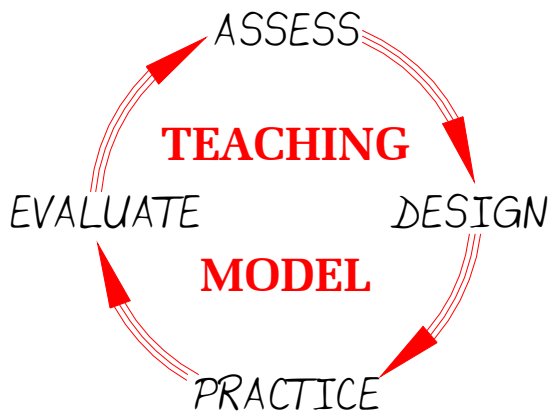


Skiing Focus - How?

The “How” is the methodology for coaching skiing; i.e. what you do with your time with your clients, how you communicate and coach skiing. The framework of this time spent coaching is your teaching model.



Assessment is always the first order. Through talking and skiing you assess both your clients desires and needs and set goals. For personal development as ski instructors, setting some personal skiing goals is critical.

A useful technique for this assessment is, after the initial meet and greet time, the warm-up ski run. If there is a group, a line rotation is effective. Here everyone has a chance to view each other. Ask the group to pick out of someone else's skiing, something that they would like to add to their own. This is the beginning of goal setting.

Of course, what to do next after the assessment will depend on the group, however, following are some basic guidelines

as well as specific drills and techniques that will help many people.

Note: A more detailed discussion of the skiing skills and the physics behind the skills is found in other articles, “Skiing Focus - What?” and “Skiing Focus - Why?”. A discussion of us human beings is found in “Skiing Focus - Who?”.

Medium Radius Turns: A good starting point is always with stance and balance. Starting out with medium radius turns, think about where you stand, your stance and balance. Where on your foot is the focus of your body weight while you are skiing? Physically, when skiing, the shin bone transfers the weight to the foot just on the forward edge of the heel, back edge of the arch. If you look at a skeleton, the heel bone actually sticks out quite a bit past your shin bone. We used to teach people to stand on the balls of their feet thinking that this would get them more forward. However, standing on the balls of your feet, prevents you from being able to flex your ankle. Try it. If you are on the balls of your feet, when you flex your knees, you will have a tendency to drop your bum to stay in balance.

Continuing skiing some medium radius turns, staying centered and now focussing on total motion - always moving. Total motion, always moving, is critical for dynamic balance. Start to emphasize paying attention to the sensations, to “feeling” the snow through the skis.

Focus: Total motion - always moving, never static, flexing/extending, bending/unbending, steering, edging, lateral weight transfer (up one leg and down the other). Feel!

Sideslipping exercises will always improve everyone's balance. It is impossible to sideslip when out of balance. Sideslipping is also a great early season exercise for all ages, especially senior skiers. Low impact, two-footed and safe!

Sideslip down the hill, forward diagonally, backward diagonally, falling leafs and pivot slips. In addition to balance, sideslipping helps with edging skills. When you add in pivot slips, then you are also working on steering skills. I think of these steering flat skis skills as the “soft” skills. With the advent of the shaped skis, we have raised a whole generation who is somewhat lacking in these soft skills - edge-pressure is how they learned to ski. During all these drills, focus on total motion as well as alignment/balance/stance.

Focus: A balanced stance - stacking the bones with the least amount of muscular energy. Feel the forces!

Diagonal forward sideslip/turn entry (Commitment exercise): On blue terrain, start with a diagonal side slip, weight on uphill ski. Put a little bit of pressure on the big toe/arch which causes ski to move towards the fall-line. As ski enters fall line, edge the ski progressively to an outside ski christie. In sideslip, extend as you press on the big toe/arch. As you roll forward, swing your pole, touching it at the top of your extension.

Show flexion as you edge to make the outside ski christie. Your upper body is stabilized, zipper aimed at apex of turn, shoulders relatively level, elbows in front of torso, hands wider than elbows.

This is an excellent drill for teaching an early lateral, foot-to-foot weight transfer. After a bit of practice on one foot, take this exercise to being two-footed, but still with the early weight transfer. The lateral weight distribution between the two feet is another one of those “always”. All the time, throughout the whole turn, you are always transferring weight from one foot to the other, progressively. This is not usually a 100% transfer foot to foot, but only partially. Sometimes it only varies from 45% to 55% and back, other times it's 60%/40% or 70%/30% or 80%/20% etc. Regardless of the extent of the weight distribution between the two feet, there is always a “functional” tension in your legs working this weight distribution and transfer between your feet - PJ always calls it “up one leg and down the other”.

The timing of lateral weight transfer is critical for efficient skiing. Typically, you will find that most people wait until the apex, the fall line, to have more weight on their outside ski. For efficient pressure management, this is too late. Ideally, we want to be about 50:50 at edge change, way before the apex. To do this, you should be starting to move to the new outside ski (lateral weight transfer) immediately after the apex of the turn. This is even what Ted Ligety and others on the U.S. Team do and it also helps even seniors turn much more easily, especially in the bumps. (You can use a similar “Commitment Exercise” in the bumps that will make skiing the bumps much easier!)

It is important to note that in lateral weight transfer, the alignment of the hips is very important, more so, as the speed and dynamics of the turn increase. Lateral weight transfer with “low” forces is rather simple as you can simply take the weight off one foot, automatically transferring it to the other foot. However, try that at 40 m.p.h. or even more and it's a different story. The greater the forces are, the more critical it is to be stacked in your bones and that means how you are aligning your hips over your skis so you *can* transfer the pressure to your new outside foot!

Focus: Early weight transfer for efficient skiing; i.e. 50:50 at edge change, outside ski always dominant, progressive and continual transfer of weight from ski to ski. “Feel” the snow, “feel” the forces!

Turn Shape: Turn shape, where you go, makes a tremendous difference in your ability to ski efficiently. It is indeed very difficult for someone making more z-shaped turns to get either their feet out from under them or get early edge at turn entry. So, after working on stance, balance and total motion, turn shape is a great way to keep progressing with an early weight transfer, direction of extension, and coordinating steering with more edge earlier in the turn.

One of the best exercises for turn shape is the older French turn, the virage aval. This is a pre-turn up the hill just prior to turning down the hill. It basically works out to be a very rounded, completed finish of the previous arc. Virage avals, especially when performed on easy blue terrain, are great for leading people into the feeling of moving to the inside with their body while their skis scribe a bigger arc. This gets their feet out from under them and out to the side which allows them to develop a greater edge angle earlier in the turn before the fall line.

A concept that is very helpful here is that of the two “you's”, the upper body and the lower body. The upper body and the lower body take different lines and start moving into the new turn at different times. The lower body's line is outside the upper body's line. The upper body starts to move the new turn while the skis and lower body are still finishing the previous turn. The upper body starts moving to the new turn shortly after the apex, while the skis do not begin the new turn until edge change.

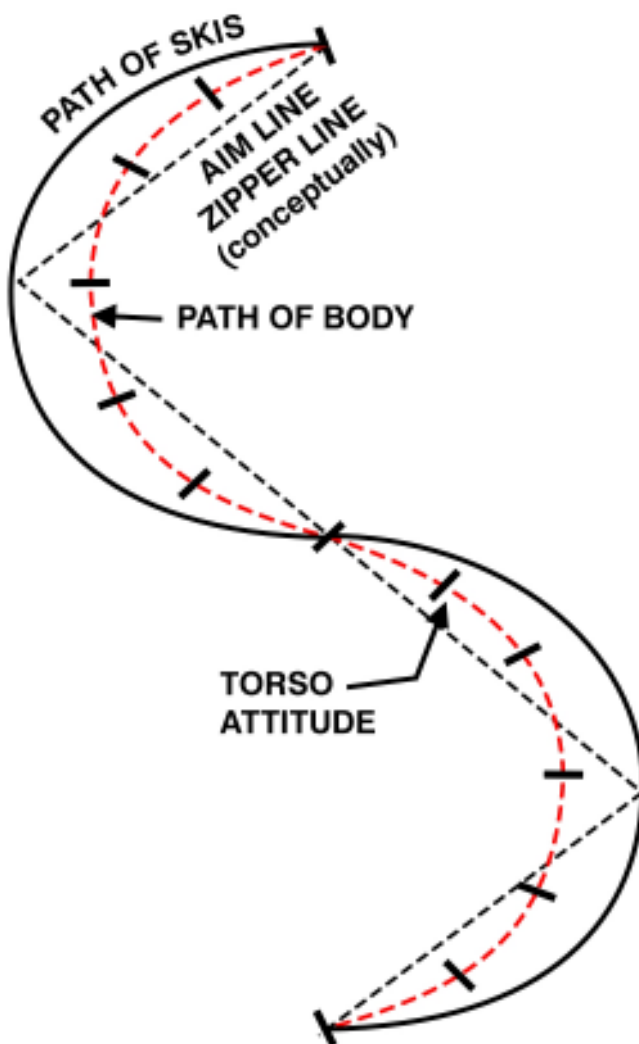
(As noted in a previous article, the hips are part of the lower body because the thighs originate in the hips and even though the hip socket is a ball joint, the hips need to be oriented or aligned in coordination with the desired direction the thighs are moving; i.e. the hips can limit or enhance the way the thighs can move and work.)



Focus: The two “you’s” - the upper body and the lower body. The upper body takes an inside line while the lower body takes an outside line. They each move into the new turn at different times. Feel the snow, feel the forces!

Aiming, direction of travel: Of course, there are many different directions you coaching can take and it will ultimately be dependent on the client: i.e. student centered. We will here continue to give you some basic guidelines and ideas that we have found are applicable in many cases.

While still concentrating on making ROUND turns, with the feet out and the body in, next it’s helpful to begin to work on the direction of movement of the body throughout the turn.



Upper/Lower Body Coordination and Discipline
Guide and direct your upper body, just like you guide and direct your skis. Aim the zipper of your jacket at where you are going next.

For years, PJ has taught to face the zipper line of your jacket towards where you are going next. Please note that is not “down-the-hill” unless you are making short turns!

Simply aiming your zipper line where you are next will allow you to develop the appropriate “counter” for the turn you are making. I’ve seen so many people get hung up on counter and simply confuse both themselves and those around them. Aim where you are going next and don’t worry too much more about it. Feel your edges in the snow and pay more attention to what your skis are doing with the two you’s!

Focus: Aim the zipper line where you are going next. Feel the snow, feel the forces!

Thigh over, shin drive - direction: Another concept that helps develop movements in the right direction at the right time for efficient skiing is the thought “thigh over” at the top of the turn and “shin drive” at the bottom of a turn. These are more PJ’isms.

Thigh over means that with edge change, as you are entering the turn, you move your thighs over towards the apex of the new turn which will move your body inside the turn as you extend.

After the apex, while flexing to reduce the pressure, you are driving your shins into the hill as you edge to hold the arc.

Focus: Thigh over/shin drive. Feel it!

Transition/edge change: Transitions vary according to turn shape, size, speed, terrain and snow conditions. You can be extending at edge change or you can be flexing at edge change or you can be retracting at edge change. It helps to create versatility if you practice all types. Extending at edge change is very familiar for most people. However, extension can create both unweighting as well as weighting. A weighted extension is the more modern variety, very similar to a skating move and is used to propel us more down the hill, increasing the pressure on our skis at the top of the turn. An unweighted extension is the classical variety, the float, where you “push off” just before edge change.

There is often confusion between flexing and retracting at edge change. For the casual observer, the body looks flexed in both. There is also the difference of whether the flexing is a down unweighting through edge change or a down weighting just prior to edge change or a retraction through the edge change.

Many older skiers often are familiar with down unweighting flexing at edge change, the old avalment, sinking transition. Pivot slips with down unweighting are a good way to get a feel for this then, taking them to rounded, skidded turns with the same down upweighting.

A flexing down weighting move is also a very classical movement pattern with the edge set just before the edge change. This is followed by the up unweighting as you change edges, and so it will sometimes look like an extension and other times as flexion depending on exactly when you look at it!

The modern “flexing” through edge change is actually a retraction unweighting where you are pulling your skis towards your body. It is used in modern reaching gliding turns such as slalom turns. You reach your feet out to one side, pull them toward you and then reach out to the other side, all the while riding the edges. This is very fun and feels very very cool!

A great exercise for working with this retraction move as well as the lateral transfer and getting your feet out to the side are high tuck turns. For the high tuck turn, start on gentle terrain. Pick a target directly down the fall line. Head straight down the hill at the target in a high tuck. As you start off, begin to simply pump your legs up and down while going straight. As you gain speed, continue pumping, but now also start reaching your feet out side to side riding the side cut of the skis, allowing the side cut to make the skis turn, and retracting as your skis pass under you. See how far out you can reach your feet as you snake them around on their edges.

Subsequently, take these tuck turns to short turns and continue to use retraction as the skis come under you. You actively pull and reach your feet to manage the pressure on your skis and keep them cutting.

Another follow-up is to partner up and synchronize ski short turns, but with the person behind having to put their feet just outside the tracks of the person in front. Also great fun and great and creating more versatility in your skiing!

Focus: Retraction for pressure control, especially in short turns. Feel it!

Being Smooth: Often you see a very talented skier and they are smooth. Learning to be smooth is the result of efficiently blending the skiing skills. Edge is blended with steering for the “blue angel effect”. Pressure control is effective throughout the turn by the direction, the duration, the intensity, the accuracy and the timing, of all the movements. Dynamic balance is maintained throughout the turn with a stance that only has functional tension, but is otherwise relaxed.

One of the most critical aspects of being smooth is controlling the pressure produced by the turn forces after the apex of the turn. This is an area where many of the older, more classical skiers have difficulty grasping the concept in modern skiing of flexing to DECREASE pressure at the bottom of the turn. It is helpful to think of flexing at the bottom of a turn more of a “cushioning” effect.

In pressure control, you are continually timing and directing your movements to try and even out the pressure of the turn forces as much as possible.

Progressive, continual total motion is another important concept. You should always be flexing or extending, bending or unbending, always moving, in concert with the turn forces. One area that sometimes needs smoothing out is the transition.

This is where the tactic of regarding the turn as going from apex to apex really helps smooth out the transitions. “Mind” games like that can greatly effect your skiing. When you think “apex to apex”, the transition is the middle swooping part of an “S” and you are not thinking about starting and stopping a turn. It is easiest to get this mindset of apex to apex starting with short, retraction turns, then take them larger and larger, always “feeling” your skis on the snow and the turn forces!

Focus: A turn goes apex to apex with total motion evening out the pressure of the turn forces. Feel the force and go with it!

Etc. Etc. Etc.: There are of course thousands of more exercises such as “a thousand steps” on gentle terrain is useful for learning to move to the inside. This has just been a brief smattering addressing the most common needs of many skiers.

The key to efficient skiing is in the blending of the skills, stacking the bones and using the least muscles possible for the desired effect. Go out and ski and feel the snow and the forces - smile and grit your teeth!



Point 1

Tall, stacked, moving with skis



Point 2 Apex - turn pressure, edge angles increasing.



Point 3

Shin drive, higher edge angles, begin to gradually pressure a bit more "new" outside foot.



Point 4

FINISHIATION/TRANSITION

Begin to swing pole and begin to move thigh over fore/agonally.



Point 5

50/50, edge change, pole touch. (Flat ski for 1 millisecond.)



Point 1



Point 2



Point 3

Point 4

Point 5



FINISHIATION/TRANSITION