Outline - Basic Training for Senior Clinicians

I Indoor Workshop

A. Who Senior Is

1. A diverse group!
2. Importance of people, social aspect as well as learning
3. Great bull shit detectors - need to be competent, as well as confident

B. Risk Management

1. The mountain environment - terrain, conditions, weather
2. The guest:
Equipment (see below)
Physical condition - How athletic? Adaptive needs? Artificial parts?
Current health concerns/medications? Previous injuries? Fatigued?
Hydration and food?
Psychological Condition - Motive for lesson and skiing/boarding?
Fears or anxiety? Goals?

C. People Skills

Who we are: CAWPS, Maslow Hierarchy, brain dominance, VAK-E learning styles, stages of learning, teaching styles

D. Teaching Skills

Observation, Communication, Analytical, Organizational, Performing

E. Understanding Basic Skills Concept/Physics/Body Mechanics

1. Gravity and friction
2. Balance, rotary/steering, edging, pressure control
3. Direction, Accuracy, Timing, Intensity, Duration

F. Equipment for Seniors

1. Boots that fit and can be flexed with a more upright cuff
2. Short, moderate width skis, especially short women's skis, properly tuned (not aggressive tune)
3. Long enough poles
4. Light lenses in goggles
5. Helmets that allow for hearing

G. Ski Techniques

1. Low Impact
2. Two Footed
3. Modern timing of movement patterns/early weight transfer
4. Stack the bones, loose, feel the forces and go with them

H. Tactical Considerations

1. Terrain, quiet, stretch yet enjoyable
2. Pacing, energy management, oscillation
3. Full engagement, flow, adaptation, play

II On-Snow Workshop - Do It/Feel It/Be It

Communicate in sensory language, body enabling language, what you feel

A. Stance/Balancing - side slip drills - stackitude

Sensory focus: Ski on your foot sole
Loose so can feel forces and go with them

B. Early weight transfer - turn mechanics - finishiation

Modern turn dynamics as opposed to classic turn dynamics
Sensory focus: Inside of outside foot
Sensory focus: Inside knee
Sensory focus: Outside hip

C. Turn shape - virage aval - foragonal - stacking bones

Sensory focus: Continual movement, even out pressure, why flexing

D. Apply to bumps and all conditions

E. Fun drills

1. Developing foragonal modern movements, moving into the turn with the forces
Pair up - short/large turns
Pair up - one foot outside track
2. Synchronize

F. "Rescue" techniques

Stem turn
Christiana Leger

Core Teaching Competencies List

- Values and demonstrates respect
- Listens well (not just to what is being said, but also what is emoted)
- Reads students through the intangibles of tone of voice, body language, listening beyond spoken word.
- Empathizes well.
- Able to connect using non-verbal communication
- Able to develop trust (listen and relate and connect) with both guests and peers
- Exercises sound diagnostic skills = mechanics, emotional state, understanding needs and motivations
- Deals with the full reality of the student.
- Exudes self- confidence without arrogance.
- Explains things in brief and easy to understand language, both verbally and non-verbally..
- Shows skillful ability to weave social- with instructional communication.
- Shows a working understanding of building and working lesson plans.
- Demonstrates skilled goal setting/goal getting coaching.
- Customizes lessons according to gender, learning style, energy, culture.
- Offers diverse methodologies and solutions fitting diverse learning styles.
- Uses terrain, snow conditions and other environment 'aids' such as quiet places, in support of desired goal achievement.
- Attends to mental, physical and emotional development tracks in coordinated manner.
- Uses sound exercise lines to achieve desired goals.
- Able to promote challenging but supportive learning environment.
- Uses experiential learning/learning by doing (create experience-reflect-generalize-apply-experience)
- Able to enjoy, play, and use humor.
- Understands how to motivate students.
- Able to encourage
- Creates a relaxed interpersonal relationship and collaborative environment.
- Creates and manages productive, collaborative group dynamics.
- Balances 'ask' – 'tell' in the instructional process.
- Manages 'stretch'- task difficulty well.
- Manages pace of lesson.
- Produces and manages positive energy (Self and other)
- Shows working understanding of 'oscillation'.
- Knows how to bring about FLOW conditions in the instructional process.
- Productive feedback - share what doing "right" and next goal, not focus on what is "wrong"
- Is able to move from instructor- to self- provided feedback.
- Is aware of her/his own emotional 'wake'.
- Readily can assess his/her own learning at any time about self and others.
- Exercises real time self-observation while teaching.
- Sound conflict management - positively, with confidence
- Generates return business through the strength of interpersonal skills.

Geezer Senior Focus - Who?

All “good” coaching is always student centered; i.e. the student is the focal point. Therefore, for effective coaching, it is paramount to understand the nature of the student.

In addition, for a coach to focus on the student, the coach needs to also understand himself. Hence, the importance of sociology and psychology in teaching skiing...

Gaze out across the snowy mountain tops. Watch the squirrel scurry across the snow. Inhale the scent of the pine trees. Feel the breeze on your cheeks. Look across at your friend, smiling. Inside the lodge, sip your hot tea while you listen to some uplifting music, with your feet up warming by the fire. All this nourishes our hearts, our spirits. We are spiritual beings - at least this is what I am here defining as that part of your spiritual nature.

It is important to recognize and give precedence to your spiritual being especially when coaching seniors. As we geezers become more geezered, our priorities in life shift to people, to relationships, to other living beings. People are more important than things, for most seniors. (At least for us older senior skiers!)

In coaching seniors, cherish and encourage relationships, the wealth of their histories as well as the present beauty, awe and power of the mountains and weather. Coaching seniors is more being “with” them, developing the relationship, not so much as being the “coach”, but as a friend, another being.

Number one in importance with seniors, as with anyone, is the heart, the spirit. People are precious.

However, we are more complicated than a simple spirit - we also have gray/cray processors in our heads, emotions to motivate or freeze us, and free wills! PSIA has partially recognized this in its promotion of the C.A.P. model. The **c**ognitive domain is that of the mind. The **a**ffective domain is that of the emotions, the feelings. The **p**hysical domain is that of our aging bodies that are beginning to wear out...

In our geezer model, the cognitive and affective domains are what I group together as part of our soul, however, added to the cognitive and affective aspects of our being, is our free will. We are spirit beings who have souls and live in bodies. (Some of you might disagree, but please humor me here for the purposes of developing an effective geezer “who” coaching model.)

New learning can occur in all areas of our being, however, in seniors, the affective domain is especially important in “allowing” learning in any area. We learn more quickly and can even be “tricked” into learning when there is some positive emotional content also present. However, before you can set the emotional stage, the physiological needs must first be addressed. Maslow’s hierarchy is indeed valid. So, hold that thought about the importance of the affective realm of our being, and let’s first look at our wonderful bodies, our physical realm.

In seniors, there is a very diverse range of physical aptitude and health. Not only do our bodies age at various rates, but the longer we live, the more opportunities we have had for physical injury. Be a bit more careful with those new knees and hips!

When skiing with us geezers, we need to also be more cognizant of sight issues. Appropriate eye wear, light enough lenses are very important. Flat light conditions need to be avoided when possible or at least treated with great care and respect! SAFETY, fun and learning!

Many of us are also beginning to not have as acute hearing as we used to. We might not be as aware of approaching disaster from behind or the sides. Trying to address the group in noisy locations such as near lifts or operating snow guns is also not very effective.

Skin protection from the sun, wind and snow is also critical, as is proper clothing to keep warm.

Although some may feel as strong as ever, there are some smaller muscle groups that are not quite the same as they used to be. Remembering to breath will help with all types of strength issues.

Never forget proper nourishment and never pass a restroom!

With those physiological needs addressed, next the needs of safety and security need to be addressed (Maslow still). Coaching some "new" techniques and paying attention to conditions and terrain selection, or at least sharing that as an objective of the coaching session, will at least begin to help satisfy the safety needs.

(More suggestions and techniques that will help to satisfy the "safety" needs, are addressed in other focus articles on the "what", geezer skiing techniques.)

After the physical and safety "needs", affective domain "needs" come next in teaching most age groups, but especially the senior geezer group. Seniors learn so much more quickly with emotional "hooks". PSIA in the 1960's came out with "Safety, fun and learning." Notice the "fun" before the "learning". Fun promotes learning, but also do **trust** and **respect**, **appreciating** and **caring**. Being "inclusive", being part of the "group", belonging is also part of this domain.

> *Side Note: I like to equate parts of the physical body to parts of the soul. In the body we have the bones that give the body the structure; then there are the muscles that move the bones; and, simply speaking, there is the blood that carries the life to the muscles and bones. (Of course, there are the other physical systems that are of importance to life, however, for illustrative purposes here, it's bones, muscles and blood.)*
>
> *In the soul we have the mind, the emotions and the will. The mind, or cognitive domain, serves a function similar to the bones. Our logical brain creates a framework for understanding and working with the real world around us - the bones of the soul. Our emotions, or affective domain, motivates us - the muscles of the soul. Our will, our judgements and choices, give life to the soul - the blood of the soul.*

Back to the affective domain, the emotional realm - As a coach, it is important to encourage and nurture the group and individuals affective realm. Doing so will set the stage for learning, so that both cognitive as well as physical learning may occur.

The **cognitive** domain in seniors is very very well developed. We've had many years to develop our own framework of understanding of this world. We have learned to trust and rely on our framework. Twenty year olds are still "discovering" and learning with very malleable, and developing frameworks. Geezers are wise with solid and mature frameworks - or at least we think we are!

This is where Bloom's hierarchy applies: 1. knowledge; 2. comprehension; 3. application; 4. analysis; 5. synthesis; and 6. evaluation - then add in 7. creativity. Geezers have a developed framework of learning, that they will use to measure/evaluate any new information you may give them. To younger coaches, it may seem that many seniors are "slow" at processing new information, however, this is often only their perception of the seniors. The seniors are absorbing, filtering, comparing, and evaluating that "new" information much more in depth than their "younger" coach is often even capable understanding... go geezers!

Blooms top of the hierarchy, evaluation, also leads us to our free will, a part of our soul. (However, our will is as much part of the soul as the spirit.) Seniors are very adept in the area of evaluation and choice and quite a bit more stubborn than youth. For our purposes here, suffice it to say that besides the mind and the emotions, we have a will.

In coaching seniors, it is necessary to operate in the cognitive realm because, the coaching seniors need is often updating their "dated" ski techniques. This means replacing their "old" knowledge and understanding of skiing with our "modern" ski techniques. Only when the "new" understanding is embraced, can the seniors begin to be able to apply it, to make their own skiing easier and more fun.

When we were young, with strong, indestructible bodies, we would experiment and dive headlong into "new" information and "learning". However, as geezers, we need to "know" in advance that something will be safe and helpful, before we will even consider "believing" it enough to "try"! Seniors need to have the trust and confidence in both their coach as well as the "what" our coach is showing us.

So, the coach needs to work with geezer spirits, geezer emotions, geezer knowledge, geezer wills, as well as geezer bodies!!

We are indeed an integrated composite of our spirits, our souls and our bodies. In order to actually promote learning, a workable understanding of who we are is paramount. Wholistic coaching is critical. Wholistic coaching is impossible without an understanding of us geezers.

In addition to understanding humans as spirits, souls and bodies, the effective coach must also be aware of the diversity and great variety of our population!

Humans come in many "flavors" as described by many other psychologists with a variety of "learning styles" (Kolb's "feeler/thinker/doer/watcher"; and McCarthy's "active/reflective, big picture/parts"), "functioning types" (Jung's "focus-extrovert/introvert, learn-data/intuitive, decide-logic/value, adapt and orient to world-perceiving/judging"), "multiple intelligences" (Gardner's "verbal/logical/spatial/kinesthetic/rhythmic/interpersonal/intrapersonal"). All the above "flavors" have been extensively described and dissected in other books.

Suffice it here to simply say that the coach needs to be aware that these various types/styles/flavors exist. This will help coaches remember patience and tolerance of differing peoples and not give up trying something "different" to help people have fun and maybe even learn!

In summary, here is the senior geezer hierarchy for who we are:

Spirit beings with free wills
Social beings
Feeling beings
Thinking beings
Physical beings

This is the "who" seniors are - in addition we seniors still like to improve our skiing, so our coaches had better know their "stuff"!

Geezer Senior Focus - What?

Seniors are a very discerning group of diverse individuals who are quite adept at recognizing balderdash. This means that whoever coaches seniors needs to be very knowledgeable and confident. The coach must thoroughly understand and be able to communicate the "what", the "why" and the "how" of skiing.

For our purposes here, these factors are defined as follows:

The "what" are the basic theories, theorems, and concepts of skiing.

The "why" are the physical laws that explain and support the "what".

The "how" are the various strategies, tactics and techniques; i.e. what we actually coach and instruct others to "do".

The "WHAT"

In 1975, under the leadership of Horst Abraham and the Alpine National Demonstration Team, PSIA introduced what is known as the Skills Concept which became the basis for the American Teaching System and was also accepted by other countries around the world. The skills concept is the foundation of the "what".

Skiing can be broken down into three main components, the snow, the skis and the body. The skills that play a roll in skiing are what the body does with the skis on the snow. The focus is on the "skis". There are four skills that describe what the body can do with and on the skis:

1. Balance - balancing yourself in a dynamically changing world as the skis slide over the snow

2. Steering - pointing or steering your skis in the direction you want them to go

3. Edging - controlling the angle your skis make with the snow

4. Pressure control - controlling the pressure or force exerted on your skis

The good news is that a skill, as defined by the American Heritage Dictionary, is a "proficiency, facility, or dexterity that is acquired or developed through training or experience". That means that even though we are all born with varying natural talents, we may all also develop skills and become better skiers through training and experience! The even better news is that we can continue to develop these skills as we age. Our reflexes might not be as quick, our recovery time may be a bit longer, but we can continue to become more and more skillful at skiing no matter how old we get (as long as we maintain our physical fitness). Ultimately, your ability as a skier is based on both your natural talent and your developed skills.

Skillful skiing is efficient skiing. Efficient skiing is using the minimum effort to manage or produce an effect; i.e. how you manage the interaction of the ski with the snow within the realm of the natural physical forces exerted on you and your skis. I think of this as being how I can stack my bones with the minimal muscular energy to maneuver my skis.

<u>Balance</u>

The first skill to develop is that of balance. Balancing is something that our brains are very adept at doing. We have been balancing ever since our infancy when we first started to roll over, sit and crawl. Our brains are quite good at it and we need to trust them. Watch a child stack blocks. The more adept they are at balancing one block on the other, the taller they can stack them. You balance in much the same way, you stack your bones in a basic stance. In skiing, we have a basic skiing stance. However, when considering your skiing "stance", it is important not allow the image of the "stance" to hinder our ability to move and stay in balance. Sometimes "stance" evokes a static image and causes people to "freeze" or hold a position. In skiing, we are always moving and hence our stance needs to be continually adjusting and changing in order

to maintain balance. There are a few characteristic though, of a good skiing stance. These include flexing/unflexing ankles, knees and hips, a rounded "small" of the back (see photos), hands forward and out to the side, and your head stacked on your torso and facing where you are going.

One key to good balance is to be always moving and never holding a position. In dynamic balance, feeling, timing and anticipation are critical. For anticipation, you need to "feel" the forces acting upon you, "see" what is coming next and "understand" the implications so that you can time your movements to maintain dynamic balance. So, for balance, remember, always move, never hold a position so that you can also feel the forces acting upon you and go with them to use them, move them, and move with them - be with the force!!!

Steering

Steering, also called rotary, is a simple concept. It is simply pointing your skis in various directions. While skiing, you are always steering your skis; i.e. you are always guiding and directing your skis. When you go straight, you steer them straight and when you turn, you steer them in an arc. Lately, in some skiing circles, there has been talk of steering angles, however, that is of little relevance and generally serves mainly to confuse the issue of pointing your skis in various directions. The skis may be steered such that the tail follows the tip, or they may steered with some skidding or sideways component.

Throughout the history of skiing, there have been a variety of method employed to steer the skis. These methods have changed and evolved along with the changes in equipment. Modern boots are stiff laterally and permit the ankle joint to flex forward and back in a limited range. The boot fit and boot to ski connection dictates how effective various steering methods are.

The ski may be steered by rotating the foot, which, due to the nature of the modern ski boot, is mainly accomplished by rotating the shin bone below the knee. This does not allow for a very great degree of motion, or for much power or force. However, mastering such steering essential in becoming proficient at steering skills. You are always guiding and directing your feet and, in most modern skiing, we want the steering to start with the feet.

The ski can also be steered by moving the thigh bone, i.e. rotating it in the hip socket and pointing the whole lower leg and knee in various directions. The muscles involved are quite a bit stronger and have a larger range of motion. However, this range of motion is limited by range of the hip/thigh joint. Therefore, to be more effective in using the thighs, it is also necessary to coordinate them with rotation of the pelvis. I think of my pelvis as being the "joystick" of the thighs. If I want to be able to move my thighs in a certain manner, I need to make sure that my pelvis is coordinated and lined up to allow me to maintain the strength in the thighs. This form of steering the skis is also in continual use at all times.

(In the past few years, there has been quite a lot of talk about moving the femur in the hip socket. However, remember, it is impossible to move the thigh *without* moving it in the hip socket since it is a ball and socket joint! The result of so much focus on moving the femurs in the hip sockets has been quite a few skiers becoming very "stiff" in that joint, trying to hold the pelvis and not allow it to move as needed for strength with the femurs. This shows up often as issues with "counter".)

Steering can also be accomplished by adding in the whole torso, head and arms into the rotational movement. In the past and now with the advent of rockered skis, this form of steering was/is more dominant. Generally speaking though, the most effective steering of the skis originates at boot level by turning the feet with the rest of the legs and body supporting the feet..

Thus, steering is accomplished by a coordinated blend of many body parts. The exact desired outcome will determine what body part is more dominant in controlling the steering of the skis.

Edging

Edging is quite a simple concept. View the ski with an axis running longitudinally and rotating the ski around this axis; i.e. tipping the side from the flat base to its edge. As in steering the design of the boot and the connection to the ski permits movements with the body to edge the ski. It is helpful to think of the bones in your body as levers that you can use. Similar to the discussion in steering, you can edge a ski by rolling the foot in the boot, tipping the shin bone sideways, adding in the thighs and hips to move your whole body as a lever in various combinations. You can even stand tall and lean your whole body over and your skis will tip.

Skillful skiing is an efficient blending of all the skills. Edging should always be coordinated and blended with steering and pressure and balance. It is good to think about steering your skis onto an edge, progressively as you enter the turn and then progressively steering them off of their edges. This steering and edging is blended with managing the forces of the turn - pressure control - both fore/aft and side to side while remaining in balance. It's a good thing that our brain works with our body somewhat automatically so we do not have to think through each and every move!

Pressure Control

Managing the pressure on our skis and our body from the turn forces is not only one of the first fundamental skills, but also the most difficult to fully develop. You need to be aware and "feel" your skis on the snow to steer and edge the skis, but more so to manage the forces that are generated when we ski. I cannot emphasize enough the importance of being sensitive to the sensations of skiing. It's these sensations that are one of the "addicting" factors in skiing, so it's a bonus when you encourage your clients to pay attention to and to feel the snow, feel the forces!

The forces are discussed in another article on the "Why", but suffice it say here that in skiing deal mainly with the laws of gravity and motion (momentum) - thank you Sir Isaac Newton. Due to how this real world of planet earth works, we need to manage these forces which we feel as pressure on our bodies and our skis. Pressure control skills involve how you balance on your skis both fore/aft and side to side/foot to foot/ laterally. Again, think of your body as being bones and using the levers of those bones to distribute the total force onto your skis. By simply lifting one ski, you have already transferred the forces to the other ski. By flexing at the lower part of a turn where we feel the pressure build up, we go with the forces and thereby decrease the pressure on the skis. By extending we can either increase or decrease the pressure on the skis depending on the timing in the turn. We can lean forward, pressure the tips of the skis, stay balanced over the sweet spot or lean backwards and pressure the tails of the ski. Edging will transfer pressure laterally. Steering cause either cause an increase or a decrease in pressure depending on the timing in the turn. Of all the skills, pressure control/management is the most intimately blended with all the rest with the most variables and hence, the most difficult to master.

In pressure management/control, timing is critical. Knowing when to move is just as important as knowing where to move. For timing, you need to feel the forces as well as understand how your body and your skis interacts with the forces. Paying special attention to the "feeling" is again indispensable - how can you manage the forces if you don't feel them? Understanding the "why" of the forces is helpful for everyone, but especially for those who are not the naturally talented and gifted athlete. Knowledge and understanding really help in the application of skills.

Modifiers/Descriptors/Components of the Skills

Coaching skill development thus entails helping your clients learn how to better use their skis; i.e. their tools or toys. Obviously, it is the body that needs to learn how to manipulate the skis, so you are often coaching and refining bodily movements that blend the skiing skills that result in efficient and successful skiing. We can refer to these as "movements in motion" (Thank you Canadian's at an Interski.) Movements can be thought of as having various components. Understanding them as such aids in communicating and implement the skills concepts.

These components are: Direction, Accuracy, Timing, Intensity, Duration.

Direction. All movements have direction, there is no such thing as an non-directional movement, so please do not let one of the current buzz phrases confuse you. In coaching, what is important is which direction. So, whether, you advise a client to flex with the forces at the bottom of a turn, or move their thighs into the turn at the top, it is important to remember always to include in your advice, where, what direction.

Accuracy. Being able to produce the movement accurately is also important. This is where the student centered approach is critical to be able to communicate exactly what is the desired movement pattern. It is important to be very specific; i.e. what body part, where in the turn, what direction, how much etc., in simple words, avoiding vague, general terms that have may elicit multiple interpretations such as "counter" more or less or "move into the turn", "have a stronger inside half", etc. Accurate demonstrations are also essential.

Timing. Timing is everything! Feeling is essential for timing, as is understanding the desired outcome. In order to time the movement patterns properly, the client needs to be relaxed enough to be able to move. Fear is an important factor that needs to be dealt with prior to being able to achieve the correct timing. Fear freezes and for timing requires constant, continual motion which will in turn allow for "feeling" the forces through the skis and the body.

Intensity. Intensity goes jointly with the magnitude of the forces being generated. Again, here it is important to be able to "feel". For example, it is more efficient to use just the right amount of edge angle to hold a desired arc, than to over edge the skis. Learning to become progressive in movements also aids being able to vary the intensity level. Here again, it's the concept of continual motion balancing and blending all the skills.

Duration. Closely linked to timing, duration is a function of the "when" of timing and the rate, and/or varying rates, for the movement pattern. In coaching one very common example of working with duration is in developing flexion and extension movement patterns. Often the client will rapidly extend, stay there, then rapidly flex and stay there. Coaching time to take longer getting longer, longer getting shorter will help them to able to better shape their turns.

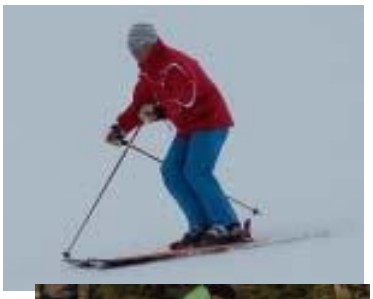
Skiing Skills Application - Tracks in the Snow

Skiing is a sport, something we do. Developing skills needs to always be linked to the doing - the skiing. It is imperative to always work on skills with a skiing objective; i.e. what sort of tracks do you want to leave in the snow, where do you want to go. Therefore, first and foremost, have the tracks, the "going", the skiing, in the forefront. Those tracks are the purpose of and the result of skiing skills development. It is amazing how simply explaining "where" to a client will result in them making monumental changes in their skiing. With seniors, who learned in the days of more z-shaped turns, simply working on rounded tops of the turns with rounded bottoms will help them develop the skills necessary for utilizing the modern shaped skis.

Round the Small of Your Back

Not This!!!

But like These!!!!!



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The "WHY"

Many people that I know do not want to have anything to do with either math or physics, however, a bit of understanding at least in practical, applied physics really helps in developing efficient skiing skills. I will attempt to keep the basics here brief, in laymen's terms and simplify Sir Isaac Newton enough to make his laws actually helpful to us when we ski. (There is an addendum to this article for those inclined to the math and physics.)

<u>Gravitation</u>

Without gravity we couldn't ski. Gravity is actually the force that pulls us towards the center of the earth, but luckily the earth is solid and we stay on top of it, mostly, except in water and powder, where we get pulled into it.

Friction holds us in place on an inclined plane unless the gravitational force is greater. Our skis have been developed to help minimize the friction so we can indeed slide down the hill. (Years ago, when I first read about Galileo and his frictionless plane, I wondered if he was a skier... dreaming...) So as we slide down the plane, we can call gravity the "engine" that powers us. Learn to embrace this gravity, make it your friend. Go with the force!

<u>Momentum</u>

An effect of gravity, is that we accelerate as we travel down the slope according to our mass, basically our weight (F=ma). As we continue down the slope, our velocity increases; i.e. we get going faster and faster. Once we start moving, we have momentum. Momentum is something we have all learned about from experience.

Sir Isaac Newton's first law is one that we all understand: *"Every object persists in its state of rest or uniform motion in a straight line unless it is compelled to change that state by forces impressed on it."*

Sir Isaac Newton's second law is one that we all intuitively understand and use, even when we don't want to admit to it: *"Force is equal to the change in momentum (mass times velocity) per change in time. For a constant mass, force equals mass times acceleration."*

We all know that the longer we go straight down the hill, the faster we will go and that the faster we go, the harder we can fall.... We also understand that as long as we go with the force, down the hill, we will not feel the force on our bodies, yet we know it exists because experience has taught us that it indeed does exist. In addition we know that we have muscles and bones and are able to "act" as another force to manage the natural forces of gravity and momentum and thus, we work with Newton's laws! Simple, even for those of you who do not think you can operate in the realm of math and physics!

Feelings and Physics

So, back to what we feel and why we feel it. As long as we go with gravity, with the force, we do not "feel" it. The longer we go with the force, the more momentum we will have. In skiing, we use these forces, they are our "friends", we work with them and appreciate them. When we go to make a turn, we are redirecting them and hence we feel them. We use the internal forces of our muscles to mange the external forces for the physical world.

Important point number 1 - *Go with the forces and you do not feel them. Go contrary to the forces and you will feel them. Simple.*

For those of you who have trained in the martial arts, you have learned that it takes more force to block an oncoming blow directly. It is much easier; i.e. it hurts less; to redirect it with a block that changes its direction. You block with a moving block.

Likewise in skiing, it is more efficient if you move with the force, feeling it as you work with it and change directions, progressively. Apply this to your skiing and you will become more efficient.

Important Point Number 2 - *Feel the forces, pay attention to them and work with them, directing your bones, in balance, in the "force".*

All of you understand simple addition, or at least I hope you do. 1+1=2. Forces are like that too. You take one force and add to it another and you get a greater force. How we move our bones with our muscles can either add to or subtract from a force. In skiing, you are making a nice round turn. Right after the apex, as you start to round out the bottom of the turn, you are changing your direction and hence no longer going with the forces. You feel them more, you need to edge your skis to be able to stand against them and not skid out of the arc. You need to stack your bones to stay in balance to them. One way of making the forces on your body and skis less at that point, is to simply go with them by flexing. Flexing your legs at the bottom of a turn, allows your body to go with the forces and lessens the pressure on your skis. This is a good thing.

Conversely, skating or actively extending at the top arc of a turn will increase the force on your ski bases, much like pushing on the gas pedal in a car. What you feel in skiing is all relative to the changes you are making to your momentum.

Important Point Number 3 - *Forces add up and forces can also be subtracted, you can increase or lessen the forces momentarily by actively moving your body either with the forces or by opposing to the forces.*

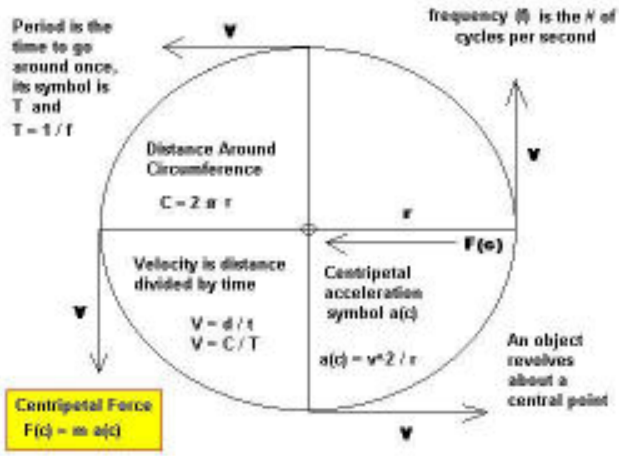
Newton has a third law that we are also very familiar with from experience and which we do not need to worry too much about here since his first and second laws pretty much cover skiing, along with gravity. Then Newton's last law: *"For every action, there is an equal and opposite re-action."* In skiing we mainly use that intuitively when we use rebound. However, we are not going to go into that here.

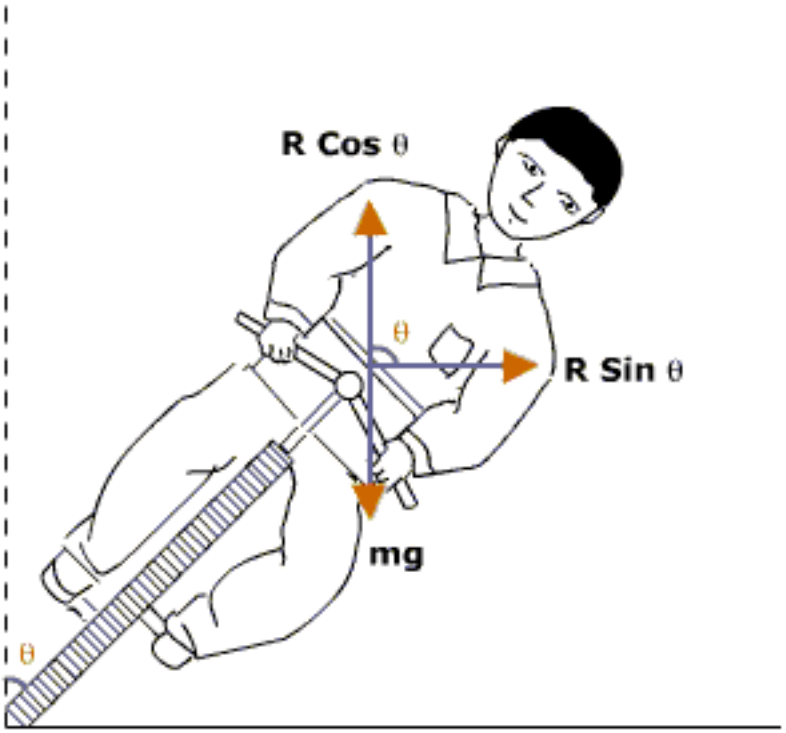
Centripetal Force

There is one more basic "force" that should be understood at least a little in skiing. That is centripetal force. Centripetal force is the force that keeps you in a turn. Without using centripetal force, it would be impossible to turn. Centrifugal force is the force that is "throwing" you out of the turn. They exist together. What you need to know about centripetal force is how to create and use it and that is fairly simple. Stack your bones to the turn forces to be able to stand against them. You create angles with your skis and body to balance against the turn forces that are trying to "throw" you out of the turn. You edge your skis and move inside to stay balanced. Simple, intuitive concept.

Important Point Number 4 - *Stack your bones to the turn forces maintaining balance while blending all the skills efficiently with minimal muscular force to accomplish the desired skiing outcome.*

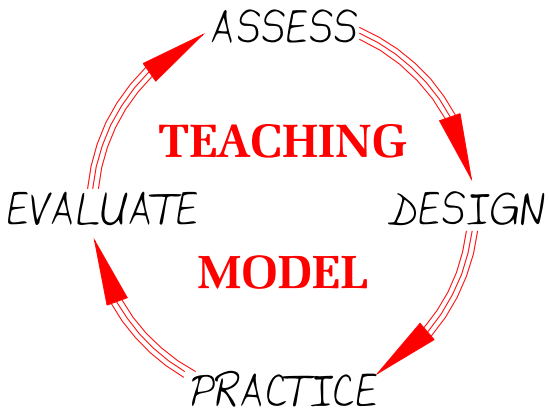
Centripetal Force Diagrams





Senior Geezer 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.

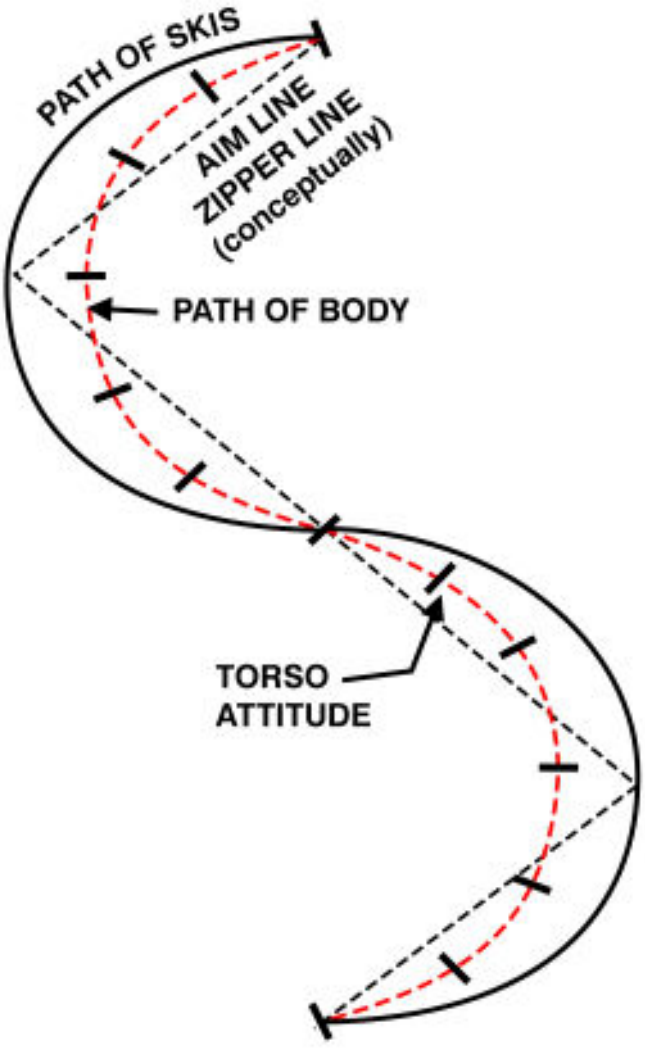
A concept that is very helpful here is that of the two "you's", the upper body and the lower body. The upper body and the lower body take different lines and start moving into the new turn at different times. The lower body's line is outside the upper body's line. The upper body starts to move the new 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.

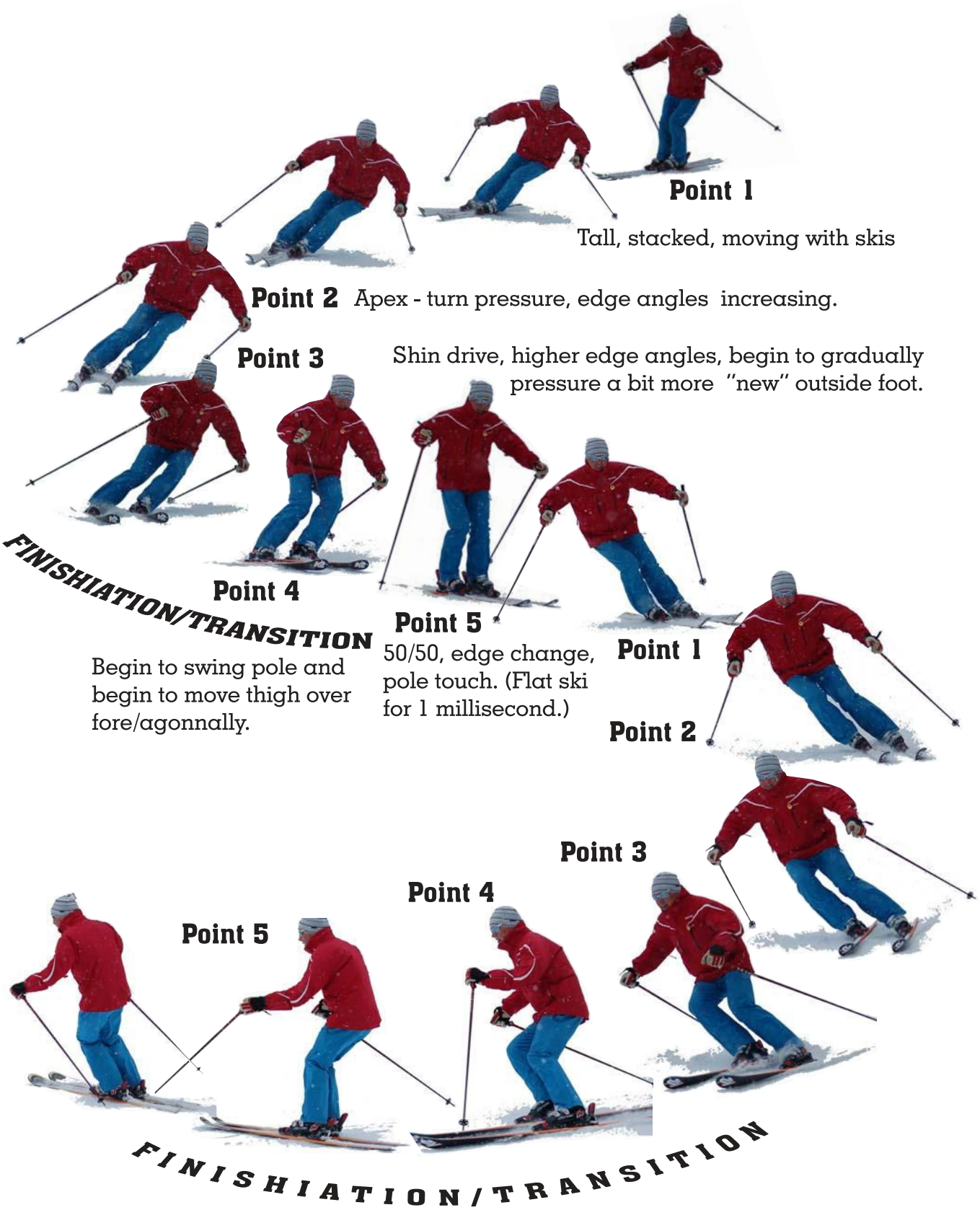
Progressive, continual total motion is another important concept. You should always be flexing or extending, bending or unbending, always moving, in concert with the turn forces. One area that sometimes needs smoothing out is the transition.

This is where the tactic of regarding the turn as going from apex to apex really helps smooth our 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!



I Risk Management

Our first duty to our students is to their Safety. Before students can have Fun or Learn, they must feel safe.

a. Mountain Environment

1. **Terrain:**
   As an instructor, you need to learn about what terrain is available at your resort for your use while instructing as well as any special hazards that exist, such as cliffs, avalanche areas, etc.. Always make use of appropriate terrain for your guests. Be especially aware of the 'crowdedness' of the slopes and any cross-traffic.
2. **Conditions:**
   Conditions will always vary, not only from day to day, but throughout any given day and in any given location on the mountain. Be aware that conditions can sometimes turn an easy green run into a 'black' run for some people!
3. **Weather:**
   As mountain weather can change quickly, always be prepared for what may be coming. Check to make sure that both you and your clients are comfortably and appropriately attired.

b. Guest/Client

1. **Equipment**
   Boards, skis, bindings, safety straps, boots, poles adjusted and in working order?
   Dangerous loose clothing?
   Proper eye protection from elements?
   Helmet (if used) fitted properly?
   Sunscreen?
2. **Physical Condition**
   How athletic?
   Adaptive needs?
   Artificial parts?
   Current health concerns/medications?
   Previous injuries?
   Fatigued?
   Hydration and food?
3. **Psychological Condition**
   Motive for lesson and skiing/boarding?
   Fears or anxiety?
   Goals?

II Teaching Skill Foundations - Basic People Skills (People Physics)

Learning about guest service.

Only when a Vision is complemented by a Strategy are overarching aspirations achievable. - Horst Abraham

To learn and grow to the level of 'master' instructor, it will require your sustained interest and effort, study and practice. Much like anyone pursuing excellence, the hunger to improve will have to become part of your DNA.

1. People Skills

As an instructor your primary mission is your skilled and empathetic interaction with guests. Treat them right and they will keep you in business and even become life-long friends.

As an instructor, your social skills are the basic price of entry. Technical skills, psychological acumen and pedagogical competence will round out your portfolio. All the above will require constant updating and renewal. When your learning stops, your career will atrophy and your personal energy will dissipate. Engage in life-long learning and your career will soar well into a ripe age!

Become more aware of your own learning style and the manner in which you process information. Assessing your own profile will help fuel your understanding how to connect with and help others.

While snow sports coaching does not require a doctorate degree, effective instructing will require some broad and pragmatic understanding and skills in how to communicate, motivate, manage, inspire, influence and teach others. PSIA's "Core Concepts" book contains valuable information about many of some of these subject areas:

a. CAP Model (Cognitive/Affective/Physical) - Core Concepts, other research

Discussion: In the "Core Concepts" and other manuals, you will find discussion about how, as human beings we operate in three main domains, cognitive, affective and physical. However, there are also two other domains that some believe we operate in - the spiritual domain as the domain of the will - hence CAPS and CAWPS.

People learn more easily when they are fully engaged; i.e. their whole being is attending to the learning. A positively charged emotional environment accelerates both learning and retention. Besides it's more fun! Safety-fun-learning. If someone feels safe, and is having fun, then they might learn.

1. What does CAP stand for? _____

_____

2. Briefly describe each domain:

_____

_____

3. As you are free skiing/riding, take a moment to observe a lesson for a while. Be aware of the emotional environment. What indicators are you observing that tell you whether it is positive or negative? When you teach, always be aware of such markers.

_____

_____

b. Maslow Hierarchy

Discussion: In the "Core Concepts", you will see the triangular diagram of Maslow's Hierarchy describing the hierarchy of needs, showing how needs stack up as we reach for self-actualization (develop to their full potential). If your guest feels safe, has fun, and has learned, there is a greater chance that he/she will return.

1. Describe four ways that you will keep your guest safe: _____

_____

_____

2. If you are teaching a diverse group, how might you develop cohesiveness and camaraderie within the group? _____

_____

3. Sincere encouragement motivates. Insincere encouragement does not. Instead of looking to diagnose deficiencies in your guests skiing/riding performance, strive to always look for what your guest is already doing well and build on that. In the beginner skier, list a few performance indicators that you might look for: _____

_____

c. Brain Hemisphere Dominance - Right/Left

Discussion: Are you right or left brain dominant? Most of our population is left brain dominant. Being aware that we are not all wired the same way, will help you both understand people, as well how to communicate with people.

Your right hemisphere has the spatial, intuitive and synthesizer capacity that enables you to ski. It tends to get confused by logical, linear and abstract description of how to ski. Give instructions that are in sensory language: Visual (Image), Auditory (Sound), Kinesthetic (Feeling), language that requires no translating, language that can be acted upon immediately.

1. Describe how a new skier/boarder might respond to a lengthy detailed, intricate explanation of the physics behind making their first turn.

_____

_____

d. Blooms Taxonomy - Core Concepts, other research

1. Read and research "Core Concepts". Regarding Bloom's Taxonomy, as a learner, do you have to 'understand' the physics of making a turn, in order to be able to turn? _____

2. Consider this statement: When you learn a motor skill, you process 'understanding' through your 'body intelligence' using sensory detail. Write down how you might communicate to a new skier/boarder what they may want to 'feel' when they are tipping or flattening the ski or board. Remember you can use verbal as well as non-verbal communication. _____

_____

_____

e. Piaget

1. In the "Core Concepts" and elsewhere, you will find information regarding Piaget and the stages of development. As a newer instructor, to a large extent, you will be most likely working with children. Many ski schools have very excellent and well developed programs for children. PSIA/AASI offers special accreditations for children. What is the single most important fact that you think will help you be successful working with children and why? _____

_____

_____

_____

f. Learning Styles - VAK-E, Thinker/Doer/Watcher/Feeler

Discussion: People also have various learning styles. There are many learning style models, however, the ones that PSIA/AASI uses the most are the VAK(E) model, Kolb's Thinker/Doer/Watcher/Feeler model, McCarthy's Active/Reflective/Big Picture/Parts model.

For the snow sports instructor, being aware that not all of us approach new learning the same way is essential. Being adept at adapting to your guests will facilitate both fun and learning for you.

1. On the internet are many 'tests' that you can take to learn more about how you learn. Try some and write down what your dominant learning style. _____

2. What does VAK stand for _____

3. Exercise: We learn through our experiences. Engineering learning experiences is the work of instructors. Thoughtful composition of terrain, snow conditions, simple, unambiguous instructions defining experiential 'territory' is the challenge the instructor needs to creatively develop. Debriefing and learning from such experiences is the shared task of both instructor and student.

For the skier/rider, spending time in focused practice is essential. One variable at a time, the student explores possibilities and registers cause and effect resulting from his efforts.
VAK-E is the language of the learner, leading experimentation with:

- a clear image to pursue
- a sound the ski makes on the snow, if applicable
- a sensory feeling to learn to differentiate, and
- an intensity level with which to engage in the practice

Practice VAK-E with your training partner.

g. Stages of Learning

As an instructor (facilitator of learning), there are many teaching models that explain the path of learning. One very simple model is helping the student move from a level of:

1. Unconscious incompetence to... (it's not working and I do not know why?!)
2. Conscious incompetence to ... (I get it, this is what is not happening yet)
3. Conscious competence to ... (I know what I am doing and it is working)
4. Unconscious competence to ... (I am good and do not need to think about it)

Considering the above in the context of your own performance as a skier/rider, an instructor. What stage of development are you in at this point? What do you need to do to get to the next level? Often times, it is easier to work with people who know that they do not know. However, many times, you will find yourself working with people who think they know, but they do not really know. What skills will you need to draw on and employ to be a facilitator of learning with such people?

_____

_____

h. Teaching Styles

Discussion: Just as there are various learning styles, there are also many teaching styles. The instructor's teaching style is governed by the student's learning style, requiring of the instructor agility and seamless shifting form one student's learning style to the next. Let us resolve in **this text** to use 'teaching' and 'facilitating' interchangeably even though there are differences. What is important to note is that effective teaching/facilitating is a process in which instructors actively collaborate with their students in achieving their goals.

1. What is the teaching style that you are most comfortable employing and why?

_____

_____

2. What is the teaching style that you are least comfortable employing and why?

_____

III TEACHING/LEARNING

"It is not theory and concept we are feeding our students, but in order to function as a teacher/ instructor on a highly effective level, we (the instructor) need to understand at least some of the most basic theories, concepts and frameworks in order to serve one of our basic functions as a teacher: designing a learning environment within which the student can and will learn, and do so without the shackles of a mostly 'convergent', technique focused approach to skiing.... It is the instructor that needs to understand concepts so the experiences he/she can design and facilitate serve the learning process optimally." - Horst Abraham

1. Teaching Skills

Ski industry literature has many teaching process models and teaching cycle models. Master instructors utilize a variety of these, however, there are certain skills that they all share.

a. Observation/Awareness Skills - Certainly, as a snow sports instructor, you need to be able to observe someone skiing or riding and understand what you see. However, that physical observation of motor skills is only a small part of your development as a master instructor. You will also need to observe your clients cognitive and emotional state as well as their motivations.

Search through your training manual and find examples that employ observation skills:

_____

_____

b. Communication Skills (Verbal and Non-Verbal) - While all of us speak and communicate every day, such practice may not render us necessarily skilled in this practice. Do a self-check on your communication skills. Ask a friend, spouse, family member about how they perceive your communication skills. Are you a good listener? Do you make yourself clear in a minimum of time? Are your verbal and non-verbal messages mostly congruent? How is your communicating energy? Too bubbly? Monotone? Screechy voice? Energized? What is the balance between positive, encouraging and critical messages? Since **affect** is so powerful, what is the feeling you tend to leave behind when completing a conversation? Can you use simple, clear language to describe desired outcomes? Can you put someone at ease when they are scared to death? How well do you listen to 'what is not said', but emoted? Are you comfortable with pauses in communication after asking a question, or do you, when answers are not quickly forthcoming, fill in the blanks? Often the most important communication is contained in the white spaces (i.e. between the lines).

Practice, practice, practice with other instructors. Ask for help when things are not clear to you, and be sure to balance 'tell' and 'ask' at about a 50:50 ratio. Be open about asking for clarification when you don't understand something.

Sincere, heart felt communications will go a long way not only in transmitting data, but also in developing a relationship of trust with your client.

When meeting someone for the first time, describe what you do to open the conversation.

_____

c. Analytical Skills - Analytical skills depend on knowledge and understanding on the subject matter. This also leads to confidence. As an instructor, you need to know not only about the discipline you will be working in (i.e. the physics and bio-mechanics), but also about people, what motivates us, how we all learn, etc. As a new instructor, you will not be expected to know 'everything', however, now is a good time to start to analyze your current knowledge base and what your short term and long term goals are. Peruse and research the PSIA and other material. Rate yourself in the following areas:

	Very Knowledgeable	Somewhat/ Need to Learn	Totally New to Me
Psychology/Sociology (People Physics)	☐	☐	☐
Physics/Bio-mechanics	☐	☐	☐
Learning Process	☐	☐	☐
Teaching/Facilitating Learning	☐	☐	☐

What/when is your first goal? _____

d. Organizing/Goal Setting/Planning Skills - The human mind is a goal seeking mechanism. Setting goals is a prerequisite to achieving goals. The clearer and the more compelling a goal, the greater the chance of reaching the goal.

Fundamental achievement goals emerge from the conversation with the guest where her/his reasons for taking a lesson are explored.

Beyond that, the instructor will have to help set goals that are learning and performance oriented, as the student may lack insight into setting realistic goals for her/himself.

Lesson planning and goal setting are core competencies of any instructor. Lesson planning represents a skill-set that needs to be practiced, honed and developed, much like practicing skiing/riding skills. In the absence of paying attention to lesson planning and goal setting, lessons become 'problem solving' lessons rather than goal achieving lessons. While there are many possible paths to achieving a goal, customizing the methodology to the student's body type, learning style, time available, environmental conditions, is the mark of an effective instructor. A 'one-size-fits-all' approach is a tell-tale of a highly limited and limiting instructor.

For any goal, there are also a myriad of possible approaches, but only a select few approaches will best suit the student in question.

While the instructor will take the lead in setting developmental goals at first, the objective should be to increasingly make goal setting and goal getting a collaborative effort. This will often necessitate spontaneity and improvisation along the way! Human beings are not machines.

As you study the literature and research online, look for S.M.A.R.T. goal setting as a source for help in this matter. Is one of the S.M.A.R.T. points more important than the others? Why?

e. Entertaining/Performing Skills - As an instructor, you are ultimately the 'one' responsible for the guest's experience. To make the guests experience a pleasurable one, you will have to wear many hats. In that sense, you will have to seamlessly multi-task most of the time while conducting lessons, always sensing which of the roles you are playing is needed most. In multi-person lessons, this capacity will be tested to the hilt, as each person may have different needs at any give time.

This is indeed an area where the more competent you are, the more confident you will be and the better you will perform.

While in training, we have the luxury of attending to each of the roles we play separately - a highly recommended practice; during lessons we need to constantly have our radar going to determine what is needed most right now with whom. While this multi-tasking proposition may be a daunting challenge for instructors in the early development phases, keen observation of human behavior and the study of such will quickly allow you to gain confidence in this regard.

Attention to detail in interpersonal relationships can be exhausting, far more so than any physical exertion during a day of teaching. Pay attention not to get distracted by your own 'curriculum' to missing important clues from the students.

One key to enhancing performance in this arena is by developing routines that help you stay abreast of both the general development plan, as well as paying attention to the guest and student. Rehearse routines for when you first meet and greet your guest. Develop other routines for setting goals, periodically assessing the process/practice focus; taking stock of what has been learned; checking on pace and time; checking for motivation and energy; etc.

Play is indeed a powerful way to learn. Play is generates energy as it taps into man's natural instinct to 'explore' and learn. So, play and have fun! Isn't ski instructing wonderful!

Remember one of your first and your most recent experience on the snow with a client. Have you changed or developed your performing skills? In what way? Would you like to change anything?

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2. Teaching Process and Learning Cycle

Good instruction is based upon developing a reliable partnership with the guest and student. Create a shared understanding about the role you, the instructor, will play; identify the role the student will have to play; identify collaborative functions you and the student will have to engage in; introduce the importance of goal setting and learning about the motivation the guest brings to the lesson. Why are you taking the lesson? What results do you hope to achieve? What will achieving these results enable you to do?

Also start with the heart by connecting with the guest on more than a 'skiing level'. Who are you? What turns you on/off? What excites you? What are things you have done that helps me understand you better? Here are some things I want you to know about me!

While the neophyte instructor limits himself to teach skiing in a very mechanical way, the more effective instructor connects with the student on many levels.

As you read through the PSIA and other materials, you will find good material on the teaching process and learning cycle. There are many teaching/learning models many of which share the following basic characteristics:

1) Meet, greet, rapport
2) Determine the desired outcome-goal
3) Assess - analyze the current reality
4) Design - goal setting
5) Focus Practice - with adjustments
6) Feedback & Celebrate Successes (acknowledge progress - catch the student doing something right)
7) Re-calibrate and repeat

Use the "Core Concepts" to help you develop a solid understanding of suggested teaching processes along with the practice examples for each specific development target. While these recommendations instruct you to a step-by-step approach to teaching skills, don't allow this linear progression/teaching process to derail you from realizing that learning is not necessarily a linear process. Debrief yourself at the end of each lesson and note (yes, notebook) what you have learned from each lesson.

Write the steps of a 'teaching cycle' model that you will use and beside each step, write down the skills you will need to fulfill each step:

_____

_____

_____

_____

IV Basic Physics/Dynamics of Snow Sports

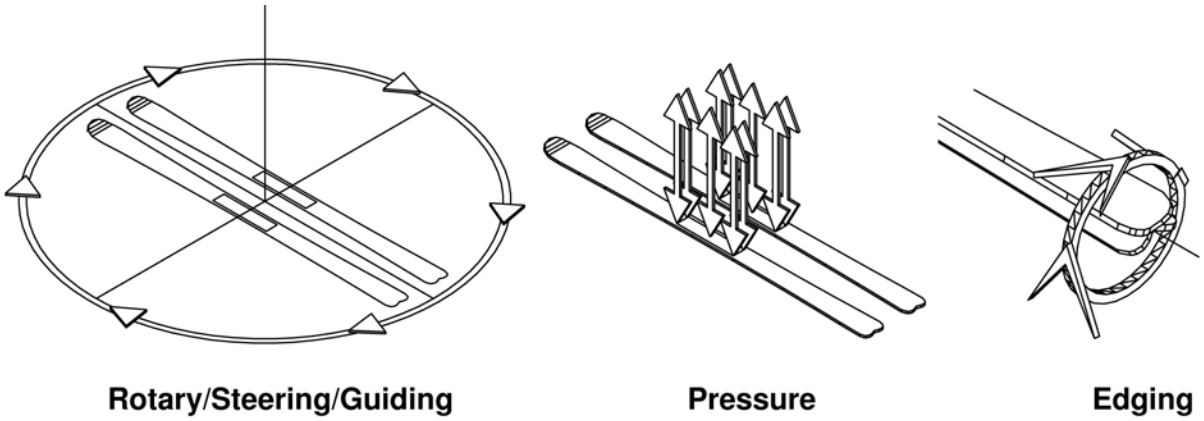
Learning about the physics of sliding and motor skills development.

As a snow sports instructor, there are some basic physics with biomechanical concepts that are universal for all snow sports. These concepts revolve around how the human body utilizes the 'tool' (board/ski) to control the tool/snow interaction.

1. Skills Concept

The skills concept identifies three primary functions by which a skier/rider interacts with the snow: *(Note: Snowboarders also have the ability to twist or torque the board. This will be discussed further in the discipline specific study guide.)*

Rotary/Steering Skill: Directional guiding and steering the skis/board
Edging Skill: Tipping the tool from edge to edge about the long axis of the ski(s)/ board
Pressure Control Skill: Regulating the pressure of the ski/board on the snow accomplished by vertical movements of the skier/rider
(Balancing - a function of rotary, edging and pressure control; the result of ongoing interplay of these three skills along with sensory functions of the skier/rider activating deliberate and unconscious bodily movement)



(Note: The above diagram shows skis only for clarity.)

Some of the most important things in snow sports cannot be taught, but they can only be learned; i.e. learning to improve balance can often be assisted by deliberately disturbing balance in a controlled environment. For the new and beginner rider/skier, improving balance along with controlling speed is a top priority. Let us elaborate:

1. Spatial awareness is an important part of 'learning to learn'. Many students will require extensive awareness practice to gain a better sense of space and time.
2. Sensing when we are in/out of balance is a given mechanism, but the speed and nature of our responses to sensing ourselves to be in/out of balance is trainable. Strength, agility, flexibility, response options are basic elements we can train students in.

3. Exercises improving balance in the spirit of the above include, but are not limited to, learning how to carry arms - our balancing poles; practicing push-over while standing, learning experientially to adjust our way of standing by contracting our core muscles and flexing all joints.

Proprioceptive Awareness x Muscular Strength = Equilibrium.

The one variable that is innate and cannot be changed is the time required to signal disequilibrium to the muscle response. THAT is a birth given reaction time that can only be optimized by increased awareness and the directed strength of the muscular response. The wiring/inner ear sensory mechanism is a given from birth.

In your discipline/s, which do you consider to be the first skill that can begin to be mastered and why? _____

_____

Which do you consider to be the most difficult to master and why?

_____

_____

2. Basic Physics

Gravity and friction are the basic physical forces that effect you on the snow. They are your 'engine'. You spend your time 'playing' with these forces as they effect your body on your 'tool'.

Turning is what defines both skiing and riding. Gravity and friction and your body mass in motion down the inclined plane produce the forces that you manage with the three basic skills of rotary, edging and pressure control on your tool. Gravity and friction create momentum that you manipulate as you turn necessitating managing also centripetal force.

[Note: The nordics also go uphill and along the flats. The Nordic Study Guide will elaborate on that!]

You can make this as complicated or as simple as you like and you will find much in the literature discussing this as you continue your study.

However, understanding at a basic level how forces are generated as well as diminished is at least helpful. Fundamentally, whenever two forces are in the same direction, the resulting force increases; i.e. in the lower part of a turn, after the gravity line (alias falline), when gravity is pulling you down the hill, if you resist gravity by also pushing against your edge/s at that time, you increase the force on you and your 'tool' - what you feel is an increase in pressure on your board/skis. Conversely, if at that same moment, you move with the force of gravity with your body mass, you will decrease the total force and you will feel less pressure on your board/skis.

Research and continue to think in terms of forces and what you feel at other points of the turn. What is going on at the apex of a turn?

_____

_____

_____

What about when you are heading across the hill on your edges? _____

_____

_____

What about when you are sideslipping down the hill? _____

_____

_____

V Putting it All Together - What a Snow Sports Instructor Does

On the snow with the guest.

With all the background you now have on the psychology of learning and teaching, how to diagnose the situation, not just movement, how to use 'enabling language', how to provide 'feedback' effectively, how to manage group dynamics, how to develop collaborative learning environments, how to plan for lessons... you are ready to put it all together and have some fun with the guest/s! Remember to look for where the guest is already skillful and to build on that!

A. Guest Contact

1. Introductions

As a snow sports instructor, you are one of the employees on the mountain that spends the most time in direct contact with the guests. Often first impressions set the stage for future success. What will be your basic framework or model when you first meet the guest?

_____

_____

2. Creating Group Cohesion

Many times as a new instructor, you will be instructing in group lessons. Describe how you might be able to draw out each guest and begin a dialogue amongst those in your group.

_____

_____

3. Developing Trust

You will find that developing trust is discussed many times in the literature. One of the primary concerns of most of your guests will be safety. A common apprehension in the beginner skier is the 'new' factor. They do not know much about skiing and that can be worrisome, for adults as well as children.

As you begin to interact with your guests and you begin to develop a level of trust, explain how you will encourage them to feel safe and be more eager rather than apprehensive. Explain how this will help develop a trusting relationship. _____

_____

_____

B. Lesson Planning

1. Observation/Assessment - CAPS (CAWPS) data input

Observation begins even prior to actually greeting your guests. It continues as you follow through the initial introductions. You 'dig' deeper as you ask more questions and possibly even take a warm-up run, if the group can indeed already ski. Practice by writing some of your 'always' questions below:

_____

_____

_____

2. Setting Goals - the "DO" plan

Your skills as an instructor relate to your ability to create and manage a learning environment collaboratively with the guest.

a. Including the guest

After you have collected enough data about and from the guests, you will need to make a plan as to what to do. Why is it important to include the guest in this planning process?

_____

_____

b. Goals for the day

Remember S.M.A.R.T. goal setting. The daily goals will vary and be based the guest/s abilities as well as their expectations and desires and needs. What will you do when you achieve the goals?

_____

_____

What will you do if you do not achieve the goals?_____

_____

_____

c. Longer term goals

Many times long term goals will facilitate return business and a long term learning partnership with your guest. Under what circumstances would you not discuss such long term goals with your guest and why? _____

_____

C. Dealing with class skill and personality diversity

Quite often, when instructing a group, you will have not only varying personality types, but also skill levels. Many snow sports schools have an arrangement for moving guests around in the groups at the beginning of a lesson, however, this is not always possible. How will you arrange the learning environment so that each individual will end up feeling like they received their own private lesson?

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D. Prudent Snow and Terrain Selection

Terrain selection will depend on the snow conditions. Familiarize yourself with your choices at your resort for the various skill levels. Fear generally inhibits learning. Aside from the inherit difficulty in the terrain and conditions, what other factors will you consider in making a terrain choice? _____

_____

_____

_____

E. The Game - What you "Do" on the Snow

1. Full Engagement

Once you know what you are going to do and where you are going to do it, you start doing it! Safety, fun, and learning are foremost. This is the time we help create 'memorable experiences'; this is the time that ultimately is about 'life balance' and engaging in the lifestyle that are the snow sports. This is the time that we spend together, but ultimately also within our own selves as we "Do It - Feel It- Be It".

Full engagement refers to the whole spirit, soul (mind/emotions/will) and body. The more successful both your guest/s and yourself will be, depends on full engagement. Research the literature and online and learn about what this entails. Explain what your goal regarding full engagement: _____

_____

_____

2. Oscillation

In our world here on earth, there are rhythms in every living thing: we breathe in and out, our heart pumps, the tides flow, the sun rises and sets, we are awake and we sleep, we run and we rest, we concentrate on study and we relax, we play and we relax. As you spend time with your guest, executing your 'plan' and adapting, learning to sense when to change, to stop, to start will help you develop into a master instructor. If you are not aware of oscillation in human behavior, the challenge now is to become aware of it.

3. Energy Management

Often when we speak of energy management in snow sports, we only think of pacing in regards to the physical realm. However, learning how to manage our energy within our beings is a critical aspect to nurturing full engagement with maximum performance with 'flow'.

If you are scratching your head now regarding the previous sentence, add this to your oscillation challenge - research, ask and learn.

4. Flow

Learning how to use enabling language, enabling non-verbal language, creating an enabling environment to produce maximum performance, 'brilliant' (thank you Weems) skiing/riding, 'flow' is perhaps the 'holy grail' of snow sports instruction.

Olympic bump skier Shannon Bahrke Happe (the pink haired young lady) relates how she would prepare herself for a competition run. As she would stand in the starting gate, she would first look up and gaze at the mountains, then down on the crowds, scanning for her parents, then finally at the course and go. She was in the moment, with her whole being, she could flow.

Curious about 'flow'? You know what to do.

5. Adaptation

While you are with your guests, you will need to be adept at adapting your action plan to your goals, or even adapting your goals to reality. This is where the 'art' of what an instructor does comes into play - and literally it is often 'play' (play energizes - it releases and even creates energy).

Consider the above mini-discussions about full engagement, oscillation, energy management, flow and adaptation. What is your response? Thoughts? Plans for yourself? Your guests?

F. Dealing with Accidents

It will be wonderful indeed if in your career, there is never an accident while you are instructing. However, assuming that there is an accident and you know and take the procedures in place at your resort, what additional actions might you take? _____

_____

F. Closing Lessons

Your resort school will most likely also have some procedures to follow to close a lesson such as escort the guests to a certain location and thanking the guest. Building a client base through return clientele is an immediate goal as a new instructor that you should start working towards. With the help of some experienced instructors as well as the literature, list as many actions that you might take as you close a lesson that will help in this process:

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