A Nordic Skiing Teaching Progression for the V-2 Skate

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The Set-Up

Double poling is common to virtually all skating strokes. While the poling motion may be severely abbreviated in some applications, it should be technically correct to the extent that it exists. For this progression, re-teach double poling (if covered previously as part of a classical technique progression) with emphasis on these key elements:

- Knees comfortably straight throughout the first 1/3-1/2 of the stroke (beginners are probably better served by having them maintain comfortably straight knees throughout)
- During the recovery phase, arms swing forward in a comfortably straight position
- Poles are planted to allow an immediate power stroke
- Upon implantation, elbows bend to 90 degrees (perhaps less at high speeds) and lock until elbow extension begins
- During the power stroke, the hands should pass at knee level or below
- The power stroke should be accomplished with a large muscle to small muscle progression with evident positive acceleration throughout: abdominals, then shoulders, then elbows, etc.
- A high, forward position should be encouraged
- Skiers should double pole "with abandon"
- A powerful abdominal compression should be obvious
- Skiers must be cautioned against squatting

The "quick double pole drill" is useful at this point. During this drill, the arms remain locked throughout, with elbows held against the sides and in full flexion, with the hands up near the face (like a little kid imitation of a gopher). This isolates abdominal compression as the only power source. The exercise consists of practicing a short stroke, high tempo double pole. It can be useful to alternate between this drill and a standard double pole, to emphasize and establish the abdominal compression component within the standard double pole. It may be necessary to re-establish the double pole during later stages of the progression by practicing it in isolation.

The Theory

The skating progression is designed to ease these learning problems:

- Skating movements add a third movement dimension to the classical techniques, that of lateral motion. This magnifies the timing and balance problems of the learner.
- The novel elements of the new skill require cognitive "set-up" time prior to initiation of the movement. That is, review of, and attention to the key elements of the new skill.

- Initiate with a double pole
- Abdominal compression, both forward, and in the direction of the intended skate
- Step onto the new gliding ski only when necessary to prevent a fall onto the face
- Land on a flat gliding ski
- Edging is a natural outcome of the lateral weight transfer during the skating movement if the foot and ankle are kept straight
- Learners have great difficulty achieving complete lateral weight transfer. This is manifested by an inability to bring the feet back together between skating cycles (this continues to be a part of correct V-2, and V-2 Alternate techniques).

The teaching progression addresses these problems by means of the following themes

- Periods of two footed support are added to the skating cycle to allow the learner to restore balance prior to initiation of the next skating power stroke.
- The period of two footed support occurs as part of a double poling motion. This addition slows the timing of the skating cycle (the time between power strokes) to afford the learner additional cognitive "set-up" time.
- Returning to a two footed stance between power strokes encourages complete lateral weight shift by bringing the feet back together.

The Progression

1. Students perform one normal double pole, followed by a double pole with a skate onto their preferred foot. The second foot should be placed next to the first, to leave the student in a parallel gliding position in a new direction. This two-step drill onto the same preferred foot is practiced until comfortable.

2. The same exercise is repeated onto the other foot. This is performed as a discreet drill until comfortable.

3. In this step, the two previous drills are linked. They double pole, double/skate onto the preferred foot, then double pole, double/skate onto the other foot, and then repeat. The extra double pole dramatically slows the tempo which provides time for mental set-up. Students can visualize timing and execution of the double pole/skate as they perform the double pole. The tandem stance phase allows students to re-establish balance, encourages complete weight shift, and develops the habit of returning to a feet-together stance, which continues to be a part of the V-2 stroke.

4. When students are comfortable with drill #3, the extra double pole is omitted. The progression becomes: double pole/skate to a tandem stance in the

preferred direction, double pole/skate to a tandem stance in the other direction, etc.

5. Next is a double pole/skate to a double support touch, alternating left and right. In this variation, the second foot only touches the snow rather than bearing full weight. This speeds up the timing while still emphasizing good weight transfer (feet together) and they can weight the second foot, if necessary, to solve balance problems.

6. In this step, the double support/touch is eliminated, and they are performing a correct V-2 skate. An important timing check for both the V-2, and the V-2 Alternate, is to encourage the learner to delay initiation of the skate until double poling has progressed to the point that the hands reach the thighs. The instructor may wish to consider switching to the V-2 Alternate rather than the V-2 when the touch is eliminated, as most skiers will find the balance easier when doing the V-2 Alternate as compared to the V-2.

As the learner progresses from one step to another, it is common for some of the key elements of the skill to deteriorate. In such cases, it is important to go back to the previous step until these are re-established, time permitting. (See: The Use of Comfort Zones in Teaching Motor Skills) Some learners will require additional double pole cycles during the 'double pole, double pole/skate' drills. This is fine, as long as trail width is adequate. Depending on the learner, it may be possible to eliminate or combine steps as well.