the different nations. Not simply a contrast in what was presented, but in how it was presented.

For the most part, different nations share common beliefs on technique. There may be a slightly different emphasis here or there, but the fundamentals are pretty similar. The enlightening aspect was how quickly many nations, in presenting their “technical system,” did so in a virtual vacuum, void of reference to the people to whom these movements and skills are to be taught; without apparent consideration of personal motivation, snow condition, or equipment variables.

Contrast that “mechanics-first” approach with countries such as Sweden, whose “Will, Skill, Hill” model places technique (Skill) in a dependent role, reliant upon the mental and emotional state of the coach and student (Will) and the terrain and snow conditions (Hill). For the Swedes, the mechanics of skiing and riding do not stand on their own without due consideration of the personal and environmental factors.

Or consider Switzerland, whose technical model is centered around “the snow.” All technical considerations in the Swiss system begin with an evaluation of the snow condition. Once

you to consider what you are seeing with an appreciation for accuracy and skill rather than a judgment as to whether a particular technique would be fast in a GS course, effective in the bumps, or work in powder.

The differences you witness between the skiers are intentional, and the outcomes are consistent between the skiers from each nation. The “chosen” movement pattern demonstrated by a skier from a given nation is not a function of his or her ability or skill, rather it is a function of training and practice. It is the result of a conscious choice to produce a specific ski-to-snow interaction. It is this type of technical choice which we encourage within the American Teaching System.

The greatest value in comparing national-team skiers from different countries is not about trying to identify “the best skiers” or by placing judgment or value on the specific differences between their images. Whether Austrian, Italian, Argentinian, American, or Kiwi you see very skilled skiers deliberately skiing with a specific skill blend or movement pattern to achieve a specific outcome. The prize lies in identifying the connection between any specific movement and the resultant performance outcome. Once that understanding is clear, the skier then has a conscious choice to influence cause-and-effect, to control how his or her skis

## MOM DOESN'T HAVE TO CARVE

If the American Teaching System only considered the action of the skis on the snow, an instructor's life would be easy. Unfortunately for us—and fortunately for our guests—we consider much more.

As an example of the added complexity of our student-based system, consider my mom. She is 76 years old and is a solid intermediate skier. Her sole ambition in skiing is to hang with her family and enjoy the sights.

She recently had a lesson that focused on “carving.” She took a trip to see me at Snowbird and by 10 in the morning she was exhausted. I asked her why she was trying to arc every turn, and she thought she “had to carve her turns to be a good skier” She thought any other outcome meant she wasn't skiing well.

While I agree that carving is a higher art form, it is the last thing my mom should be trying to do on a mountain like Snowbird. We spent the next hour learning how to shape beautifully “smeared” turns that had twice the speed control while using half the energy. In this case, the mechanics of “good skiing,” which do not include the outcome of carving the skis, are considered within the context of age, strength and conditioning, skill level, terrain, snow condition, and personal motivation. — Rob Sogard



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the surface is determined, decision making is in context to the appropriate application of technique and movements to produce outcomes relative to that snow surface.

Or reflect on the United States, where our technical beliefs are applied only after consideration to the cognitive, affective, and physical (CAP) state of our guest and the learning environment. And our application of mechanics relies on the litany of external factors—as outlined in the *Movement Matrix*—related to equipment, terrain, snow conditions, and desired outcome.

### INTERSKI AND THE AMERICAN TEACHING SYSTEM

As teachers we all seem to have an insatiable desire to learn as much as we can about our sport and our profession. Interski and the wealth of information gathered in Austria provide an incredible resource for satisfying our curiosity. Dig in, but remember that

getting the most out of that information demands a strong understanding of personal beliefs and the environment that has shaped *your* development as a skier and a ski teacher.

As you wade through the articles, videos, photos, and blogs, maintain a perspective that allows you to appreciate what you are hearing, seeing, and reading—while avoiding the pitfall of accepting an “it’s-all-good” attitude. The key to this can be found in the approach of the American Teaching System. We can accept a wide variety of movements, as long as we understand the cause and effect on the skier and the skis. We can embrace many desired outcomes, if we understand the influence of equipment, snow conditions, terrain, and personal motivation. ❄️

*A member of the PSIA Alpine Team from 1996 to 2004, Rob Sogard is now in his second term as the team’s coach. He is the assistant director of the snowsports school at Utah’s Snowbird Ski and Summer Resort.*

# THE SCIENCE OF SLOVENIA

The first thing to understand about the Slovenians is that they love to have fun. While other countries prepared intricate synchronized demos for their Interski show, the Slovenians dressed in 1970s stretch pants and skied on vintage ‘70s gear. In another skiing performance—titled “License to Skill”—they cued the James Bond theme and mimicked a scene from a 007 film, complete with tuxedo-clad secret agents crashing one-by-one in sync with the sound of gunshots. It was awesome, and a complete contrast to their approach to teaching skiing.

The message of the Slovenians seemed to be “Have all the fun you want

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on your own time, but if you want to learn to ski there is ONE way to do it; it's serious business and the process is linear and very well defined." The Slovenian Federation employs a variety of scientists and other people with Phd's, so all aspects of technique have been identified, measured, and evaluated from a physics and biomechanics standpoint.

There is a refreshing, if somewhat limiting aspect to this "pure" approach to technique that is not found in American skiing. But this singleness of focus is understandable because it relies on one important factor: In Slovenia, there is only one skiing outcome—carving! In talking to their team members and delegates, I discovered that Slovenia has hard snow, small hills, and they love racing. In Slovenia, all skiing eventually leads to carving.

Since skiing is all about carving, specifically racing, the Slovenian Team took us through a process they use when working with the Slovenian World Cup skiers. It was not a complete overview of their technical system; rather, their presentation illustrated how a single, well-defined fundamental can be developed to drive a very specific movement or performance outcome.

In the workshop I attended, they identified a very specific "problem" that World Cup skiers tend to develop in their skiing, then presented a step-by-step progression to develop the correct movement. Instead of trying to recreate the Slovenian presentation I encourage you to view it for yourself. It can be found on YouTube: [http://www.youtube.com/watch?v=OeGksNvT\\_Q8](http://www.youtube.com/watch?v=OeGksNvT_Q8).

To most appreciate the Slovenian presentation you need to value the need to clearly define the desired outcome. If the outcome is clear, the path to it can be well-defined. The technical focus can be very specific, and the progression used to develop the skill or movement can be very consistent. For the American instructor, this could seem a difficult task or even an undesirable approach since, unlike the Slovenians, American skiing embraces more outcomes than simply carving and the diversity in outcomes is growing.

As the American skiing public moves toward the epidemic acceptance of "new" equipment—including rockered skis, center-mounted twin tips, mid-fats, and fat skis—it may appear that each of these tools needs a different technical approach. In addition,

as the American skiing culture becomes more and more diverse—identifying with the clothing, style, and attitude of park and pipe, big mountain; racing, or freestyle—it may seem necessary to adapt mechanics to match motivations and personalities.

Both of these statements may be true to a point, but we need to be careful to avoid the "it's all good" approach. Ski-performance outcomes may differ somewhat, due to terrain, snow conditions, equipment or desire, but the fundamentals of skiing do not change, and while our guest-centered values lead us to appreciate skiing beyond carving, our effectiveness in teaching our guests and training instructors demands a degree of "Slovenian-like" clarity when it comes to fundamentals. The goal for the teacher, whether American or Slovenian, is to clearly identify and connect a singular fundamental movement or skill to a desired performance outcome. This will allow the instructor to create a very clear and very consistent message for the student, whether he or she is carving or not. We're just lucky enough to have more options.

Then, as the Slovenians do, have some fun with it! — *Rob Sogard*

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CONTOUR

# LESSONS FROM A WORLD OF PERSPECTIVE



Cesar Pardo

**BY DAVE  
LUNDBERG**

**U**pon landing back in Utah and returning to my daily routine after Interski 2011, I began pondering the personal lessons I learned from the skiing nations of the world and wondering which of these lessons were most valuable to American snowsports instructors. Recalling the different approaches and comparing them with what I believe about skiing and teaching, there emerged two fundamental truths:

1. How we ski and teach is a direct result of our skiing background, experience, understanding, and perspective.
2. Good things come from looking beyond personal boundaries established by our individual experiences.

A week of skiing with people from around the world was not nearly enough time to fully understand why they teach and ski the way they do, but it was enough time to understand that it's a result of where they ski and who they teach. Realizing that their technique and teaching is based upon their cultures, the mountains and snow conditions at their ski areas, and the clientele they encounter helped me put each country's approach into context.

Then I thought, *If different countries vary their approaches based on their perspective, why do we ski and teach the way we do?*

## LOOKING INWARD

We teach in a country that encompasses a broad range of cultures, mountain terrain, snow type, and student profiles, all of which shapes who we are as an organization. Our individual or personal skiing perceptions influence our understanding of the snowsports industry and impacts how

we ski, ride, and teach.

I was raised in Alta, Utah, spending every available winter day skiing and playing. The more time I spent there the more I understood about the world of skiing. What I didn't know then and am only now beginning to understand is how narrow my personal perspective on skiing really was and, therefore, how very little I truly knew.

From those initial years at Alta until I became involved with the PSIA Alpine Team in 2008, my skiing experiences entailed personal skill development, participating in the certification process, training instructors at my home mountain, and being a clinic leader and examiner for the Intermountain Division. Each of those



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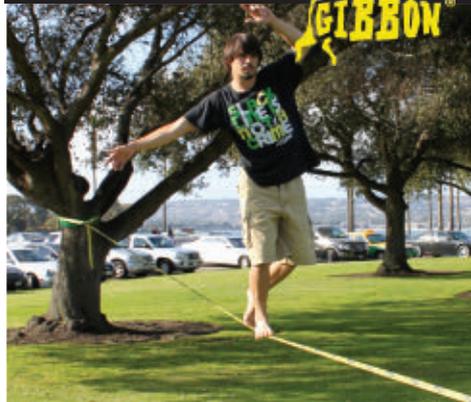
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experiences expanded my knowledge of ski instruction, but almost all happened in a place where the culture, mountains, and snow were very similar. Looking back, I realize I had a pretty narrow viewpoint.

### EXPANDED HORIZONS

I thought I understood ski teaching and the ski industry fairly well, but making the national team exposed me to ski teaching throughout the United States and gave me a broader perspective than I could have imagined. Working in all the divisions of our organization has provided me with a completely different insight into skiing.

My previous perceptions were shaped by skiing predominantly in Utah, on mountains full of steep pitches with soft and often deep snow, where I rarely chose to ski on groomed runs. As a result, I developed movements and skiing technique that helped me excel in these environments. And I taught others these same techniques. Even on the ice I knew in Utah these same movements, with slight modifications, still work.

Then I went on the road and used these same movements after a rainstorm and hard freeze in the East. Quickly I recognized that there is ice and then there is *ice*. My perspective on skiing immediately changed and I soon learned to move differently in a new environment. Realizing I had too narrow of a technical focus, I've since tried to spend more time on ice and groomed runs to enhance my technique.

I've learned that the more instructors broaden their understanding of skiing, the more able they are to identify with the various techniques of students and recognize why they may have developed certain movement patterns. This allows us to better understand each student, building on the strength they have developed through *their* personal perspective—all while looking for opportunities to help them modify their movements to shine in any given condition.

As instructors, almost all of us have a home mountain or region and, as with my childhood experience at Alta, we create our understanding and belief of skiing based on the culture of

skiing in that area. A lesson I started to learn in 2008—that skiers are shaped by their environment—was reinforced at Interski. The skiing world is huge and what works for one person in one circumstance may not work for another person in a different situation. Because of their limited size and diversity in terrain, the perspective of many skiing nations is similar to my region-centric outlook. While it may be formed by rich experiences, if the viewpoint is too narrow it can adversely affect associated technique and teaching.

### TAKING PRIDE

PSIA is sometimes criticized by other skiing nations because we are not as uniform in our technique and teaching approaches as others. Our organization could likely be improved with better consistency, but the broad range of perspectives that creates this diversity is also what makes us great. While we have certainly developed standards within a teaching system, we also realize that what works in one place (say, Alta, Utah) may not work in another (such as Mt. Snow, Vermont). And what may work for one student might not work for his or her classmate.

Interski reminded me that PSIA is a diverse and broad organization with a wide range of perceptions that influence our technique and philosophies. We should be proud of this! Interski also taught me that we have so much more we can learn by understanding the perspectives of those outside our organization.

### YOUR TURN

So, what is *your* skiing and riding perspective and how does it impact your personal technique and teaching style? More important, how can you broaden your horizons, thereby increasing your understanding of snowsports and our industry? The world of skiing is huge and can be viewed from many angles; don't limit your vantage point—and understanding—to what's right in front of you. ☞

---

*A member of the PSIA Alpine Team since 2008, Dave Lundberg is the training manager at Utah's Park City Mountain Resort.*

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# MAKE THE MOST OF SEASON-LONG LESSONS

By **MARK AIKEN**; Photos by **SHERRI HARKIN**

**R**ough Riders. Choppers. Aces. Blazers. Whatever the name, most resorts have them. I am referring, of course, to season-long programs in which students (most of the time kids, although a handful of resorts offer something for adults) return every weekend throughout the winter—and often during holiday periods too. These ongoing programs offer unique challenges and opportunities to instructors—and it is from these that season-long students

have gained reputations, some positive and some negative.

I spoke to several authorities on season-long programs—three National Team members and one USSA-certified race coach—about their approaches. Following are their suggestions about ways to make the most of the season-long lesson experience.

## OPPORTUNITIES / CHALLENGES

Coaching an ongoing lesson program gives instructors the opportunity to

establish long-term relationships with students and to see them progress over the long haul. Rocky Mountain division examiner Jenny MacArthur coordinates children's programs at Snowmass, Colorado, and served on the Australian National Team. "You can achieve far deeper mastery," she says of season-long programs. "Pros can introduce something, and the kids can sleep on it, coming back with better ownership of it."

This kind of mastery owes much to the latitude that comes with teaching over a period of time, which teachers (and takers) of daily lessons just don't have. With a whole season at his or her disposal, an instructor can digress within a lesson, explore a trail—or a shoot through the woods—that wouldn't otherwise fit in the timeframe of a daily class, or focus on a more obscure objective (maybe a freestyle trick or a kick-turn) that might not find its way into the one-day lesson plan. "A longer-term program affords the opportunity to develop kids in a more complete way," says MacArthur.

On the flip side, season-long programs take endurance—both on the



Ongoing lessons build relationships and long-term success

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parts of kids and instructors. While season-long programs can imply guaranteed lessons, hours, and pay in an otherwise uncertain line of work, the commitment is significant. Meanwhile, kids in season-long programs tend to be heavily scheduled people—with school, sports, drama, religion, family, and other commitments on top of their skiing calendar. While families pay for their season-long programs up front, there is a certain amount of breakage—that is, absenteeism—built in to most pricing of these programs. And the inevitable no-shows that happen over a season, whether it's once in a blue moon, every other weekend, or for three weeks in the middle of the season, affect the consistency that season-long programs strive to achieve.

Season-long programs take on every size and shape imaginable. Some meet Saturdays and Sundays, some during the week, others just once a week. Ages run the



Daily, weekend, and seasonal goals pay off—for students *and* instructors.

complete gamut. Time frames also vary. Regardless of what your resort's format looks like, managing students over the course of a season is more involved than taking students out for one daily lesson. "We look for pros with a broader vision," says MacArthur of Snowmass's season-long staff. "They need to take a proactive and progressive approach rather than a problem-solving, Band-Aid, approach."

### THINK SEASONALLY

Lineup instructors teaching daily lessons can get away with operating one day at a time, but season-long instructors need to keep the big picture in mind. Whether you work in a season-long program for three year olds or in a club for teens, goal setting is paramount. "We encourage the instructor to keep in mind a daily goal, a weekend goal, and a seasonal goal," says Stratton Mountain Snowsports Director and former PSIA Nordic Team coach Craig Panarisi. "If it's a five-year-old in a power wedge, by February I want to have him matching his skis."

These goals should not be kept locked in a vault (or even hidden deep inside an instructor's brain). Share them with students and parents, so they know what to expect—and what's realistic. MacArthur suggests including students in the setting of goals, since their desires are important too. "Just wanting to be with friends is different than 'I want to make the Olympics,'" she notes.

Along with goal-setting comes the setting of expectations and guidelines. Don't put this off; cover them on your first weekend. The tighter you hold the reins at the beginning, the easier it is to control your group months later. Obviously, if you give kids too much freedom in the early going, reeling them in later is more difficult, if not impossible. This holds true for behavior issues, terrain selection, and teaching segments.

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## CREATE A CURRICULUM

Before Micheline Lemay, head coach for the JV-JVI race program at Mount Mansfield Ski Club at Stowe, Vermont, even sets foot on the snow with her racers, she sits down with her calendar. "I create a plan by month," she says. The first weekend of the season is spent getting to know everyone, but beyond that she assigns a broad skill for each month of the season. For example, last season Lemay's December focus was athletic stance, January was pressure and line, and February was speed. On most days, mornings are for drills and afternoons for activities that reinforce the morning's work.

"A curriculum for the year isn't just constant teaching," says Mickey Stone, supervisor of seasonal programs at Vermont's Sugarbush Resort and a former PSIA Nordic Team member. "It's fun, play, and adventure all together. It's those areas you are going to work on throughout the year."

Many season-long programs market themselves as having a specific focus, like "freestyle," "backcountry," or "racing." The management of such programs will most certainly have at least a rough curriculum for instructors to follow, although solid fundamentals will be the baseline for all of these. If they don't teach in a specialty program, season-long instructors probably have the opportunity to integrate some or all aspects of such specialties. Or make arrangements (through a supervisor or directly) to meet a freestyle coach in the resort's terrain park. They might also be frequent visitors to the open-to-the-public race course, if the resort has one. In a season-long program, the instructor could also teach safety fundamentals of skiing out-of-bounds, and—depending on the resort's policy regarding such practices—visit an appropriate woods trail.

Regardless of whether supervisors of season-long programs hand a curriculum to instructors, instructors are well advised to put thought into their broader plan. After all, the plan needs to reflect the personalities, desires, skills, and goals of each separate group—and the individuals within that group. Obviously, this curriculum will be a work in progress that depends on weather,

snow conditions, and how quickly the group progresses. A curriculum gives an instructor something to look forward to, to review, and the assurance that the group continues to progress over the course of a season.

## USE YOUR TEAM

Every expert I spoke with mentioned class groups as important to their program—and some degree of fluidity between groups. They all said that as the season progresses, they generally see a leveling of different ability levels. However, getting students in groups that work is an important—and potentially touchy—component early on. It's good practice to keep tabs on friendships as well as ability levels when it comes to grouping students, and then to communicate with kids and parents. What is more important to a student—a desire to progress as much as possible in Group A or be in Group B where his or her friends are?

Skill assessments should be ongoing throughout the season, especially as student attendance patterns come to light. Ability discrepancies will come

up, and it is important for instructors to communicate with colleagues and supervisors about them. Stone emphasizes the need to observe students over a period of time. "I ask instructors if it's a case of a student having a bad day," says Stone. "Or is it a pattern? You have to know the difference."

It helps for instructors to be knowledgeable about the ability levels of same-age groups and the groups around them too. Snowmass and Stratton have more than a thousand students in season-long programs. The more communication about skills, terrain, and abilities that goes on between staff, the better the program will be able to deal with making switches and dealing with students progressing at different rates.

Sometimes parents will express concerns about their expectations for the program, their child's group, or their child's experience. In these situations, again, it helps if coaches and supervisors know the ability levels of the different groups. And it is important to listen to all the players—the parent, the child, and the various coaches—in order to come up with the best solution.



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### BE FLEXIBLE

With a curriculum, seasonal goals, weekend goals, and daily goals in place, your sailing should be pretty straightforward, right? Not necessarily. There are two factors that instructors simply can't control: Mother Nature and how your students are feeling on any given day. Let's start with the weather. Let's say you have designed a carving progression for hard snow, but Mother Nature drops 18 inches of fluffy powder. Obviously, you will scrap the carving lesson and instead focus on balance, stance, and rhythm as they pertain to powder. "You have to adjust your plan for conditions," says Stone.

Likewise, instructors need to know the patterns of their students, and adjust their freedom (or lack thereof) accordingly. Are kids in your group generally tired on Saturday mornings after the four-hour, late-night drive to the ski area? Are they hopped up on sugar after eating candy at lunch? "Think of having your group on a leash," says Stone. "Instructors need to

## Mickey Stone's Season-Long Bullet List

- ◆ Plan your season.
- ◆ Plan your weekend.
- ◆ Know your kids well.
- ◆ Know your mountain.
- ◆ Know when to let the leash run long... and when to keep it short.

on-limits—and those that are not.

Season-long programs are increasing in popularity because of the obvious positive outcomes possible in an ongoing situation with the same instructor and group. However, groups that ski together can get overly comfortable and familiar with a situation—and this can present challenges that can manifest themselves in safety and behavior issues, and a lack of learning.

"My sole focus," says Lemay, "is for our kids to walk away from every day saying 'I love skiing.'"

**Groups that ski together can get overly comfortable and familiar with a situation—and this can present challenges.**

know when to let the leash run long and when to keep it short."

This concept certainly applies to terrain choices season-long instructors may choose to explore that typical daily lesson students will never see. Season-long instructors should have a solid knowledge of their mountain—and the judgment to keep groups safe. Kids will want to visit certain "secret" stashes, whether they know what's in there or not. Instructors need to know the ability level of the group, the entrances and exits to various places, which off-piste areas are

Having short and long-term plans, a curriculum, a functioning team of instructors with good leadership, and the flexibility to alter the plan when called for, will help instructors maintain a safe environment for students and maximize every day of a season-long experience. ☐

*Vermonters Mark Aiken is a supervisor in the ski school at Stowe Mountain Resort. He's taught skiing for 18 years and—in addition to his time in Vermont,—has taught skiing in Utah and the German Alps.*



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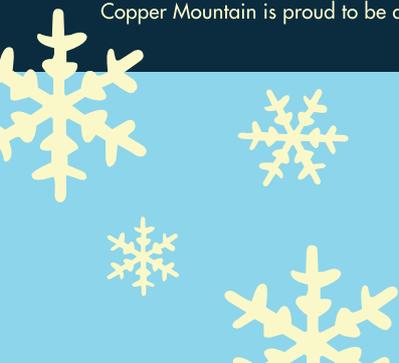
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# STRATEGIC EDUCATION PLAN PROMOTES ENHANCED VALUE

By EARL SALINE, PSIA-AASI PROFESSIONAL DEVELOPMENT MANAGER

**A**s you prepare for the 2011–12 snowsports season, the PSIA-AASI Professional Development Department is heading into the second year of a three-year plan to improve the programs and resources you and your fellow instructors rely upon to help do your jobs well and support your professional development.

Approved by the PSIA-AASI Board of Directors in October 2010, the Strategic Education Plan (SEP) encompasses the planning, development, and maintenance of PSIA-AASI education programs and credentialing\* programs. In developing the SEP, PSIA-AASI staff gathered information from members, snowsports school directors, and industry partners and found that the association is a market leader in U.S. snowsports education—with a motivated volunteer core and dedicated membership—but that there is a perceived lack of consistency in the quality and implementation of PSIA-AASI's education programs and credentials. Research also identified a recognized need to:

- ◆ improve communication and engagement with members and other stakeholders,
- ◆ develop a deeper pool of motivated volunteer leaders, and
- ◆ respond more quickly to changes in the snowsports education



Among other things, the Strategic Education Plan seeks to help you teach fun, meaningful lessons.

Sherri Harkin

marketplace and the snowsports industry in general.

These themes, along with input from division leaders and best practices of outside credentialing organizations such as the Institute for Credentialing Excellence, the National Commission for Certifying Agencies, the National Organization for Competency Assurance, and the American National Standards Institute, are represented in the SEP. In implementing the plan outlined in the SEP, PSIA-AASI will achieve four strategic priorities identified by its Education Advisory Council:

1. Increase the *ease and access* to all products, programs, and services;

develop and communicate clear paths to success in our educational system.

2. Develop a *quality assurance* system to uphold standards for all products, programs, and services.
3. Define *success measures* in order to evaluate PSIA-AASI products, programs, and services.
4. Implement a *leadership development* program to ensure a broad pool of volunteers so new ideas and energy can be used to create new products, programs, and services.

The first question you should be asking yourself is “Why is this important?” The short answer is because PSIA-

\*Credentialing is the umbrella term for certification; certificate, re-certification, or continuing education requirements; and accreditation.

AASI credentials are trained to and evaluated across all nine divisions and supported by schools and our industry. While the national organization helps develop the standards with the divisions, the divisions implement the standards through their training and credentialing programs. If there are real or perceived inconsistencies and/or variation in the quality of these credentials, the value of the nationally recognized programs is immediately called into question.

Now, one year after the plan was approved, it's fair to ask "What has been accomplished?" Early last season, the education department managers travelled to six of nine divisions to talk with members, division education staff, and division staff about the SEP, soliciting their feedback and answering their questions. Since then, division representatives have been involved in conference calls related to components of the SEP. As a result, two groups have formed, one of which is focusing on Level I certification, comparing and contrasting the Level I programs and

## You will see an increase in the value of your education, PSIA-AASI credentials, and your membership.

component parts across all nine divisions and across all disciplines. The intent is to understand what each division does within its Level I program, identify *how* the programs are similar and different, and determine *why* they are different. Using the national standards as a filter, the group will look for opportunities to create more consistency across the country and among the disciplines.

The other group will tackle the policies and procedures for credentialing programs. In each group, division representatives will work together to develop recommendations for the national board of directors and divisions.

What does all this mean for you? As a PSIA-AASI member, you will see an increase in the value of your

education, PSIA-AASI credentials, and your membership. This will come about through a concerted effort to improve the integrity and relevance of PSIA-AASI's education and credentialing systems, better alignment of division and national resources as new programs are researched and developed, and expanded opportunities to provide input and feedback about PSIA-AASI education resources and programs.

So, whether your goal for the coming season is to reach for that next level of certification, attain a leadership position and contribute to your organization, or merely boost your ability to teach fun and meaningful lessons, PSIA-AASI is working to improve how it helps you do that. **32**

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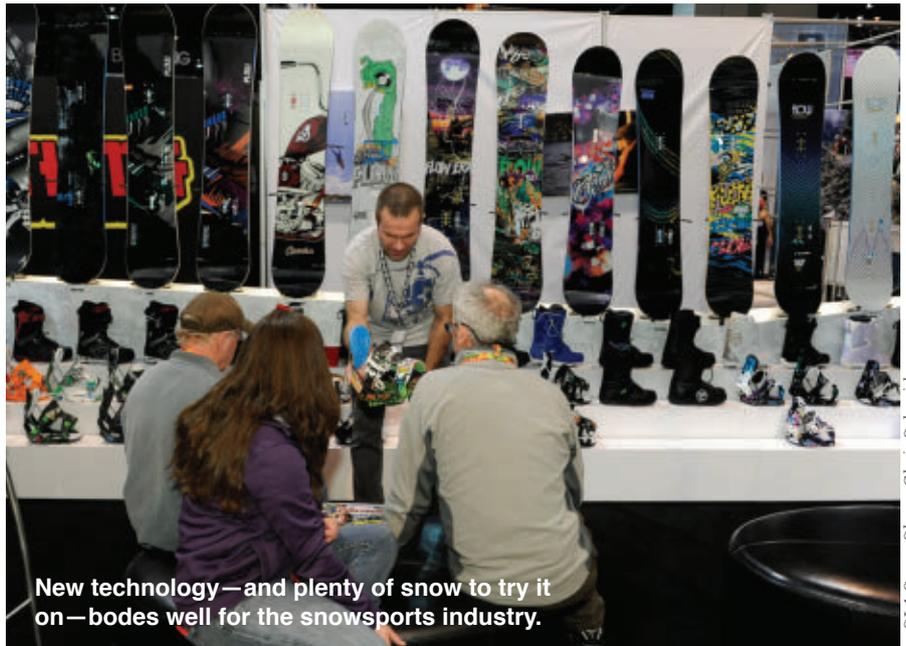
By PETER KRAY

The 2010–11 snowsports season broke so many records at retail shops and on the slopes that decades from now people might still be using the phrase “greatest winter of all time” to describe its impact.

Deep snow—and plenty of it—was the driving force, as snowfall records fell across the West. California’s Squaw Valley USA surpassed 800 inches of total snowfall after never before exceeding the 700-inch mark. Utah’s Snowbird Ski and Summer Resort, where the previous record was 688 inches, recorded 783 inches of precipitation. And Crystal Mountain, in Washington State, topped the 600-inch total for the first time ever, allowing the area to keep its new gondola running for skiers and snowboarders until July 16th.

Those rising snowpacks led to ringing cash registers and a steady influx of cold hard cash. For the first time ever, snowsports sales broke the \$3.3 billion barrier (the previous record was \$3 billion, set during the 2007–08 season), which meant that despite a stubborn recession, people were still willing to spend their hard-earned money on new parkas and ski and snowboard equipment. While on the lifts, U.S. ski areas reported their best season ever, recording 60.54 million skier days across the country, just inching past the 60.5 million skier visit record set—perhaps not so coincidentally—in 2007–08.

It all appears to be part of a



New technology—and plenty of snow to try it on—bodes well for the snowsports industry.

SLA Snow Store: Chris Schneider

rising tide in participation across the snowsports market, according to Nolan Rosall, who has long prepared the *Kottke National End of Season Survey*, the annual compendium of U.S. skier visits, for the National Ski Areas Association (NSAA). Rosall, who began easing into retirement this past spring in order to spend more time on the slopes himself, wrote in the Kottke survey that, “The industry has operated at a heightened performance level since the 2000–01 season, achieving 57- to 60-million visits in moderate to good years, and 54- to 55-million visits in poor years, both significantly above the levels recorded in previous decades.”

“For the past decade we really have been operating on a higher plane,” Rosall said in reference to the trend.

“The whole bar has been moved up.”

Although it looked as if U.S. ski areas might not achieve a record season in May, the massive amount of snow that was still remaining in the mountains so late into the season meant that at least nine ski areas remained open or reopened for the Fourth of July weekend, and the skier visits kept adding up.

NSAA President Michael Berry said it all points to a long-term pattern of growth. “While we’re excited about this unprecedented record-setting season, we’re perhaps even more encouraged by the longer-term trend,” he said. “In the past 10 years the industry has performed at levels significantly higher than previous decades and we attribute this to the efforts ski areas are making

to provide an extraordinary experience, and the fact that, more and more, multi-generations are now enjoying the thrill of sliding on snow together as a family.”

One statistic, however, that should draw the attention of PSIA-AASI instructors across the country is the fact that, despite all of the other positive indicators, the number of ski and snowboard lessons given during the past season was essentially flat. Based on a total of 117 ski areas that provided data on lesson volume for the Kottke survey, from the 2009–10 to the 2010–11 season, overall lessons were only up 0.03 percent. This despite year-over-year visits increasing by 1.3 percent.

“That certainly could have been largely as a result of all the snow,” Rosall said. “A large part of lesson volume comes from beginners and novices who would prefer to learn when the weather is nice and the sun is out.”

The other reason could be that season-pass holders are one of the most significant factors in America’s new raised plateau of annual skier visits. Almost exclusively

## BY THE NUMBERS:

# EQUIPMENT SALES HIGHLIGHTS

- ◆ Alpine skis (flat skis sold without bindings) in the 80mm-110mm waist width category were up 74 percent in dollars sold on more than 74,000 units compared to 47,000 units sold during the 2009–10 season.
- ◆ Women’s ski sales increased 20 percent in units sold and 26 percent in dollars sold. Out of a total of 419,000 alpine skis sold, 149,000 were women’s models.
- ◆ Reverse/Mixed camber ski sales finished the season up 134 percent in units sold and 129 percent in dollars sold. Approximately 54,000 pairs of reverse camber/mixed camber skis were sold.
- ◆ Reverse camber snowboard sales were up 42 percent in units sold and 46 percent in dollars sold. In fact, 45 percent of all boards sold had reverse camber.

Source: SIA RetailTRAK™ BY Leisure Trends Group.

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comprised of more experienced riders, locals, and ski area employees—according to the Kottke survey—season pass holders accounted for a whopping 36.2 percent of all skier visits last season, compared to 34.3 percent in 2009–10. In what the Kottke survey refers to as “The Pacific Southwest,” (i.e., California, Nevada and Arizona), proportionate pass-holder use was up by 4.3 percentage points. While those aren’t the kind of customers who typically line up for lessons, they do speak to the passion of the people who are already sold on skiing and snowboarding.

And plenty of new skiers and snowboarders—who may someday become pass holders—continue to hit the slopes. This was especially true in January, when Learn to Ski and Snowboard Month (LSSM) directly accounted for more than 75,000 lessons for children and adults. That’s more than twice the 30,000 lessons the instructional initiative generated the previous season, and a sure sign that LSSM is beginning to establish itself as a real mechanism for introducing people to snowsports. For 2012, PSIA-AASI, along with several state ski associations, as well as the NSAA, National Ski Patrol (NSP), Snowsports Industries America

(SIA) and the U.S. Ski and Snowboard Association, are actively planning for the 2012 LSSM event.

Another positive sign is the fact that because of such tremendous fiscal success at the retail level—SIA reports that of the record \$3.3 billion in revenue last season, more than \$900 million was spent on equipment—there is an unprecedented demand for new technology in the ski and snowboard shops. After clearing last season’s

more than 130 retail snowsports storefronts in the U.S. Rogers said that not only will his retail members be pushing rocker technology on the sales floor, they’ll also be spending plenty of money on newspaper, radio and, in some instances, even television advertising to market it.

Already rolling on the momentum of the previous season, and with plenty of opportunities to market how to use new technology to everyone from beginners

## Learn to Ski and Snowboard Month is beginning to establish itself as a real mechanism for introducing people to snowsports.

inventory down to the bare walls in some cases, retailers have reloaded for this season by placing big bets on rocker and early rise technology in both skis and snowboards, and will be selling it to everyone from experts to intermediates.

“New technology accounted for a significant amount of our open-to-buy for this season,” said Steve Rogers, president of Sports Specialists Ltd., a retail buying group whose members account for 52 retail businesses and

to experts, the only thing the ski industry needs to remain hopeful for this season is that the snow keeps showing up. 

*Peter Kray is the special projects editor for 32 Degrees, focusing on emerging snowsports trends and on-snow innovations. Kray skis, telemarks, and snowboards out of Santa Fe, New Mexico, and is the founder of Shred White and Blue ([www.shredwhiteandblue.com](http://www.shredwhiteandblue.com)), a media and apparel company celebrating American boardsports.*

## ON THE SLOPES: KEY FACTORS IN U.S. SKIING’S NEW BEST SEASON EVER

- ◆ Gains in visits occurred in most regions, including the Northeast (up 4.0 percent over the previous season), Rockies (up 1.7 percent), Midwest (1.0 percent), and Pacific Northwest (0.3 percent).
- ◆ All regions were strong in the 33-year context of recorded skier visit numbers, with each region achieving top-seven status in relation to its best season ever. The season ranked 3rd best in the Rockies, 5th best in the Northeast, 6th best in the Midwest and Pacific West, and 7th best in the Southeast.
- ◆ Nationally, snowfall at resorts was up 27 percent this past season when compared to the comparatively average snowfall of the 2009–10 season, and was the highest record in 20 years of Kottke research. The Pacific Southwest was up 43 percent, the Northeast was up 37 percent, the Rockies were up 31 percent, and the Midwest was up 26 percent.
- ◆ On-mountain improvements continue to gain momentum, as capital expenditures have grown from \$238 million in 2009–2010, to \$272 million in 2010–2011. According to the Kottke survey, respondents forecast \$357 million in lift, lodge, and on-slope improvements to be ready for the 2011–12 season.

Source: Kottke National End of Season Survey 2010/11

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# WHAT'S SUP? A NEW WAY TO PLAY, CROSS-TRAIN IN WATER

By Charlie MacArthur

Looking for a new off-season sport? Try one with all the benefits of core training, balance work, time on the water, and cross-training for all the major snowsports. The sport is stand up paddle surfing (SUP), and it originated in Hawaii. All you need is a board, paddle, a wetsuit, water, and you are on your way.

The relatively new sport is steadily spreading from the coasts to inland waterways and, according to the Boulder-based Outdoor Industry Association, SUP is now the country's fastest-

growing water sport. According to the association's inaugural survey on the sport, in 2010 there were 1.05 million SUP participants in the U.S. Those million-plus fans know there's something inherently exciting about SUP. Maybe it's the natural standing position and the enhanced vision one gets as compared to sit-down paddling. Perhaps it has to do with the seemingly universal desire to ride—like a surfer or snowboarder—on a gliding board. Then there's the fact that wave faces small and large as well as another person's boat or board wake help make the session exciting and addictive.

## A NATURAL FOR NORDS

From a cross-country skier's perspective, SUP is the most nordic water sport out there. The paddler is standing, using his or her whole body in the stroke—and, unlike kayakers, are unencumbered by a seat, footbraces, back bands, or thigh braces.

The concentration of power in the stroke increases as the paddle in water comes closer to the body (just like a skier's poles on snow). The compression and accompanying flex of the body during the propulsion phase is also present. Hips, torso, and arms move forward in glide



Photo montage by Cesar Priotto

and recovery phases to prepare for the next stroke—as with a pole push.

Glide rules the day, with the major payback coming when the paddler hunts down and harnesses pockets of gravity to extract the most glide possible. Just as a track skier will take advantage of micro/macro sloping segments of a track or lane, a paddler will glide down the face of a “bump” or small wind-driven waves in deep water.

### BOARD / ALPINE CONNECTIONS

From a snowboard perspective, a SUP board rider can stand in unlimited goofy or regular forward stances at will. River paddling actually demands the SUP paddler own both stances when turning into and out of different currents. Surfing a wave gives you the same toe/heel pressuring extant in snowboarding and surfing. In addition, the push/pull of one leg for pivoting results in powerful turning forces and, of course, possible tricks. The fore/aft leverage in the paddler’s stance adds to the ability to quickly accelerate or brake as well, and to pivot the board as in a nose or tail press.

## Glide rules the day, with the major payback coming when the paddler hunts down and harnesses pockets of gravity.

From an alpine skiing perspective, you can use the “long leg, short leg” principle (extending one leg and flexing the other) for balance and edge control when the feet are more side by side or “square” to the nose of the board. A slight stagger to this stance mimics the stance of a skier in a turn. Facing the nose of the board, the paddler has symmetrical paddling power on either side of the board. By using a narrower stance, a more skeletal and relaxed position is achieved (for cruising and flat-water racing) while challenging the core with dynamic balance. A wider stance is used for more stability and enhanced edging for running rapids, surfing, or negotiating choppy conditions.

34 inches) and a paddle 6 to 10 inches taller than the paddler. Select a calm section of water in a protected bay or a very slow-moving stretch of river. Use appropriate safety gear, including life vest, helmet, a wetsuit for cool and cold water, and water shoes or booties where there are rocky areas.

Paddle strokes are very similar to canoe and kayak strokes, so people with prior paddling experience catch on fast. Take time to sit down often on the board during your early sessions since the small skeletal and core muscles tend to over-fire from all the balancing movements you’ll be making. Stretch your shin and arch muscles by kneeling with toes pointed back and toes pointed forward. If you take

## TRAINING BENEFITS OF STAND UP PADDLE SURFING

- ◆ Core balance training.
- ◆ Stances are similar to those used in nordic skiing and telemarking.
- ◆ Propulsion phases are similar to those in track skiing.
- ◆ Uses stances similar to those used in snowboarding, as well common skills such as pivoting the board.
- ◆ Use of tip and tail leverage mimics that of snowboarding.
- ◆ Shares stance and skill elements with alpine skiing, such as symmetry and “long leg short leg” movements. —Charlie MacArthur

### GET YOUR FEET WET

If all this sounds intriguing, why not join the growing ranks of the SUP crowd? Ideally you should take a lesson from a certified instructor to get started (the American Canoe Association now has a growing number of certified SUP instructors). Beginning SUP is relatively easy with a wide board (30 to

a 5- to 10-minute break after your first 15 minutes on the board you’ll likely feel more balanced the next time you go out.

And if one of the things that appeals to you about skiing or riding is the wide array of gear that helps you get the most out of your time on snow, you’ll be happy to know there are also lots of options for whatever adventures you want on water.

Race boards, surf-specific boards, and family friendly cruising boards are all available.

So if you want a new off-season recreational option that can help you stay fit and focused for your work on snow, check out SUP’s new way of playing in the water. **32°**

*A member of the PSIA Nordic Team (and former member of the PSIA Alpine Team), Charlie MacArthur lives in Snowmass, Colorado, and spends plenty of time enjoying his SUP setup on mountain rivers, as well as teaching others how to enjoy the flow. For more information on stand up paddle surfing—and to see action videos of the sport—see his website, [riversup.com](http://riversup.com), as well as [c4waterman.com](http://c4waterman.com).*



For info on another great cross-training option, log on to [TheSnowPros.org](http://TheSnowPros.org) and check out the article on roller skiing in the “Web Extras” for 32 Degrees.



Jonathan Selkowitz

# Interski's Tips and Tools for **Surface-Lift Survival**

Text and photos by **GEOFF KRILL**

**W**hen traveling overseas as a disabled athlete and skier there are many hurdles and inconveniences to conquer in order to have an exciting and memorable experience. In the United States we've become very accustomed to the benefits of the Americans with Disabilities Act and the many ways it has enhanced the day-to-day existence of those living with a disability. This is extremely evident in

the efforts being made by U.S. ski resorts to provide accessible lifts and consistent standards. The detachable high-speed lift has become more and more the norm—though we know it is never perfect.

The first day at Interski in St. Anton, Austria, quickly enlightened me to the many difficulties that might face disabled clientele on a daily basis. Bill Bowness, PSIA-AASI Adaptive Team coach, and I noticed that to access much of the “good terrain” we would have to ride t-bars and Poma surface lifts. In the U.S. these have become more and more of a rarity and are seemingly left operating to give customers nostalgic appeal. Within the U.S., in most cases, there are alternative routes to help avoid these lifts.

The St. Anton surface lifts were very much integrated into the beginner zone areas throughout the terrain. Prior to the trip, Bowness and I discussed the possibility of this encounter, but had really discounted its frequency or ramifications.

The PSIA-AASI Adaptive Team had shown up to ski, teach, and learn so we

sought out some seasoned Austrian and Finnish surface-lift riders to provide us with tricks of the trade. These tips proved invaluable and can be an asset to any instructor who works and trains with athletes using sit equipment or looking to access new terrain.

First, we had to acquire hardware to retrofit the quick-release mechanisms of our trusty sit-skis. Fortunately, Alois



**Surface lifts can pose some sticky challenges for sit-skiers.**

Praschberger had some spare sets to purchase out of the back of his van down by the river. This consisted of a 24-inch piece of nylon webbing with a D-ring stitched at each end. The webbing was then connected in front of the knees by two quick-release mechanisms mounted to the sides of the sit-ski (photo 1). The reason for two is that in the event of a fall to the left or right while riding up, you still have the ability to release and avoid a body-grooming session all the way to the top. It sounds simple: Insert a loop to the t-bar or Poma with the ability to release at the top. This is the standard setup, but the need for a modification quickly became evident.

The first few trips went swimmingly and I was feeling pretty solid on my releases—until the webbing stuck in the hinge of the Poma lift upon hitting the quick release. I was dragged over the emergency stop, through the bamboo poles, and was about to go around the bullwheel when the webbing graciously snapped.

Here's what we learned (because somehow we missed it in the German-to-English translation). Through pure observation we noticed that all of the sit-skiers had threaded their webbing through rubber hoses in order to keep the webbing from becoming entangled (photo 2). Maybe they should make them that way. Brilliant!

Having survived that experience, I was able to ride the surface lifts again and discover a few more tips to make riding this style of lift more pleasurable for sit-skiers:

- ◆ Make sure the t-bar or Poma is inserted up and into the webbing for the best hold-and-release results.
- ◆ Keep your weight forward to keep the ski tip from being yanked into the air. This is especially important at the initial takeoff or in the event of a lift stoppage.
- ◆ Always hit the quick-release as you begin entering the unload area. A delay in timing can result in the momentum carrying the sit-ski into the safety stop.

These few guidelines can help sit-skiers explore the potential adventure of the surface lift and open up a new world of terrain choices and experiences. At the very least they will learn how to



**Photo 1: The overall surface lift setup. The quick release hardware is positioned on both sides and within easy reach for the skier.**



**Photo 2: A closer look at the quick-release hardware and system with the rubber hose added to the webbing strap.**

manage and ride a flat ski on the way up. This quick-release setup is also great for being towed into the backcountry by snowmobile. Just a little food for thought for sit-skiers planning their next adventure. ☺

*Geoff Krill is a member of the PSIA-*

*AASI Adaptive Team and is the snowsports director of New England Disabled Sports at Loon Mountain, New Hampshire.*

*He says that while this surface-lift equipment can be difficult to locate, one U.S. source is Spokes'n Motion at [spokesnmotionn.com](http://spokesnmotionn.com), the U.S. distributor for Praschberger products.*

# A Balanced Approach: Digital Platform Makes Quick Work of Sit-Ski Setup

By GABI BENEL

**A**s skiers, we constantly strive to attain balance in motion. Our muscles extend and contract to move us up and down, forward and backward, and side to side over our skis. We apply pressure and absorb it, turn our skis, and edge them with subtle movements of our joints. During any given run, millions of calculations course through our brains as we evaluate terrain and snow conditions.

Ski dynamics are greatly influenced by the skier's lateral and longitudinal position relative to the ski. Able-bodied skiers constantly adjust their body position to suit

the terrain and desired ski performance. Sit-skiers also need to address this issue, but with limited lower and upper body mobility, ski and bucket setup plays a

crucial role in maximizing the rider's ability to control the ski.

## SYSTEMS FOR BALANCING

Traditionally, a wooden dowel placed perpendicular to the ski has been used to find the rider's fore/aft center of mass when sitting in the sit-ski. By sliding the sit-ski forward and backward on the dowel, the skier can find a position where she can distribute her weight equally from the tip to the tail of the ski. Binding position is then adjusted to bring this point over the marked



PSIA-AASI Adaptive Team member Geoff Krill shows what balance in motion is all about.

Cesar Priotto

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Photo 1



Photo 2

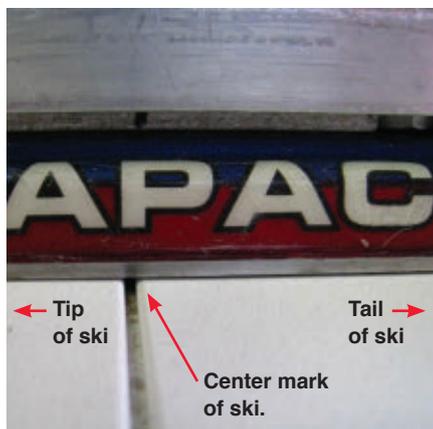


Photo 3



Photo 4

center of ski or other desired point (for instance, if the skier favors an off-center mounting position that makes it easier to pressure the tip or tail earlier or later in the turn). Side-to-side (lateral) balance and range of motion is usually evaluated by gauging the skier's comfort, her range of motion and ability to incline or twist, and through trial and error on snow. Requirements here have traditionally been accommodated through the use of strategically-placed padding.

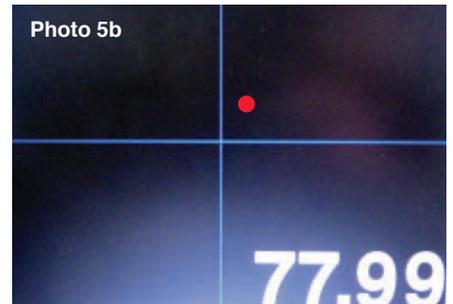
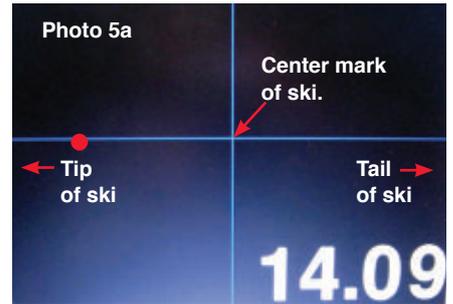
With body position playing such a crucial role in the sit-skier's ability to rotate and pressure the ski, proper sit-ski setup is critical for maximum performance and enjoyment. At Challenge Aspen, the adaptive snowsports school I work with, we've found a way to easily—and precisely—determine proper sit-ski setup by using a Nintendo Wii Balance Board™ (photo 1). By connecting the balance board to a computer, we are able to measure the location of the sit-skier's center of mass and use this information to balance the skier fore and aft along the ski as well as to evaluate the person's side-to-side position. The device is placed under a sit-ski with the rider sitting in an athletic stance and holding outriggers slightly off the ground. The balance board communicates wirelessly with a computer that displays the skier's center of mass as a red dot on an x-y axis.

Both instructors and sit-skiers have found the system to be more user-friendly than the dowel method. They are able to use the quantitative feedback the system readily provides to make quicker adjustments to the ski setup. Additionally, the visual feedback that the skiers receive from seeing a graphical display of their balance point relative to the ski has proven to be an incredibly useful learning and teaching tool.

**THE SETUP**

Photo 2 shows the components of the system. The balance board itself is the size of a large bathroom scale, and communicates wirelessly to a laptop computer via Bluetooth. The ski is mounted with a Monster Binding that can slide back and forth on the ski and then be locked down.

The Wii Balance Board and the orientation of the ski when on the board



Photos by Gabi Benzel

is shown in photo 3. The boot center mark of the ski (or the desired balance point) is placed on the centerline of the board.

A Freedom Factory Revolution mono-ski is placed on the balance board in photo 4, and the output seen on the screen is shown in photos 5a and 5b. The blue crosshairs on the screen correspond to the lines on the balance board itself, and the red dot shows the center of mass of the entire system. The white numbers indicate mass in kilograms.

It is interesting to note that, with regard to how this particular ski was mounted, the ski with an empty bucket has a center of mass somewhat forward of the boot center mark of this particular ski (photo 5a). When a rider sat in the ski, though, the center of mass of the system moved to slightly right and aft of the boot center mark of this ski (photo 5b).

I calibrated the system by pressing down on specific, measured points on the board with a sharp object and marking these points on the display screen. The accuracy of the Wii board has been evaluated in other studies and has been found to be of lab quality; one study shows it to be  $-0.03 \pm 1.56\text{mm}$  across the plate, and  $0.55 \pm 3.25\text{mm}$  along the plate ("The Accuracy of the Nintendo Wii Balance Board™ As a Measuring Tool for Centre of Pressure," by T. McBain, J. Rice, J. Watson, and P. Lagadec), <https://sites.google>.

com/a/jamie-rice.com/jamie-rice/research [accessed July 28, 2011]).

## METHODOLOGY

Skiers were first balanced fore and aft on the ski using the traditional dowel-test method. This procedure is as follows:

1. The sit-ski (bucket and ski) is placed on a stable, hard surface.
2. The skier, wearing the same clothing she would wear while skiing (including helmet), sits in the sit-ski with a ski attached. Outriggers can be used at this point in either ski or walk modes to aid balance.
3. A 1-inch diameter dowel is placed in front of the ski, and the skier pushes herself forward onto the dowel.
4. The dowel is positioned so it is under the marked center of ski, perpendicular to the ski.
5. With outriggers in ski mode, the skier assumes an athletic stance.
6. The skier slides the sit-ski forward or backward on the dowel until her weight is equally distributed over the tip and tail. Optimum balance is

achieved when the rider can balance over the dowel and keep the ski in the air with very small movements, such as a tip of the head.

7. This centered position is marked on the sit-ski frame.
8. The binding is then moved so that this "frame center" mark is placed over the marked center of the ski. In some cases, this can be done with the skier still sitting in the bucket, but it may require that the skier transfer out of the ski.

The new procedure with the Nintendo Wii Balance Board is similar in concept, but a graphical display of the rider's center of mass (forward and back, as well as side to side) is displayed on a screen relative to the center of the ski. The binding position is adjusted to bring the center of mass over the marked center of ski. Procedures applicable to the use of the balance board are as follows:

1. The balance board is paired with the computer, and the empty sit-ski bucket with ski attached is

placed on the balance board in front of the monitor.

2. The center mark of the ski is aligned with the center line of the balance board.
3. The skier transfers into the bucket and straps into the ski.
4. The skier dons outriggers and assumes a skiing stance.
5. Once comfortable, the rider can look at the screen and evaluate his or her center of balance relative to the ski.
6. If adjustments are necessary, the skier needs to exit the ski so that the binding can be adjusted to move the location of the bucket relative to the ski. On setups where the binding is not adjustable, such as the Mountain Man bi-ski, it may be possible to move the bucket forward or backward on the frame.
7. Lateral adjustments can be made using padding, straps, or other adjustments.
8. The skier can also experiment with his range of motion and look at the red dot on the screen to see how far he can move from center (photos 6,

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7). Another useful exercise is for the rider to close his eyes, find what he thinks is center, and compare that feeling to reality once he opens his eyes.

### BALANCE BOARD SYSTEM IN PRACTICE

In practice, when comparing results between the balance board system and the dowel test for setting up a skier on sit-ski equipment, we found that both systems gave similar results in terms of binding position for fore/aft alignment. The new approach using the balance board, however, has proven to be a favorite for both adaptive instructors and sit-skiers alike.

One of the greatest advantages of the system is that new skiers are much more comfortable being on a stable platform rather than teetering on a wooden dowel. The stability makes the student more comfortable



Photo 6



Photo 7

Photos by Gabi Benel

## BUILD YOUR OWN BALANCE SYSTEM

To build a system similar to the one described in the accompanying article, you need the following components:

- 1** A Nintendo Wii Balance Board, which can be purchased online or from a store that sells gaming equipment (such as Best Buy) for about \$90.
- 2** A PC or Macintosh computer running a Linux operating system. Ubuntu is a very user-friendly option and can be downloaded for free at <http://www.ubuntu.com/>.
- 3** A Linux-compatible Bluetooth “dongle,” which enables your computer to communicate with the balance board. One that works well and only costs about \$20 is the IOGEAR USB 2.1 Bluetooth Micro Adapter (GBU421).
- 4** Software to communicate with and interpret the signal from the balance board. This is the most involved part of the process, and requires some knowledge of coding and Linux. There is open-source code available at CWiid (<http://abstrakraft.org/cwild/>). Feel free to contact me at [gbenel@gmail.com](mailto:gbenel@gmail.com) if you'd like guidance. —Gabi Benel

while adapting to a new environment and new equipment. After all, a new rider faces many challenges on that first day in a sit-ski: wearing warm ski clothes while indoors (necessary to make sure a good fit is achieved in the bucket), the tippiness of a sit-ski, and the pressure of performing and demonstrating balance in front of people the person just met! Making the balancing process slightly easier can be a big help at this stage.

In addition, we've found that the balance-board system works well for both mono-skis and bi-skis. Being a large platform, the board can accommodate either one or two skis. The quick setup time of the system, and the ability for the instructor to evaluate the student's balance visually and quantitatively (by seeing how far off the skier is from center), encourages its use for all setups.

It was also interesting to discover that taking the time to effectively balance a bi-skier using fixed outriggers aided subsequent tethering for the instructor. Simply put, it's much easier to control the bi-ski with tethers when

the student is in balance. With the bi-ski performing as intended, instructor input can be much more minimal—which helps the skier to experience greater control and feel more independent.

The visual feedback that the skier gets from actually seeing where her balance is relative to the ski is of enormous benefit. It can be used as a mental cue by the skier when on the hill, as well as a tool that the instructor can use as a reference to guide the student when outdoors.

For example, while indoors the student can see the effect of arm position on the location of the center of mass. The stable platform and visual feedback afforded by this balance system seems to be favored by users versus the kinesthetic feedback given by the original dowel test.

In contrast to the dowel system, side-to-side balance can be evaluated almost as easily as fore/aft balance on the ski. This can be very helpful when dealing with various disabilities that may affect one side of the body more

than the other (such as a hemiparesis or cerebral palsy). The affects of adding padding or adjusting straps to address balance and range of motion issues can easily be evaluated in real time on the display screen. And, finally, skiers can compare what they feel is centered to the reality displayed on the screen in front of them.

In the future, Challenge Aspen plans to conduct a study using the balance board system to evaluate the setups of various elite-level sit-skiers so that we can determine where they like to have their balance relative to the center of ski. This will also be useful in determining where different sit-ski designs place the rider's center of mass when mounted similarly.

### CONCLUSION

Adaptive programs have long relied on innovation and adaptability to help create amazing snowsports experiences for their students. Nowhere is this more apparent than in the use of one Wii product to yield big results for sit-skiers. 32°

*Gabi Benel is an instructor with the Ski and Snowboard Schools of Aspen and Challenge Aspen. He is Level II certified in both alpine and adaptive disciplines, and has a master's degree in mechanical and aerospace engineering from Cornell University.*

### ACKNOWLEDGEMENTS

I would like to thank the incredible team at Challenge Aspen and the Ski and Snowboard Schools of Aspen (SSSA) who helped test this device and provided great input and suggestions for improvement.

I would also like to thank the skiers who came to Challenge Aspen and enthusiastically helped evaluate the new system. The software used is based on the open source code of CWiid (<http://abstrakraft.org/cwiid/>), with additional open source code from Matt Cutts (<http://www.mattcutts.com/blog/>). Thanks to both for their hard work and development! Many thanks as well to Naomi Berkowitz, who donated the first balance board for development. — Gabi Benel

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Jonathan Selkowitz

# New-School Moves for All-Mountain Skills

By MIKE HAFER; photos by MATT SCHULER

**T**he success of ski teaching in the United States comes from innovative and original teaching concepts that focus on guests' wants and needs. With the growing popularity of parks and pipes, more and more skiers want to experience these areas with an instructor and yet they still want to become better all-mountain skiers. Here are three ideas to help develop lesson plans to accomplish both goals at once.

## SWITCH SKIING

This exercise isn't new to the seasoned instructor, however the focal points can be. I utilize this as a kinesthetic-awareness drill versus a drill to produce a forward movement. The sensation I am trying to build in my students is the ability to stand over the ball of the foot in an athletic stance. It's human nature to move into this position as you are sliding backwards. As you can see in Photo 1, the skier's center of mass is over the middle of his foot. Another indication of a good stance is that the spine is parallel to the shin. The idea is to build some muscle memory so that the student can then duplicate this stance when going forward. Now the student has an internal point of reference—the ball of the foot—to move toward when entering a turn. This is an excellent task that can be delivered in a first lesson.

As the student becomes more and more comfortable skiing switch, introduce turning. The goal is to control the direction of the skis, using the legs to turn. The great thing about skiing switch is that it is very difficult to turn the skis from any body part other than your legs. You can add speed and terrain to increase the difficulty of this task. Now it's time to turn it around and put it to the test.



Photo 1

An important consideration when skiing switch is to look down the hill. This sounds simple, but it takes some time getting use to. Find a vacant slope to introduce switch skiing. Some students will feel the need to change the shoulder they look over as they transition from turn to turn. Others will feel most comfortable looking over only one shoulder regardless of which turn they are in. At this point safety is the main focus, so follow the student's lead.

### THE SLASH

In a nutshell, a "slash" is similar to a hockey stop with a large spray of snow. The goal with a slash is to create higher edge angles in different phases of the turn. Kids just love this progression. I like to set up brushes in the snow as targets. The easiest slash is to direct the spray downhill, just like in a hockey stop. The difference between a slash and a hockey stop is that you spray as

## The most difficult of slashes is one in which the skier shoots snow up the hill.

much snow as possible and continue without stopping. As you will see, the skier will have to remain centered on the skis to be successful. If the skier moves back, he or she will not be able to control the direction of the skis and the spray will be minimal, and if the person skis too far forward, he or she will pivot around the tip of the ski and slide backwards. When the skier is centered, you will see maximum spray and the skier will be able to continue in a directed path. This helps develop a turn that controls speed rapidly, similar to a turn you may use in steeper terrain or bumps.

To increase the difficulty of the slash, move the brush into the apex of

the turn. When done correctly, snow will fly to the right or left of the run. Pressure will build in the apex of the turn and there will be less of a finish to this type of turn. This develops a great turn-shape for skiing crud.

The most difficult of slashes shoots snow up the hill. The skier will have to move forward and down the hill in the initiation phase to be successful (photo 2). As you can imagine, an early edge is a high-level skill that is often seen in a race course.

As the student progresses with this concept, change the intensity of how much snow is sprayed into the air. This will teach the student how to manage the edge angle throughout the turn.

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## SLIDING BOXES

The desired outcome here is to use a box slide to teach students how to balance over the outside ski. To begin, suspend the brake of one ski just as you would in order to tune the ski on a bench. Next, lay the ski base-up in the snow and parallel to the fall line on a low-angle pitch. Voila, you have an introductory rail. Have the student approach the ski slowly in ski boots, jump up and turn 90 degrees as they land on the base of the ski. The focus is to keep the weight over the downhill foot. The student will be successful if he or she is balanced correctly.

Continue with the ski slide until the student becomes comfortable with the maneuver. Once comfortable with the slide, the student will need to practice the dismount. This will take a small pop and then a 90-degree rotation to exit in the fall line. Then it's time to take it to a box.

As your students enter the park, it's a great time to introduce the Smart Style freestyle terrain safety initiative (<http://www.nsaa.org/nsaa/safety/smart-style/>). Take it slow at first. Find a box that is very low to the ground and flat. Now it's time to go for it, this time with the skis on (photo 3).

After the success in the park, take the concept to the hill. The theory is that balance over the outside foot will be most notable when the skis are 90 degrees to the fall line, just as they experienced on the box.

Innovative teaching is exciting and entertaining. It keeps instructors motivated when teaching the same concepts day in and day out. Riding switch, slashing targets, and playing in the park are ways to spice up a lesson plan. Let your creative side come out and borrow some new-school moves to teach all mountain skills. ☑

*Mike Hafer is a member of the PSIA Alpine Team. He is assistant director of the Ski and Snowboard School at California's Northstar at Tahoe.*



Photo 2



Photo 3

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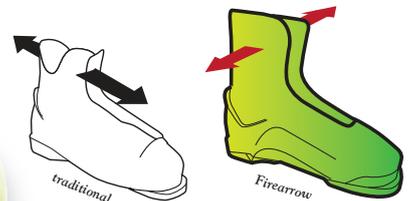
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# Don't Confuse Ski Technique with Teaching Methodology

Text and montage photos by Ron LeMaster

**W**hy is it that we're successful some days helping skiers improve, but unsuccessful with others? Often it's because we confuse the techniques we would like students to develop with the teaching methods we use to help make

that happen. Techniques are the movements skiers make with their bodies. Teaching methods are the interactions we have with students in hopes of helping them learn appropriate technique: things like exercises, visual images we provide with our own skiing, and, most importantly, our verbal descriptions of those movements.

There are many good teaching methods that can be used to develop any given technique. Most work well for some skiers, but poorly for others. When it comes to verbal descriptions of techniques, that's because they are usually descriptions of what it *feels* like to make the movement, not an accurate description of the movement itself. And how that movement feels to one person may be quite different than how it feels to another.

It's not uncommon for instructors and coaches often confuse methodology with technique. They discover something they can say to students and athletes that produces better skiing and, if it sounds technical, they put it in the category of technique. Instead of being treated as a description of a skier's subjective experience, it is treated as a statement of objective fact. Unfortunately, the teaching method becomes the teaching goal, not the underlying technique.

Consider the technique



**Photo 1. Technically speaking, leg rotation is a movement of the femur in the pelvis. Good methods for teaching leg rotation usually focus on the feet and knees.**



**Photo 2. Lindsey Vonn flexes deeply to absorb a bump between two GS turns. In this low posture, her hips are behind her feet, yet she is in good balance.**



**Photo 3. As Tanja Heller flexes to absorb these moguls, her hips move behind her feet in a manner similar to Vonn's.**

of leg rotation, an important technique for, among other things, pivoting the skis early in the turn or for steering them to an edge set in a short-radius turn on a steep slope. Biomechanically speaking, this is done by rotating the femurs in the pelvis. The outside femur is rotated inward, and the inside femur is rotated outward. When the femurs are relatively extended at the hip, the muscles used to accomplish this are predominantly the interior and exterior rotators, respectively, of the femur. When the femurs are flexed at the hip, the work is done mostly by the femur's adductors and abductors, respectively.

Is the explanation of leg rotation in the previous paragraph a good way to teach people to do it? Of course not. We rely on tried-and-true teaching methods: We say, "Turn your feet," or "Crank your knees," or other colorful and expressive verbal cues. (Technically speaking, you can't turn your feet or knees, *per se*, very much, even though it feels like you can). When teaching we might have students watch and imitate us, or do an exercise that teaches them more effectively than our words can.

A common piece of advice given by instructors and coaches is to "keep your hips over your feet." This cue helps a lot of people ski better because it helps them avoid getting too far back coming out of the turn, and helps them move forward early into the next. Is it a fundamental technique, or a good teaching method? The skiers in photo montages 2 and 3 don't keep their hips over their feet all the time, but they are skiing quite well. What they have over



**Photo 4. In this low posture, Lindsey Vonn's center of mass is over her feet, but her hips are not.**

their feet are their centers of mass, as shown in photo 4.

"Keep your hips over your feet" is a teaching method—and a good one in many circumstances. But it's not an accurate description of the movements a skier really makes, and is not a statement of technique. Photo montages 5 and 6 show what can happen when skiers literally keep their hips over their feet. The hips of the skier in photo montage 5 stay over his outside foot because he over-flexes his left ankle. The skier in photo montage 6 does it by bending excessively at the waist. In both cases, the result is too much pressure on the skier's forebodies.

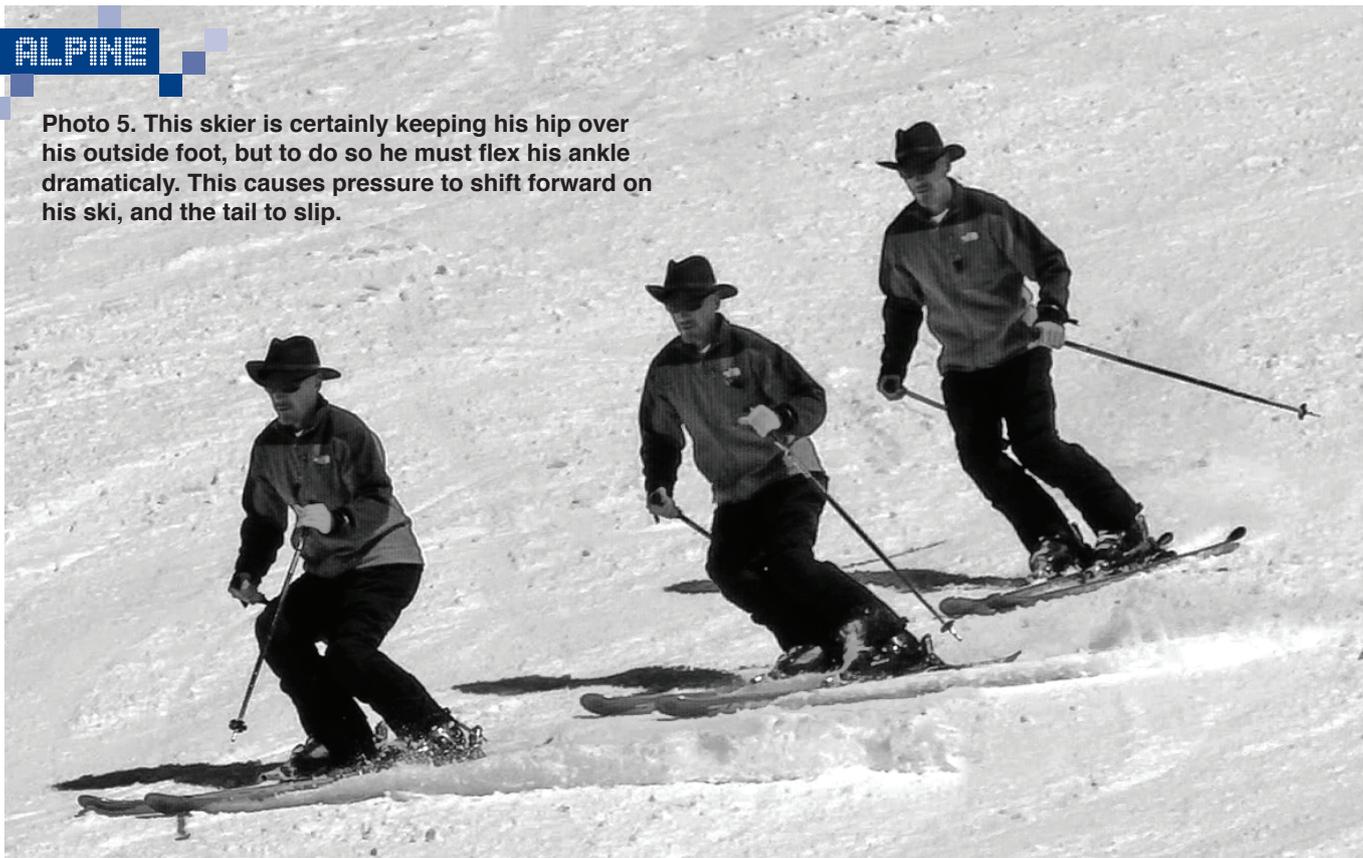
This doesn't mean we should burden students with explanations of actual technique. Few people learn to ski well from that approach. Most get confused

and either end up skiing worse or simply ignoring the instructor. But we will be more effective coaches and instructors if we know the difference between the techniques we want skiers to learn and the methods we employ to achieve those goals.

Think of instruction as a two-part process: First, determine the technique or movement pattern that you would like to see the student develop, then pick teaching methods that will work for that particular student. If you're working with the skiers like those in photo montages 5 and 6, and they say that they've been instructed to keep their hips over their feet, explain to them it's a teaching cue that works sometimes, but not all the time, for developing good fore aft balance and movement through turns. Explain that, in their case, applying that cue puts them too

Red Bull Photofiles

**Photo 5.** This skier is certainly keeping his hip over his outside foot, but to do so he must flex his ankle dramatically. This causes pressure to shift forward on his ski, and the tail to slip.



far forward when they try to flex. Then apply a different teaching method, such as saying “reach forward with your arms and let your knees come up toward your chest as you flex.”

Another teaching method that doesn’t pass muster as a fundamental technique is

the notion that you should “project your center of mass diagonally into the new turn.” Many accomplished skiers know just what you mean when you say it, but it is physically impossible for an alpine skier to do. You can only project your center of mass in some direction if you have a base

of support to push against in the opposite direction. When you skate on skis, for example, you propel yourself forward by pushing backward against the snow with your skis and poles. When you’re making linked dynamic turns and want to “project” your body forward and down the



**Photo 6.** In order to keep his hips over his feet while absorbing this bump, this skier bends excessively at the waist and pitches forward.

● ON PISTE, ● OFF PISTE, POWDER,  
ICE, ● MOGULS, ● QUADS, ● ROPE TOWS...  
HECK, ● WHATEVER...  
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**Photo 7. Ted Ligety might feel like he is “projecting” his body down the hill in the transition between these two turns, and that might be a good expression to use when helping someone learn to ski like this. But the principal techniques Ligety uses to make it happen are a bit of increased angulation in frame 4, retraction in frame 5, and precise fore-aft pressure control with the ankles throughout. A good instructor or coach understands both aspects of communication.**

hill, however, you don’t have anything to push against that’s uphill and behind you.

It may *feel* like you’re throwing your body down the hill and forward, but you’re really not. What you’re doing is

But many people who have never experienced that feeling won’t know what the heck you mean, and you’ll have to give them some clear instructions on how to actually do it.

only teaching methods—and not the techniques that they are aimed to develop—will fail with many of their students. Identifying the technical goal is the important first step, followed closely by selecting teaching methods that can achieve that goal. To achieve consistent success you have to know the difference between the two. Always keep in mind that the teaching methods we use are a means to an end, and that end is technique. <sup>32</sup>

## Good teaching methods are the bread and butter of ski instruction.

getting your feet to slow down or turn more than your upper body, so that your upper body’s momentum carries it across your feet and down the hill. A number of techniques can be used to accomplish this tricky feat, a couple of which Ted Ligety applies in photo montage 7.

For some students, “project your body down the hill” works fine.

### CONCLUSION

Good teaching methods are the bread and butter of ski instruction. Having a big bag of tools at your fingertips—and knowing which tools will work for a particular student in a particular situation—is one of the most important skills an instructor can have. But instructors who know

*Ron LeMaster has been a technical advisor to the U.S. Ski Team and Vail Ski School, and lectures frequently about technique and biomechanics to ski schools and teams around the world. His latest book, Ultimate Skiing can be purchased at [ronlemaster.com](http://ronlemaster.com), from where many photos of world-class skiing can also be downloaded at no charge.*



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Jonathan Selkowitz

# Three Takeaways Emerge from On-Piste Skating with Finns

By TOM MARSHALL

**T**he rumors were true. We were really going to ski on the alpine piste during the Finnish Interski clinic. Charlie MacArthur and I weren't really sure what they had planned, but when they told us at the end of the indoor lecture—30 minutes before meeting on snow—to bring out tele poles and wear our helmets the reality became clear.

We were actually going up on the steep man-made snow with just skate gear.

The indoor lecture focused on the "Power of Motivation: Leading Motivation Climate" and they were going to present just that on snow. I admit that I was more internally excited and looking forward to this clinic than any other during the



Skating on a steep alpine piste? Crazy!

Charlie MacArthur

week. They were right. Changing the learning environment and introducing an extra challenge is motivating. And that illustrates the first key takeaway—one that you can apply to your own development as a skier and impart to your students: “Find your inner motivation.”

There were about 10 participants in the group and since cross-country is such a small part of the whole Interski representation I already had met and skied with most of the group. We had a solid group dynamic going and it was apparent, even with some language barriers, that the whole group was a bit anxious. After the leaders introduced themselves they asked, “Who has cross-country skied on the alpine slopes before?” Most everyone raised their pole. It wasn’t completely new to us, but going on the mountain isn’t the everyday tactic for cross-country skiing.

They explained that in Finland what we were doing was not out of the ordinary. Compared to the Alps and the large alpine ski areas across the world

then did an excellent demo.

Before going over to the gondola and heading way up on the mountain they made sure the entire group could safely make wedge turns, traverse parallel, and make wedge Christie turns. The focus was on flexing and extending smoothly throughout the turn. Sound familiar?

I felt like a beginner skier riding the lift for the first time. Looking down at the big, steep, icy runs, then at my tiny skate boots, I wasn’t totally sure how everything would end up, but I was determined to give it my best shot. We regrouped at the top and learned that we were going to spend the clinic on another Poma lift. The terrain was challenging, but not scary at all, and the snow at the higher elevation was much better. It was here that the third key takeaway came to life: “Learn—by skiing—how to handle various conditions.” We did at least 15 laps on that slope doing exercises that worked on our skiing skills.

Here is a rundown on what we did:

◆ Straight run on one ski. Looking ahead

**As ski instructors I think we can agree that anything that helps improve our balance while sliding on snow helps improve all aspects and disciplines of the sport.**

the mountains in Finland are small. Finnish instructors regularly take nordic groups off the trails and work on skiing skills on the ski runs. The second key takeaway was “Skiing with nordic skis sustains normal alpine skiing.” As ski instructors I think we can agree that anything that helps improve our balance while sliding on snow helps improve all aspects and disciplines of the sport.

We went through a well-thought-out progression of exercises, starting with the beginner slope off a Poma lift right at the base area. We did one new thing or task per run and the leaders did an exemplary job of presenting to different learning styles (visual, auditory, and kinesthetic). They briefly explained what to do, what it might feel like, and

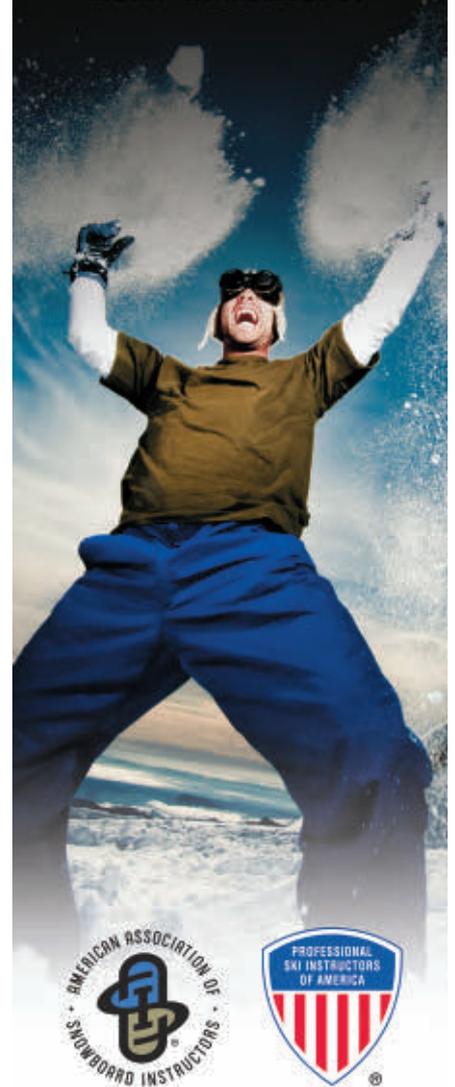
and trying to go as far as possible without setting the other ski down.

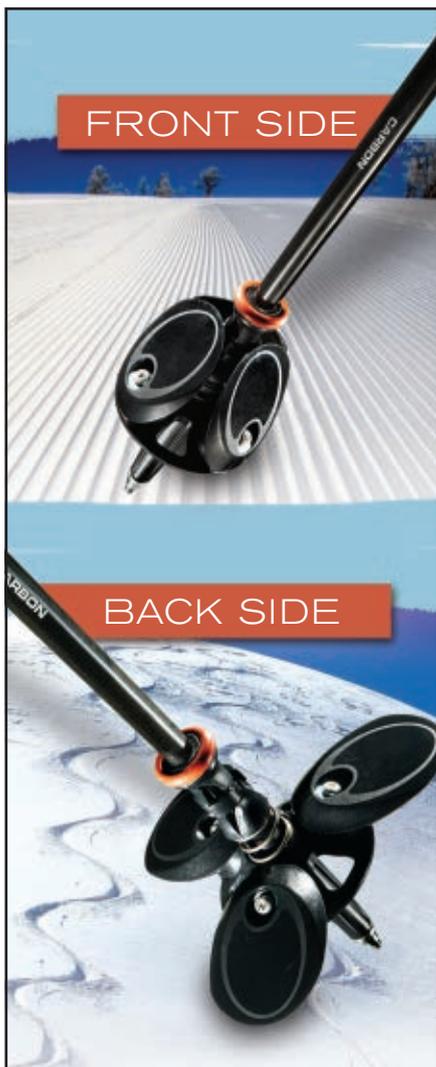
- ◆ Straight run on one ski with a partner. Same as before while skiing next to your partner with hands over each other’s shoulders.
- ◆ Ballet straight run on one ski. This takes more commitment since you have to hold your arms and hands out front and hold the other leg back.
- ◆ Wedge turns with a partner. One person leads and the other follows right behind with their hands on the leader’s hips. The key is to stagger your skis, not wedge in between the leader’s skis like a parent skiing their kid down the bunny slope.
- ◆ Ski backwards with some wedge turns. Skiing backwards really makes

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you focus on your balance point and not seeing where you are going, enhances the feeling of the snow.

- ◆ Michael Jackson's Moonwalk. This was the hit of the entire clinic and our Finnish friend Jussi Rähkä demonstrated it beautifully. On a very gradual slope we glided backward with one foot in front of the other, then pulled the back foot forward while keeping the ski on the snow and the toe pointed and the heel up. When repeated in fluid motion it looked just like the moonwalk, but it was much harder for us to pick up.

**Looking down at the big, steep, icy runs, then at my tiny skate boots, I wasn't totally sure how everything would end up, but I was determined to give it my best shot.**

This can also be done on telemark gear, but the smaller boots and more flexibility in the bindings make it look better on light cross-country equipment.

- ◆ Step turns. The goal here was not to skid, but to step through the turn. To start a right turn, you would step your right ski to the right, transfer your weight to it, and then step the left ski parallel to its partner in quick succession. The skis essentially form a V at the tails of the ski, and the tips would be spread, until the left ski was stepped up. At a more advanced level this move can give you more juice through the turn.
- ◆ Short alpine turns. This is good for controlling speed on steeper terrain.
- ◆ Hop to telemark turns. At the turn initiation we hopped, and after landing, we dropped into a telemark stance to finish the turn.
- ◆ Telemark turns. We focused on keeping pressure on both skis throughout the turn.

- ◆ Medium-radius classic alpine turns. The Finns demonstrated this turn with a narrow stance, and it was impressive how easy they made it look. If you didn't notice their equipment they looked like just like an alpine skier from the '70s.

Through all this skiing our Finnish clinic leaders kept the group together, but gave us the freedom to learn and practice the exercises at our own pace. They had some good jokes, which all seemed to be aimed at Sweden. They truly demonstrated one of their main topics from the indoor presentation, "Teaching is the core competence for the instructor, other skills are just enablers." It was a great experience.

I assumed we would ski back up to the gondola and ride it down to the base at the end of the clinic.

I was wrong.

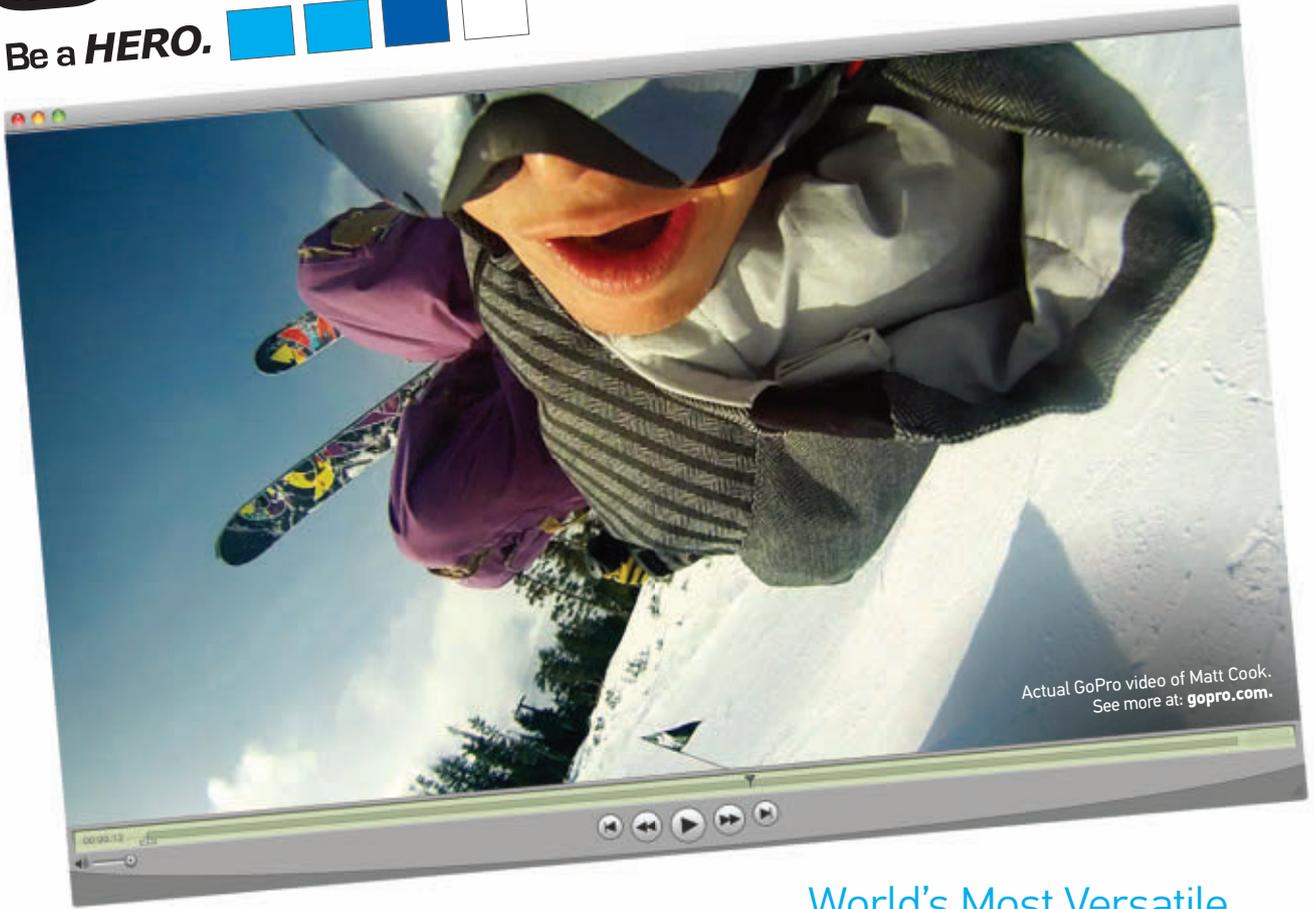
Using the skills that we had practiced all morning, we put them to the test, by skiing to the bottom. It was definitely challenging and Charlie and I both had some good falls near the bottom while skiing next to the demo slope.

Icy patches with big push-piles of sugar snow demanded 100-percent focus to get down. I definitely recommend taking your light gear, with permission of course, over to the green or blue slopes at your ski area. There is a lot to learn while going downhill. ☑

*Tom Marshall is a PSIA Nordic Team member who teaches at Big Sky, Montana. He skis cross-country at Montana's Lone Mountain Ranch, and is also an alpine and telemark examiner in PSIA-AASI's Northern Rocky Mountain Division.*

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# How to Get Kids on Track with Cross-country Skiing

Text and photos by **DAVID LAWRENCE**

**W**ild mood swings. Irritability. Uncontrollable bursts of joy and enthusiasm. Over-estimation of ability. Out of touch with reality. What sounds like symptoms for a gaggle of doctors to diagnose can actually be identified with a TV game-show reply: “Alex, what describes kids on skis?”

Teaching kids on snow equals a wild ride of highs and lows. Over the years, I’ve come to not only enjoy the ride but also enjoy learning the process and tactics to literally trick kids into loving our sport.

Here are a few of my favorite tricks—oops, I mean tactics—which I learned while teaching my daughter Tana to ski.

## **DON'T OVER TERRAIN**

This tactic was articulated by my friend Ross Matlock of the PSIA Nordic Team, “Don’t over terrain your kid.” In other words, pick the right place to play.

You wouldn’t want to take your 80-year old grandma to the super steeps of Crested Butte. If she survives the harrowing downhill, she probably would push you in front of a bus near the ski area’s base. If she controlled her anger, you can bet she wouldn’t ever trust you again and she surely wouldn’t ski with you again.

The same applies to kids. Keep them on terrain that matches their confidence and ability. Pick terrain that favors their strengths, psychologically grooming them for more challenging terrain later.

Pick the terrain that sets kids up for success. With Tana, our two-year-old, my wife and I pick flat, easy terrain with the slightest of hills to go play on. The worse thing I could do is pick terrain that favors my preferences and frustrates her.

## **FREAKONOMICS**

Economists love incentives, which they use to manipulate economic behaviors. The right incentives make companies, businesses, and people do beneficially lucrative things that favor both the economy and the people. The term coined to describe applying



Tana  
having  
fun.

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Having a great time with friends and family, cross-country style!

economic principles to uneconomic circumstances? Freakonomics. Count me in.

Tana loves incentives. So my wife and I incentivize distance when she cross-country skis, creating a mutually beneficial outcome. We incentivize the ski adventure with food; she skis along and gets tired. We then put her into the pull-behind ski chariot, were she falls asleep and we get to ski for a few hours.

Tana's favorite food incentive? Grapes. First we feed her a grape at the trailhead after putting on her skis. Whetting her appetite, she's now a junkie looking for her next fix. We dose her again 10 feet down the trail. Next, we place grapes every 10, 20, or 30 feet. She skis, she stops, and she reaches down, picks up a grape, gets her fix, and skis to the next grape. This keeps her going for almost an hour.

Food incentives make covering ground more fun. With Tana we're up to one kilometer with no problem!

**SHOW AND DO, TALK LESS**

My favorite comment when teaching skiing is "Try this." My second favorite

is "Do this."

Kids learn more by mimicking, doing, and trying than they do by listening. Teach kids by doing. Make it a game. Let them follow you. Don't stand around flapping your lips; start moving. See how much you can get them to do and how much you can get them to learn by just using two comments and four words.

**TEACH A LITTLE, PLAY A LOT!**

A mistake often made by those with the best of intentions is to start the skiing adventure with too many expectations. Teach kids one thing and go make fun on skis. So what if you wanted to cover four things. Once you realize what your expectations are, you can remove them (or at least push them to the side), and better tune in to what the kid needs.

To avoid that temptation to teach or say too much, I use two basic instructions that I boiled down to two simple audio cues: touch your knees, and stomp like an elephant. Two things, that's it. We go ski, we eat grapes, we throw rocks in the irrigation ditch, and we go on

adventures, looking for hills. Sometimes I say “Stomp like an elephant” to get up hills. Sometimes I say “Touch your knees” to go down hills.

I avoid all those other directions I hear well-intentioned instructors and parents say: bend your knees; flex your ankles; don't sit down; you're leaning too far forward; don't look down, look forward.

Okay, so keep the day to one or two pieces of instruction boiled down to simple verbal commands. The other bonus tip? Make those commands fun! Sometimes I pretend to put super-sticky glue from my pocket onto kids' gloves, so when they put their hands on their knees the super-sticky glue on their gloves keeps their hands on their knees. Then my verbal clue goes like this: “Put the glue on your knees.” That's so much more fun than “Bend your knees and keep your hands in front of you,” which

the unexpected. Embrace the adventure. If you do, kids will embrace skiing.

### MAKE IT SOCIAL!

According to recent data collected by Snowsports Industries America, almost 55 percent of adult skiers ski because it's social. More than half of skiers ski because it's fun to ski with their friends. The poll has never been done with kids, but wouldn't you imagine that the percentage of kid skiers who ski because it's social is more like 85 to 90 percent?

Our industry shows that skiers want a social experience, so it's up to us to create that for our kids. Get more kids involved by making ski dates with other parents and friends. When you teach a group children's lesson, get the kids interacting, playing games, and, heck, even break them into groups to choreograph a synchro ski routine.

**I love skiing so much that I believe propoganda and brainwashing are totally okay.**

essentially happens when little kids put their hands on their knees when they go downhill.

### DISTRACTIONS ARE GREAT

Ski trails often become the greatest unplanned experience of the day. My kids light up when a snowmobile or groomer comes by. They also stop paying attention and listening. Frustrating? No. Learn to embrace the distraction.

When the groomer goes by we become groomers. Our skis push snow (snowplowing) like a groomer. Our skis groom the snow when we kick and glide.

If something distracts us, we go toward it. We embrace the opportunity, make an adventure out of it, and make it a teachable moment.

In that moment, an adventure and an experience forms something special that can make kids lifelong skiers. Embrace

What's fun isn't what you know or skiing where you want to go, but skiing with your friends and sharing a killer experience.

### SUBLIMINAL SKIING

I love skiing so much that I believe propoganda and brainwashing are totally okay.

In Tana's room, when she was one year old, I put up a poster of female cross-country phenomena Kikkan Randall. Now when Tana goes to bed or when she rises, she sees great cross-country skiing.

We also talk about the adventure of skiing and what we've done on skis like two kids comparing memories after a fishing trip. We like talking about the trip almost as much as we liked the trip itself. ☺

*PSIA Nordic Team member David Lawrence lives in Winthrop, Washington, and is an instructor in the Methow Valley.*

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Jonathan Selkowitz

# How Do You Decide What to Ride?

By ERIC ROLLS, with LANE CLEGG

If you've checked out any of the recent buyer's guides or strolled through a snowboard shop lately, you know there are a ton of board designs out there. So how do you choose what's best for you—or give accurate advice to students who ask you what *they* should ride?

When it comes down to it, board selection is all about where and how you like to ride. Most of us ride more than

one style, so one option is to buy a quiver of boards and choose the one best suited for that day or snow condition. However, if you don't have the coin to purchase more than one deck, you want to pick something that works in a wide variety of terrain and conditions, and luckily most of the new designs will do just that.

To help sort out the options, we'll start by defining some different styles of riding, (and terrain), which can be specific (for example, the halfpipe) or general (as in "all mountain"). Then we'll look at some of the new board profiles and their characteristics. Finally the "decision tree" that follows breaks down the process we use to help our athletes or students find the board that best suits their needs.

## PREFERRED TERRAIN/ RIDING STYLE

### Speed

Whether you like racing in the most traditional sense, boardercross, or just going fast in top-to-bottom runs, you'll want good stability and strong edge hold.

### Halfpipe

You're looking for the rush of dropping in, carrying speed across the flat-

bottom, and boosting out (or at least going for the lip). Again, you'll want good stability and strong edge hold.

### Park

You like jumps of 40 feet or less, boxes/rails with low consequences for errors, and features that are meant to be hit without a lot of speed. More playful and jibby, you take multiple line choices through the park, combined with ground tricks/butters. You'll want softer flex overall and looser feel on the tip/tail for butters and box/rail features.

### Big (Pro) Park

You head for jumps of 40+ feet, and boxes/rails with higher consequences. You need to carry speed into features and stomp the landings to maintain necessary speed for the next feature. Opt for a stiffer board for stability and precision.

### All-Mountain Freestyle/Freeride

You ride the entire mountain, using natural terrain. This includes riding the steeps; gapping moguls; slashing berms; weaseling through trees, wall hits, and gullies; launching cat tracks; taking drops; and hitting natural rollers

and jumps. This style includes riding in all types of conditions, from deep pow to what's left after the previous night's rain (ugh). You need a maximum-versatility board—able to ride deep pow but still handle ice—to go from jibbing to dropping cliffs.

### Cruising Groomers

You primarily like mellow carving, smooth riding, and mostly staying on the snow. The board needs to hold a carve or round out a skidded turn on demand.

### Backcountry

You want to leave the crowds behind, whether you're hiking/skinning or taking a snowmobile, snowcat, or helicopter beyond resort boundaries in hopes of finding the fresh. This style encompasses every type of riding, terrain, and snow condition. Board choice here largely depends on your method of access; otherwise any board that floats well in pow is all you need.

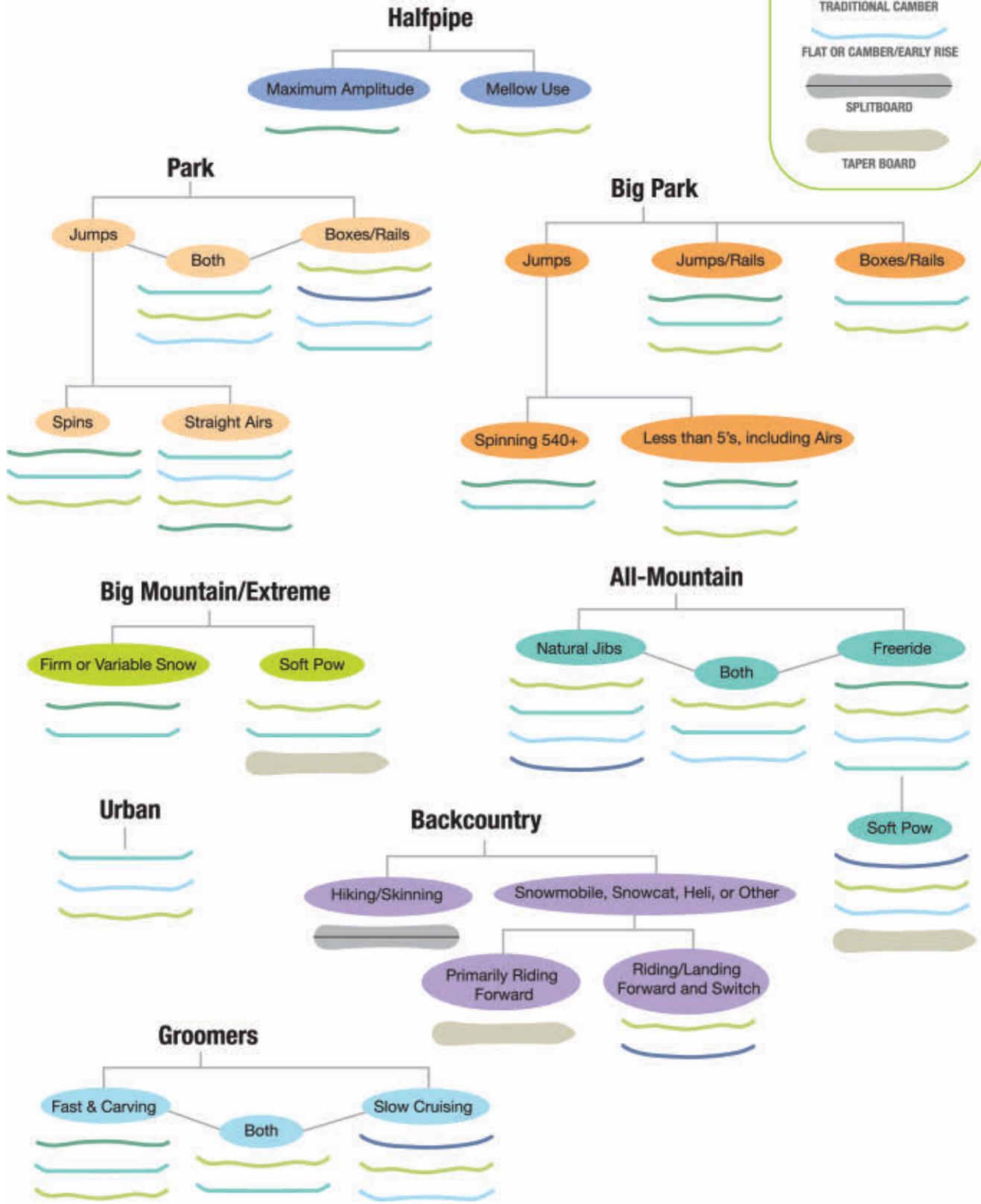
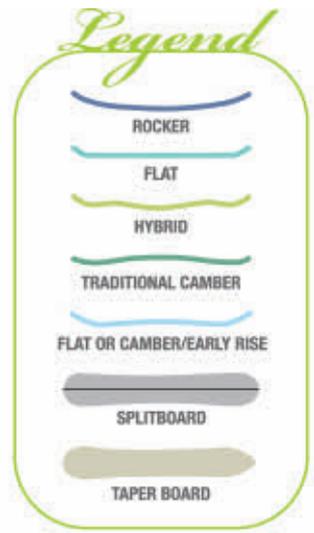
### Big Mountain/Extreme

You enjoy the rush of big, steep lines, sick chutes, and couloirs—which can lead to gnarly consequences if you blow your line. This type of riding is done with speed and is paired with airs and grabs for style. Your board should be stable and damp to handle vibration.

### Urban

Your ideal turf is made up of rails, stairs, ledges, closeouts, drops, gaps, and anything else that you can imagine in the cityscape. Choose any board that isn't

# Riding Styles and the Boards that Love Them



going to hook up and slam you to concrete and metal. Think loose feel and forgiving.

## BOARD PROFILES

### Flat

Totally flat between tip and tail, you get back what you put into it. It has a predictable ride; not pivoty, good edge hold, fairly solid stability, and good pop.

### Camber

With stored energy built in, camber boasts strong edge hold, maximum stability, precision for carving, and pop.

### Hybrid Camber

This board has reverse camber in the center with camber underfoot or just outside of each binding. With a hybrid of both camber and reverse camber, this multi-cambered board offers a playful and pivoty feel but with decent edge hold. It usually has good pop and floats well in soft snow (both forward and switch).

### Rocker (Reverse Camber)

The rocker shape typically starts from the center on twins and is set back on directional boards. These boards are super pivoty, skiddy, loose feeling, user-friendly (easy to ride), and float very well in soft snow (both forward and switch).

### Early Rise Tip and Tail

This design is flat or slightly cambered throughout the middle of the deck and has rocker outside the inserts toward the tip and tail. These decks usually ride like a shorter camber or flat board but still float in soft snow (both forward and switch). They have decent edge hold and stability with pop. Still pivoty while the board is flat but offer control throughout casual carves due to the precurved tip/tail shape.

### Taper

Can have several camber profiles but is narrower in the tail than in the nose. Primarily designed for deep, soft snow in which the tip tends to float to the surface.

### Splitboard

This board design can have several camber profiles, flex patterns, and shapes. What sets this board apart is the ability to separate it into two halves that, essentially, imitate backcountry skis (used in conjunction with skins and splitboard bindings). 

*In addition to raising 3 chickens, 12 pheasants, and a grumpy old dog named Buck, Eric Rolls enjoys all mountain freeride/freestyle riding with a hybrid-camber board. He teaches snowboarding at Canyons in Park City, Utah, and is a head coach for Team Utah-Brighton. Eric is also a member of the AASI Snowboard Team.*

*Lane Clegg is the coach of the AASI Snowboard Team.*

By the way, the choices we list here are the consensus of two people through their experiences riding dozens of demo boards, teaching, coaching, and working closely with manufacturers. Don't waste time arguing; go ride!



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9:00 AM Search for freshies.

2:20 PM Stomp the rainbow rail.

2:54 PM Drop again.  
And again.

10:30 AM Call tricks.  
Head to the park.

2:42 PM Launch a  
backside 540.

4:21 PM Cheers.

8:17 AM Wake up  
and caffeinate.

3:45 PM Pull pine needles  
from goggle strap. Ride to  
catch last chair.



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coaches. Register now, while there's still time left, at [TheSnowPros.org](http://TheSnowPros.org)

# With Snowboard Movement Analysis, There Is No Black and White

By **CODY MALLORY**

**I**n snowboarding there are very few things that fit into nice and neat categories; there is going to be an exception to every “rule.” ¶ Dave Lynch made this clear in his article “Embrace Differences to Help Style Thrive,” which appeared in the winter 2010 issue of *32 Degrees*. “Snowboarding isn’t math,” he wrote.

“More often than not, there’s more than one answer—and many shades of gray.” This is especially true when we start discussing the difference between carved turns, skidded turns, and their dynamic and basic variations. The extremes of each are easily identified regardless of an instructor’s experience, but the subtle nuances that differentiate one from another can seem dizzying.

I’ve seen eyes glaze over when this topic is covered. I’ve also sat through several video analysis sessions where instructors/examiners have debated whether or not a turn was basic, dynamic, carved, skidded, or scarved (that is, a combo platter of skidded and carved). If we can’t identify the characteristics that distinguish turn shape within a controlled video analysis session—where we’re able to rewind, slow down, and pause the video—how can we accurately make these calls out on the hill? Perhaps it is time to question how we perform movement analysis, and the way we categorize the different turns that we see.

I realized this a while back when I was working with a group of new-

hire instructors. I had introduced the concept of skidded and carved turns, with dynamic and basic variations. Upon watching their eyes and listening to their responses, it became evident they didn’t completely grasp the concepts I was presenting. Since breaking these concepts into definitive categories



**Every rider has his or her own set of movement patterns**

Cesar Piroto



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did not work for me or the group of instructors I was training, I asked myself “is it the teaching that is unsound or the teacher?” I went back to the drawing board to develop a more tangible analysis tool, with a different approach to identifying dynamic versus basic turns and skidded versus carved turns.

What I discovered is that there are as many movement patterns as there are riders, and we need to consider that every rider has his or her own set of movement patterns. While they may resemble that of other snowboarders, these movements are unique to the rider and represent the rider’s snowboarding “fingerprint.” These unique movements, coupled with differences in equipment and setups, blur the lines of separation between various turn types and dynamism—and the result is an artistic, individualized interpretation of what snowboarding should look like.

**DYNAMIC VERSUS BASIC**

Whether a turn is dynamic or basic is largely determined by how the rider uses and blends flexion/extension and rotation. A rider performing basic turns will typically exhibit passive movements and primarily rely on flexion and extension to manipulate the snowboard. A rider performing basic turns also exhibits some or all of the following characteristics: minimal or, at times, huge and wild (but generally ineffective) body movement while turning the snowboard, and a center of mass that follows the same general path as the snowboard (just slightly to the inside of the turn).

Dynamic turns are at the other end of the spectrum. When watching a rider who is riding dynamically you’ll see more active/aggressive movements that blend flexion, extension, and rotation throughout the turn. The rider’s center of mass travels a different path than the snowboard. For example, when riding dynamically a rider will anticipate a new turn by driving the knees and hips in the direction of the new turn while the board is still completing the old turn.

**TABLE 1**

**REFERENCE ALIGNMENTS**

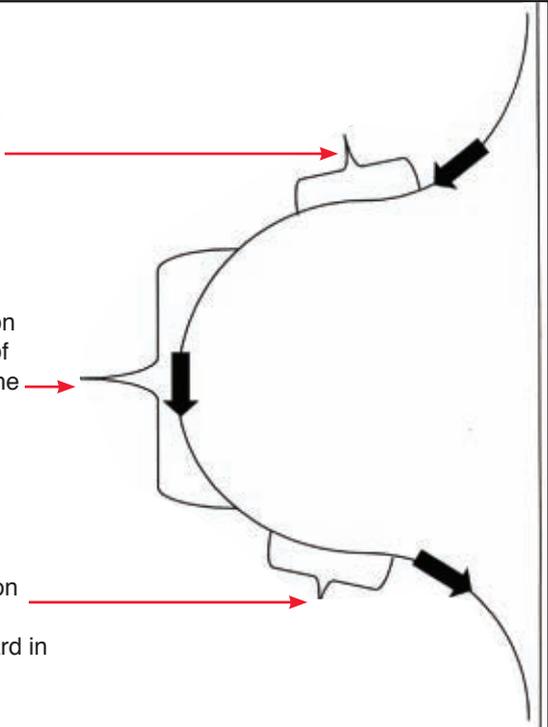
- 1. Shoulders, hips, and knees are perpendicular to the front foot.**
- 2. Shoulders and hips are aligned with the terrain in which the board is traveling.**
- 3. Center of mass is aligned between the feet and over the board or working edge.**

**FIGURE 1**

At the initiation of the turn, the rider’s center of mass moves toward the apex of the turn.

Throughout the shaping portion of the turn, the rider’s center of mass travels to the inside of the path of the snowboard.

At the completion of the turn, the rider will make either flexion or extension movements to decrease pressure on the board in preparation for the new turn.



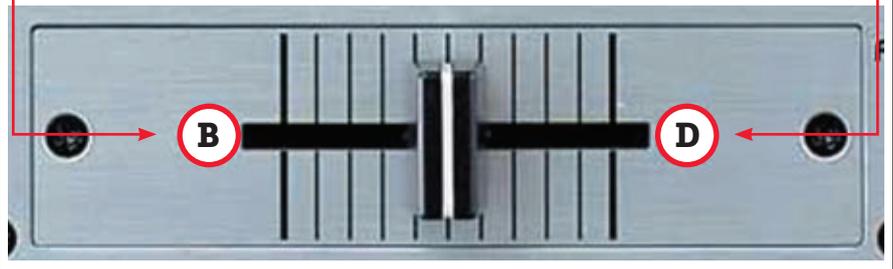
**FIGURE 2**

**BASIC**

- ◆ Rotation is nearly nonexistent
- ◆ Minimal (or wild and ineffective) body movement in a turn
- ◆ Minimal variance in the path of the center of mass and snowboard
- ◆ Reference alignments are maintained

**DYNAMIC**

- ◆ Increased blend of flexion/extension and rotation
- ◆ Greater variance in the path of the center of mass and snowboard
- ◆ Anticipation of the new turn
- ◆ Riding in and out of the reference alignments



By blending movements and increasing range of motion, the rider is able to apply or decrease pressure, effect edge angle, and/or pivot the snowboard throughout the turn. This active use of the board performance concepts allows the rider to actively manipulate the snowboard and, in most cases, increase its performance. Another way to look at it is that basic riding relies mostly on a balanced position that allows the *board* to shape the turn, whereas dynamic riding involves movements that manipulate the board through edging, pressure, and rotation so the *rider* controls the shape of the turn.

At these extremes, it's easy to tell the difference between dynamic and basic turns. When observing intermediate to advanced riders it's also a good idea to watch the rider's reference alignments (table 1). If the reference alignments are maintained throughout the turn it is basic; if the rider moves in and out of the reference alignments throughout the turn consider it dynamic (fig. 1).

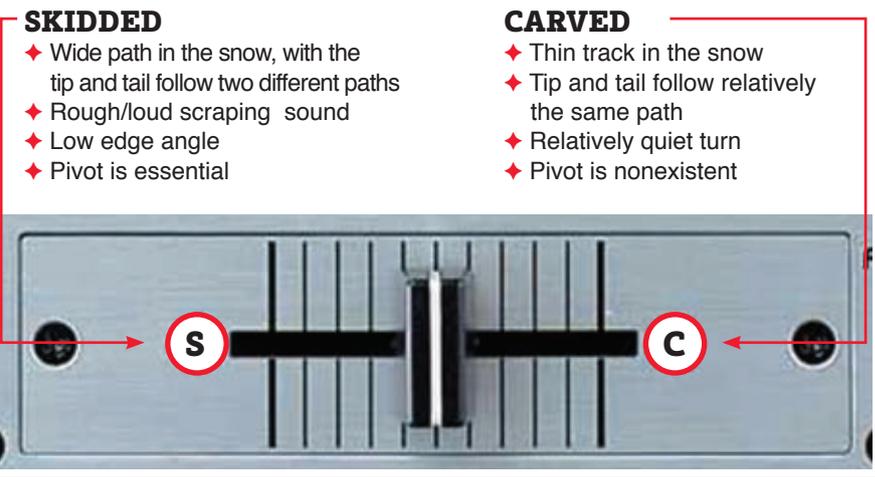
That said, most riders don't ride at either extreme, which makes categorizing performance an inexact science. At what point does a basic turn become dynamic? I'm with Lynch: "Snowboarding isn't math" and there is no equation or an exact amount of movement that determines the boundary between basic and dynamic turns. In any run, a rider flows back and forth, in and out of the distinguishing elements. With the dividing line blurred, you can look at the difference between basic and dynamic turns by using a sliding scale—a tuner, so-to-speak, rather than a switch (fig. 2).

### CARVED, SKIDDED, AND SCARVED

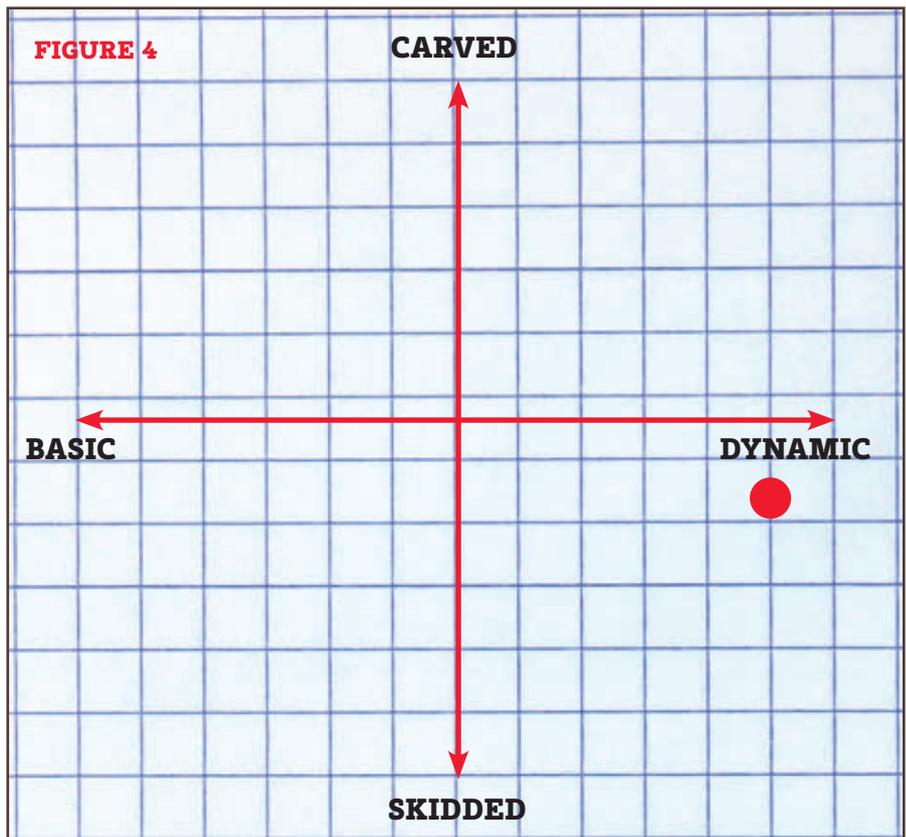
You can use the same sliding-scale concept when looking at the difference between skidded and carved turns (fig. 3). At one end of the spectrum is the skidded turn, the common characteristics of which are: wide path in the snow, low edge angle, a loud scraping sound (imagine saying "shhhh"), reliance on pivoting, and simultaneous sliding and slipping.

On the opposite end of the spectrum is the carved turn: tip and tail traveling through the same point, a quieter turn (like inhaling an "ffff"), and a lack of pivot. What results is a linear graph with the end points representing the

**FIGURE 3**



**FIGURE 4**



Plot a turn on graph in which the X axis represents a sliding scale of basic to dynamic turns and the Y axis represents a sliding scale of skidded to carved turns. When describing the turn, think VAK:

**Visual** – Describe what you see in the snow, rider, and board.

**Auditory** – Describe the sound the board makes during the turn.

**Kinesthetic** – Describe what the rider is probably feeling throughout the turn.

extremes. A rider performing a sideslip would be at one end of the spectrum, while a rider competing in a boardercross event would be at the other. As with the dynamic and basic turns, riders mainly ride somewhere between the two extremes with variance in the degrees of tilt and pivot determined by where

the turn is plotted on the line.

Scarved turns make up the gray area, or the space between the two ends of the spectrum. Again, scarved describes a turn that is skidded in one portion and carved in another. A rider can be in a carved turn initially, but then fade into a skid as the turn nears completion.

**PUTTING IT ALL TOGETHER**

Combine the two sliding scales into an X-Y axis graph and you have a literal, tangible tool. In other words, when assessing a rider's characteristics draw intersecting X and Y axes in your ever-accessible notepad and plot what you see (fig. 4).

Next, test your assessment by putting what you see and sense into words—so that others can relate to the information. This, of course, is the whole purpose of using the analysis tool.

By the way, it makes sense to tailor your assessment to your student's learning preference, be it visual, auditory, or kinesthetic. For the turn plotted in figure 4, the narrative might go something like this for a visual learner: "I plotted you right here for a couple of reasons. First, if we look back up the hill at your track, you can see that it is fairly narrow. This clue tells us

that while your turns were skidded they lacked pivot and steering, which is not necessarily a bad thing. Another reason I plotted you here is because your turns were very dynamic. I could really see you driving your knees and hips in the direction of the new turn. You were also demonstrating a fairly large range of motion in both your hips and knees." (I recommend mimicking the student's movements while describing them.)

To get the most out of this movement analysis tool you'll, of course, want to assess more than just a single turn. Try to establish a sense of the rider's movement mix by continuing to plot characteristics as he or she performs a variety of turns.

Imagine how your own turns would show up on the graph as you negotiate your favorite run. Most likely you would see a tight, but shotgun pattern within a region of the axis, right? However, as the terrain and/or snow conditions change, so too do goals and tactics. By plotting your students on different

terrain and in different conditions, you can get a feel for their adaptability and versatility. If that shotgun pattern remains in the same spot regardless of the terrain and conditions it could be an indication of underdeveloped skills.

As your critical eye develops and your descriptions evolve from absolutes (like dynamic carve) to "mostlys" (largely, primarily, fundamentally; you pick the term), your axis can be more virtual—remaining in your mind's eye—provided you are able to verbalize your mental notes. When you eliminate the need for finite, polar descriptors, and begin employing terms of relativity—words such as appropriate, effective, efficient—you allow for the nuances that individuals bring to the sport. You downplay the math, and accentuate the artistry. 32°

*Cody Mallory is an instructor and lead snowboard trainer at Michigan's Crystal Mountain Resort and Spa. He is also a member of the education staff in PSIA-AASI's Central Division.*



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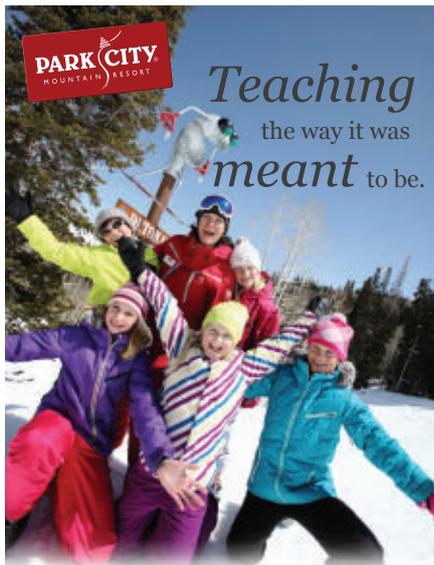
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## LAST CHAIR

### THROUGH THE LENS

The wait before actually sliding through snow afflicts all ages. Henry Roberts boots up with the help of dad, Ben, at Echo Mountain.

Photo by Jess Evett



## THE WAITING GAME

Remember reading *Waiting For Godot* back in school? Here's a bit brighter title that could be a big seller as crimson leaves and temperatures drop: *Waiting For Good Snow*. What? You can do better? Likely so, and that's exactly why you should share your experiences that happen before, during, and after cavorting on snow. Send submissions to [32Degrees@thesnowpros.org](mailto:32Degrees@thesnowpros.org), with the subject line "Last Chair." If your contribution makes it onto this page you'll win a \$25 gift certificate to the PSIA-AASI Accessories Catalog.

## BAKING AND BOOTS

Andrew Collin, an Alpine III and Children's Specialist 1 instructor who lives in Sandy, Oregon, sent us a note about baking and ski equipment, along with proof that this isn't a bogus mashup. "My wife wanted a bread pan with a spring lock—and a ski buckle was the first thing that I thought of," Collin said. "That was the inspiration. And Sandy is a small place and everyone here has a sort of a farmer mentality . . . it's just that we would rather make it than buy it." Collin instructs at Mount Hood, and he'll receive



a \$25 gift certificate for the brand-spanking new 2011-12 PSIA-AASI *Accessories Catalog*.

## INQUIRING MINDS

In the Spring 2011 issue we asked readers to share their most successful step for helping clients adapt to rocker technology. Steve Frink, a PSIA-AASI certified Snowboard III, Alpine II, and Telemark I instructor at Stevens Pass, Washington, has this to say: "Every rocker/camber variation you get on will have a different ride. Know how each ride feels (action-reaction) so you can translate your clients' style (movements) into the language of their rocker board. The basics of snowboarding are still the same so you just need to explore their range of motion and discuss the differences they feel to get them comfortable in their new "footprint." Then exploit the design advantages to show them why they sprung for the new technology."

Steve, thanks for the insights. For our next edition, our "Inquiring Minds" question is:

**Exams can be stressful. What is your personal strategy for keeping your anxiety in check?**

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## Doug Pierini

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