



Notes from coaching conference organised by Manchester Cross-Country Ski Club (MCCSC) at UCLan, Preston (10.30-1.30, Saturday 26 July, 2025)

The overall aim of the conference was to facilitate a discussion between Snowsport England (SE) Nordic instructors and coaches on some key aspects of teaching cross-country skiing on rollerskis as well as their applicability to track skiing on snow. The conference was split into five sessions, each of which was led by a facilitator from MCCSC who is either a Level 2 or a Level 3 SE Nordic coach.

Introduction (led by Mike Smith and Ros Brown-Grant)

Some fundamental teaching issues raised for brief, preliminary discussion were:

- If **safety, enjoyment and learning** are all key aims of a ski lesson, safety is nonetheless paramount as learners need to feel comfortable and secure for them to enjoy a lesson and to take something from it; whilst older skiers might be more anxious about safety, younger skiers might not be sufficiently aware of the risks involved, hence the instructor must remain vigilant throughout to ensure that the learning environment is a safe one. Lessons also need to be active, comprehensible, adaptable to abilities and weather.
- An appropriate **balance** needs to be struck in lessons between verbal instruction, demonstration and explanation, based on the profile of the learners in the group (i.e. children might benefit most from demonstrations and little verbal instruction/explanation, whilst an adult group of educated professionals may well require and expect detailed analysis of why a particular technique is being taught). Since learners have different learning styles, instructors need to have different teaching styles at their fingertips in order to meet their needs.
- Whilst an instructor needs to have a set of **drills** in their toolbox when planning a lesson, they need to remain flexible in their use as some learners will pick things up very fast and may well soon need further drills/progressions whilst others may need to take more time over a particular drill or indeed be given an alternative drill if they don't pick things up first time; a group can be split up as appropriate to work in pairs if there is a big disparity in speed of working on drills.

A coach/instructor therefore needs to ensure that their sessions:

- Focus on movement more than standing around
- Encourage talking rather than just listening
- Use demos in preference to descriptions
- Are flexible to change drills when they're not having the desired effect.

Filming

- Make it clear what you want the students to demonstrate
- Filming from the side often works better for most techniques than filming head on
- Film in short sections throughout the session rather than in long sections
- Try to capture a minimum of 10 cycles of the technique
- Offer to use someone's own phone to film them as they then have control over how that footage is used (this generally works better when the group sizes are small).

1. **Activation** (led by Rosie Blades)

The aim of this session was to emphasise the usefulness and importance of activation (i.e. dry land exercises performed off skis) both before and during a rollerski lesson on a particular technique. This demonstrates key body positioning in a safe and easy way and helps to build muscle memory for when the actual technique is performed on skis. The example chosen was how to get the skier into a good position for being able to do the correct leg technique in diagonal stride through a series of progressions.

- This began by standing with legs roughly hip width apart and going into a simple split leg stance with one foot in front of the other and engaging core muscles before just **rocking** onto the front foot, leading with the thigh/hip and back again: this was to show that the ankle naturally gets into a good flexed position with centre of gravity forward ready for diagonal stride.
- Next, the rocking was extended into a **balance** on the front foot, which helps bring that hip forward over the bent knee and allows the back foot to lift off the ground, a position in which the diagonal stride glide phase naturally occurs.
- Next, the rocking and balance were extended to allow the back leg to **swing forward** and become the new front leg, thus showing the actual stride phase of diagonal stride, emphasising the need to keep toes up and lead with the knee/ thigh to prevent overstriding: imagine a wall perpendicular to your head and aim to land before kicking through the wall.
- This whole sequence of rocking, balance and glide onto new leg was then repeated multiple times to get the feel of the **full leg cycle** in diagonal stride.
- The final progression was to emphasise compression and a more dynamic swing through of the back foot to land on the gliding leg and to link a succession of strides.

A key point noted was that the first part (rocking) might be sufficient for a group of absolute beginners before getting them onto rollerskis. The full sequence (or several parts of it) could be used as a revision activation for more experienced skiers during a lesson on rollerskis where something is not quite right or needs reinforcing by taking skis off.

This type of off-ski activation can be adapted to most techniques, but is particularly useful for the timing of double pole stride if clients are struggling to coordinate the phases.

These are also useful drills to practise as ‘homework’, particularly for beginners/improvers without their own kit.

2. Downhill skills (led by Ros Brown-Grant)

The aim of this session was to respond to a point recently made by one of SE’s Nordic Senior Tutors that downhill skills are one of the weaker areas of British Nordic skiers’ competence, whether on rollers or on snow, and that more practice of key skills should be done on rollers prior to going on snow. To this end, two techniques were chosen for practice: snowplough and step turns.

Snowplough (as a technique for reducing speed downhill): the importance of a **good body position** was emphasised before initiating the descent itself, i.e. flexed ankles, flexed knees, strong engaged core (with pelvis tucked under as needed), hands out wider than hip width and in front of the body with poles held roughly parallel behind, body and eyes facing down the hill.

- The issue of how much **edging** of the inner edge of the rollerskis is possible/desirable was discussed, with some people stressing that the ski should remain flat, even though this requires considerable pressure from the legs, whilst others were more convinced that a slight edge is feasible. In practice, almost everyone found their skis naturally went onto a slight inner edge on the descent in a straight snowplough.
- To emphasise the braking part of snowplough, the next exercise was **lemons or bubbles**, where the skier starts off in a normal snowplough stance, then exerts pressure through both legs to push the skis out further apart and then reverses that pressure to bring the skis closer together again, thus creating a series of lemon or bubble shapes as they descend the slope. A useful mantra here was ‘ease and squeeze’ as pressure is released/exerted down the slope. This exercise was found to offer more speed control than just a straight snowplough.
- The final exercise was **snowplough turning**, where the squeezing/pressuring was on one ski at a time, hence initiating a slight turn down the slope on alternating legs. For some, this was found to be even better as a speed control technique than lemons/bubbles, but for others it was slightly faster.

Step turns (as a technique for maintaining speed downhill): it was agreed that the body position adopted for this technique is similar to that for snowplough but slightly lower to the ground, with the suggestion made that pointing with the hand and looking forward to initiate the turn were useful things to try. It was also agreed that the actual steps taken should be very small (just lifting the front wheels, equating to the tips on actual skis) and thus resemble those taken in star turns (but of course without moving through 360 degrees!).

When teaching these two techniques, it was emphasised that the instructor needs to gauge what a group can cope with and to start at an appropriate point on the slope when teaching

(i.e. from the top with experienced skiers but only part of the way up with less experienced ones until their confidence grows).

3. Balance and agility (led by Alistair Brown)

The aim of this session was to show the usefulness of creating different courses with cones in order to enhance learners' general balance and agility and to build their skills at **cornering, turning and simulated lane-changing**. Whilst these are not for complete beginners, aspects can be introduced quite early.

Summary of Balance and Agility objectives and layouts is available from MCCSC website at <https://www.mccsc.org.uk/pages/newsletter.htm> and then selecting *Balance & Agility Session #1*.

Note agility safety aspects. Additionally, for a lesson, look out for skiers bunching in slalom or close passing of opposite direction skiers in a loop (i.e expect people to be looking at their feet, not where there are going).

For a focused warm-up ski, suggest using wide space slalom (whole group ski through before returning) or two half circles to form a circuit. Can use with both classic or skate skis.

As well as letting students get ski motion back, you can assess their ability: e.g

- over reliance on poles (using poles all the time)
- under reliance on poles (stalling in corners)
- weight transfer between skis (how close feet together in turns)
- pre-empting turns (setting up turn before cone rather than when they get to it).

Introduce cornering body and pole positioning considerations after a few runs as required, e.g. what is most common group deficiency or which change will best feed into your main session?

Finish session by getting students to pick up cones. Safety:

- if within capability (e.g ability and tiredness at end of session)
- allocate areas for students so all not going for same cone
- get the fitter skiers to collect the furthest cones.

Other agility drill ideas in summary are more focused for a dedicated agility session.

Suggest two markers (e.g cones at track edge or chalk marks) set several metres apart to demarcate a space for 'agility drills', e.g.:

- Step sideways (progress from stationary start/finish to more fluid 90° star turn into and out of side step).
- Grass walk/run back onto tarmac (works on classic or skate skis)

- Ski/ pole push/ step backwards (care to be taken when doing this on classic rollerskis due to the presence of ratchets!). Probably best to avoid on tarmac, particular if group becomes competitive. Try on the grass at the side of the track (safety, focus on leaning forward onto poles so prevent ratchets forcing a backward fall).

Note that the figure of 8 drill is not good for a group unless the cones are so far apart that the cross-over can be managed to avoid a collision.

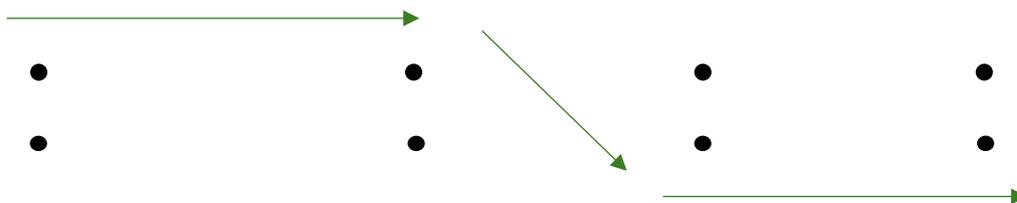
Lane Entry/Exit and Changing Setup

For skiers who are able to skate, i.e transfer weight onto one ski.

Setup two lines of cones. Suggest initially that the cones should be spaced nominally 2m apart (cones in each line aligned) and the lines nominally 0.5m apart. Adjust the line spacing for ability (the larger the gap the harder the drill). Cone spacing in line allows safe line switch with it still being obvious where the line is (you could chalk lines and not use cones - I tried it once and decided cones was easier!).

Basic drill

- Skier double poles along line with all cones (e.g) to right.
- At a gap in cone line they glide on the ski nearest cones between the two lines. They can pole just before glide (i.e Skate 2 timing) or just push and glide depending on speed/ ability.
- Non-glide foot is then placed down in line with cone line when all cones (e.g) to left.
- Weight is transferred to ski in line with cones and 'glide' ski brought in parallel
- Double pole along line



Try spacing of about 2-3m between cones and lateral spacing of about 0.5m.

Consider using pacing rather than tape measure.

As a reminder of what the skate lane entry/exit or change technique looks like, see:

https://youtu.be/pbi_e0jSAgE

Progression

- Start with one line change in one direction (e.g left to right line, switch directions between runs)
- Switch across and back between lines on a run
- Widen gap between lines and repeat.

If skiers put both skis down when traversing diagonally between lines, firstly assess your explanation of drill. If it was correct and student is struggling with balance, reduce gap between lines. There is benefit from getting skiers used to placing non-glide ski in line with cone line rather than parallel to glide ski and then stepping round to direction of line. As their balance improves, they'll be able to glide further but rest of action will remain unchanged.

You can either focus on why it's relevant for snow skiing (particularly for skiers who've already been on snow) or treat it as a 'wax on/wax off' drill to extend glide, or Skate 2 pole/glide timing, while also giving someone an easier ride teaching them lane changing on snow.

4. Classic drills (led by Mike Smith)

The aim of this session was to discuss and share drills commonly felt to be useful in teaching the fundamentals of classic techniques such as double pole and diagonal stride. There was also a brief discussion about which classic technique to start with when teaching beginners: double pole was agreed to be best.

Double pole:

- Activation on grass or on tarmac by swinging bent arms strongly forward and backwards to show how to build up momentum prior to the body drop through the poles. Use this to 'frog jump' forward.
- Note that it is useful to think of getting the body closer to the poles rather than bringing the poles closer to the body, because this gets the body into a forward-leaning position.
- Activation to prevent excessive hinging at the waist by practising the drop phase standing with one's back in front of but away from a wall and making sure that the backside doesn't bump into the wall when bending forwards.
- Falling onto skis in a 'zombie' or ski jumper stance before catching oneself on the poles (best done on grass) to get the idea of a forward lean led by the hips.
- Core engagement emphasised through the idea of crunching or holding the middle of the body firm as the body weight is dropped down through the poles.
- Bent elbows leading the swing both forward and backwards, allowing for some slight release in the triceps in the backward phase for getting full power from straps on poles but without straightening the arms; emphasis on elbows not wrists in forward recovery of poles.
- On rollers, get skier to roll to stop in down position before they start the next pole motion; this gets them used to starting motion with arm up-swing.

Diagonal stride:

- Scooting with one ski on, one ski off: pressuring the ski to spring forward onto the foot on the ground and repeating this from standing each time to get idea of

compression; the opposite, i.e. springing off the foot on the ground onto the foot on the ski to get the idea of where the power to glide comes from. Can have hands as if holding the handlebar of an imaginary scooter.

- Scooting with both skis on: how to spring forward from the back ski to the front ski.
- Scooting with both skis on: lengthening the glide and improving balance by going from 3 scoots on one foot to 3 on the other, to 2 scoots on one foot to 2 on the other and then from 1 scoot on one foot to one on the other which actually replicates diagonal stride (i.e. = alternating scoots!).
- Pretend holding a hot drink in a travel mug to get hand in right position. Then blow on the travel mug to cool it down; this encourages you to glide longer on the ski and to look up in direction of travel.
- Take strides, and on every third stride try and glide longer; can vary to every fifth, seventh, etc, as long as number is odd so gliding longer on different feet.

5. Skating drills (led by Alison Pawley)

The aim of this session was to look at ways of improving **balance, timing and compression** in the various skate techniques through discussion and sharing of different drills. There was also a brief discussion about which skate technique to start with when teaching beginners: Skate 1 was most popular, though some did suggest Skate 2. Important to get the correct offset pole position inculcated right from the start in Skate 1.

Balance: drills without poles:

- Skating with hands placed on hips.
- Skating with hands held together in front of chest in namaste position (good for stabilising a wobbly or twisting upper body).
- Skating whilst doing 'breaststroke' along each gliding leg.
- Skating whilst clapping hands in front of and behind body on each glide (hands can be high or at waist height in front, depending on technique, i.e. high is good for Skate 3 as it encourages strong arm recovery before pole plant). For Skate 3, clap in front on one ski and behind on other to get arm position timing as well as even glide on each ski.

Balance: drills with poles:

- Marathon skate, keeping non-driving ski under the body (useful to ski along a line in the tarmac or chalked line for this). Also useful for working on getting a good drive from the skating ski, which you can only do if you bring the skating ski forward after each drive and place the foot down on the tarmac adjacent to the non-driving ski before pushing out again.
- Skiing on one ski only whilst double poling, holding other leg out to the side in a skating stance.
- Tapping twice with poles on each glide.

- Pushing knee in direction of toes throughout the glide phase.

Timing:

- Double pole whilst skating on one ski only at a time before stepping forward onto new ski (emphasises the hesitation phase before planting in Skate 3 in particular).
- STOLE (= STamp + POLe) as useful mnemonic for getting timing right in Skate 1 (i.e. pole plant and drive off lead leg are simultaneous).
- Get skiers to skate in pairs with one behind the other to copy timing of drive off lead leg.
- Skate 3: emphasise slight hesitation between planting pole and drive off lead leg.
- Skate 2: think of this as single leg double pole on either side, and again slight hesitation between pole plant and leg drive, arms not going far behind waist each time; snappy transition from lead to lead but allow non-driving leg to act as counterweight to gliding leg and don't rush to get it back in each time.

Compression:

- Practise wheelbarrow drill in pairs, i.e. skier in front just stands on skis, with arms and legs locked and holds poles just behind the tips; skier behind holds onto the other end of the poles near the handles and skates to move the person in front (= the wheelbarrow); need to ensure the two skiers are roughly compatible in size.
- Practise skating with body position higher and lower to feel greater compression when body is slightly lower, though important to stress that skate should be on one ski at all times and so body is extending and compressing throughout (particularly visible in Skate 2).
- Practise skate turns by 'serpentine' down a track (i.e. three skate pushes on one side, then three on the other) or in a figure of 8 or round a circle of cones.