

Chapter 5

Core Skier Development (CSD)

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"You're not going to enjoy every minute of the journey, but the success you'll find at the end will make it all worth it."

Muhammad Ali

Learning objectives – at the end of this chapter you will be able to do the following:

- Understand that Core Skier Development (CSD) is a journey that our guests undertake on the path to becoming proficient skiers.
- Have a clear understanding of the CSD stages.
- Awareness of how CSD relates to the Skills Model.

Topics-

- CSD the journey.
- CSD model.
- CSD stages explained.



Introduction

Skiing is such an exhilarating sport for complete beginners to advanced skiers, taking our guests through many emotions, physical challenges and personal achievements. Learners can progress very quickly, and we want them to experience the “now I’ve tried it I don’t want to stop” buzz that we, as instructors, are reminded of every day we put our skis on.

So, to help achieve this buzz and set our guests on the right path we introduce new guests and/or further develop our learners using a progression, which we call Core Skier Development (CSD). The principles are the same no matter what surface we are working on (snow, dry slope, rolling carpet) however, we do adapt our drills to the surface and environment, taking into consideration friction, gradient and texture of the surfaces. We will cover this in more depth in chapter 8 where we will look at the various environments and appropriate drills.

CSD allows first-time skiers to start on a *journey* from initially sliding on snow, on flat terrain, to skiing parallel on a variety of slopes. And using it (CSD) in conjunction with the Skills Model (as explained in chapter 7) gives the learners the ability to use terrain effectively to control their speed and therefore negotiate **safely** around the mountain, experiencing the **enjoyment** that **learning** such skills can provide.

Many use the phrase “Safety, Enjoyment, Learning” (SEL). If the guests are SAFE, they will ENJOY the experience and are more open to LEARNING new skills. This important acronym, which underpins our teaching approach, will be revisited in detail in chapter 12 – safety on and off piste.

CSD is not only for beginners however; proficient skiers can benefit by revisiting stages within CSD to practice specific movement patterns and improve their motor learning through slowing the movements down thus becoming more efficient and effective with how to use the ‘skills’ as discussed in chapter 7. A phrase that really supports this idea is, “speed masks accuracy.”

Before looking at each of these stages, in turn, it is worth appreciating that *journeys* are very seldom linear and while the CSD stages model (Figure 1) is presented in such a way the reality is that our learners will move through these stages at different rates, with some spending more time at a particular stage while others may even miss out a stage and then revisit it later on. This reminds us that the overriding goal is not to perfect any one stage of CSD but to use the stages as a way of developing the ‘skills’.

Core Skier Development model

The Core Skier Development Model is a progression showing the stages of development from beginner to parallel. This provides a simple structure that allows us to see where our learners are in their progression to parallel skiing. This model is taken from the book "Parallel Dreams Alpine Skiing" and used with permission.

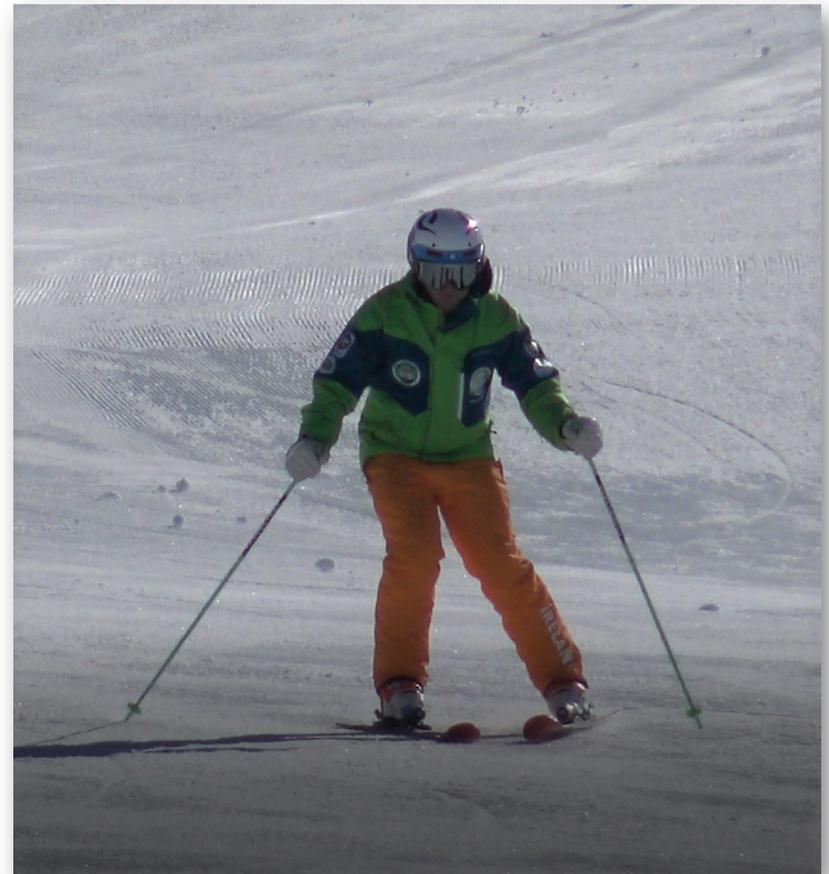
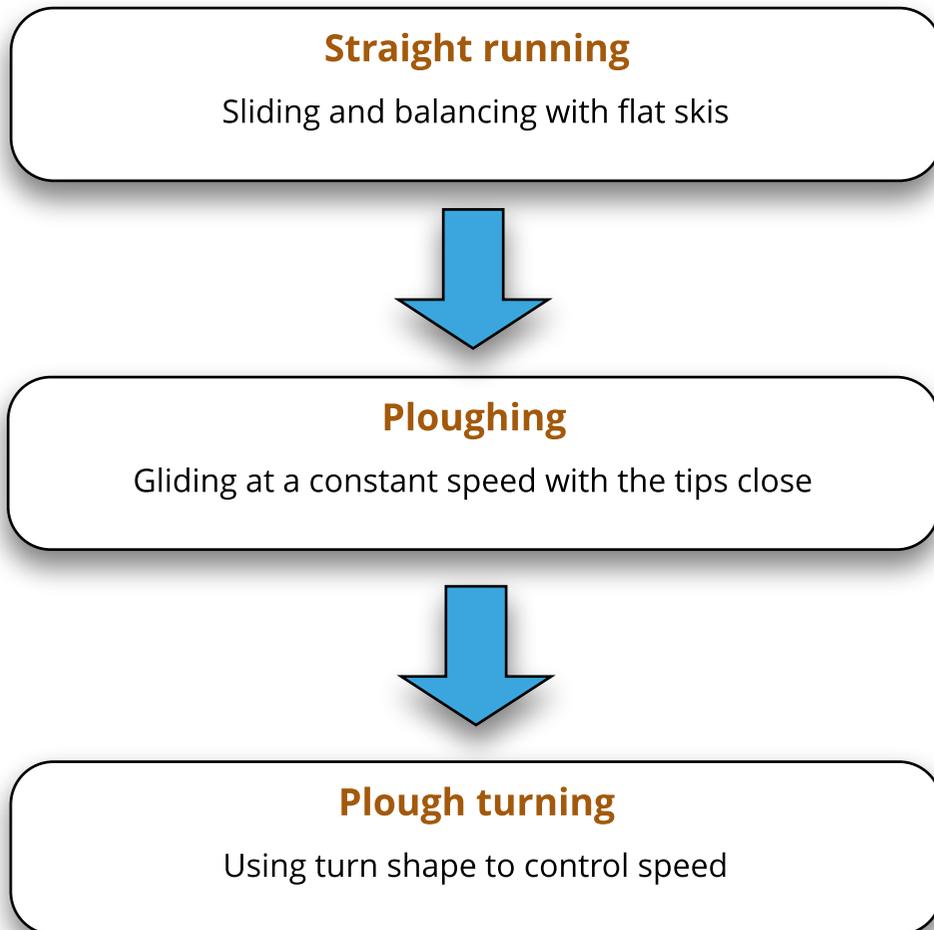
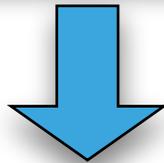


Figure 1

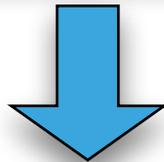
Plough parallel

Matching and continuing the curve



Basic parallel

Turning both legs and feet at the same time



Parallel using poles

Pole touch and pole plant for rhythm and timing

Figure 1 continued

REFLECTION:

How does this progression compare to systems from other countries? What are the differences? And where are the similarities?



Core Skier Development stages explained



Straight Running

The goal here is to develop confidence and balance while sliding. Instructors must choose appropriate terrain (ideally almost flat with a run out) as the control of speed, at this point, is determined by terrain. Our learners should be encouraged to balance equally on both skis keeping them as flat as possible. Lots of drills can be used at this stage to aid and challenge their balance but remember the goal is to instill confidence.



Flat skis and terrain with a run out.

Ploughing

Ploughing is when the learner begins to control speed through using the skis in a plough shape (V). Choice of terrain is again crucial at this stage. Too steep a pitch will force the learner to make a large plough shape, which will result in poor stance and posture and a defensive approach to skiing. The movements required from straight running to a plough are the turning of both legs and feet, whilst displacing the feet slightly wider than the hips in a comfortable stance. The turning effort or rotation of the legs/feet should be happening from underneath the foot rather than pushing the tails of the skis out. As this move is made a slight flexion of the ankles, knees and hips should be encouraged.



The plough shape can initially be practiced on flat terrain before using it to control the descent.

Plough Turning

Having established a good gliding plough the learner is ready to control their speed by using the plough shape to change direction. Carrying forwards the good stance created in the ploughing stage helps the learner maintain balance while sliding and turning the whole plough shape around the arc. Control, at this stage, is very important, so that the learner uses the “C (shape of their turn) not the V (larger defensive plough shape)” to control their speed. Focusing on the tips of the skis is useful, at this point, with the goal being to move both tips in the desired direction. In practice, this means that the inside ski of the plough is slightly flatter than the outside ski allowing the inner ski to be steered easily. Once this is mastered, on shallow terrain, our guests will feel confident keeping control in both directions and regulating their rate of decent.

As our learners' plough turning ability is developed their stance should remain centered and relaxed with appropriate bending in all joints (ankles, knees and hips). Choice of terrain remains crucial: too steep and the learner will adopt a defensive position. The plough will become too large, the tails of the skis will grip too much in the snow resulting in the inability to steer both skis.



Here a small plough shape is used with the tips of the skis fairly close together. The inside ski is flatter than the outside making it easier to steer both skis in the desired direction.

Plough Parallel

Now that the learner is able to steer the skis accurately in both directions and keep their speed under control through their turn shape, they can be taken a step closer to becoming parallel. As the pitch and/or speed of the learner increases, more pressure builds up on the outside ski in the second half of the turn. At this stage, and as long as the learner effectively balances against the outside ski, the inside ski can be released to allow it to rotate to **match parallel** to the bottom ski more easily. A simple way of describing this move is to roll the inside knee uphill towards the little toe of that foot and rotate the foot to match the skis parallel. This will result in the inside ski tip opening and moving away from the outside tip (as shown in Figure 2 opposite). As long as the terrain does not become too steep or variable our learners will become competent quite quickly at plough parallel.

The choice of the word 'matching' is very important as the goal is to allow the inside ski to copy the outside one so that **both skis are steered in a curve**. This is often a potential blockage to moving toward parallel turns as the learner is so intent on getting the inside ski parallel that once this is achieved they stop steering the skis and therefore end up traversing rather than learning to steer both skis/feet through the end of the curve.

Another important point, at this stage in the 'progression', is to ensure that the learner maintains a small plough shape at the initiation of the turn. This encourages the hips to move forwards and across the feet, which at the parallel stage becomes known as the 'crossover'.

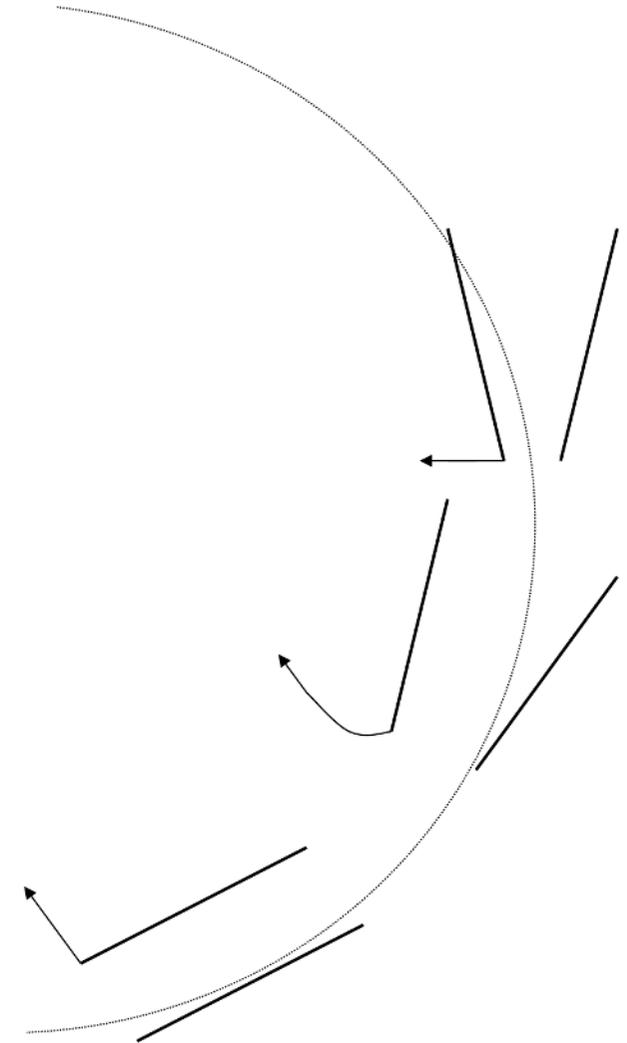


Figure 2

Basic Parallel

The learner now allows both skis to turn at the same time, by the same amount in the same direction. All the previously learned skills need to be practiced with revision on balance, steering and controlled skidding. The key factors to a parallel turn are increased speed through the arc and an increase in gradient (but not necessarily both at the same time!). The definition of a parallel turn is that the skis remain a similar distance apart from tip to tail and both skis are steered from the top of the arc to completion. At this stage, a blending of the 'skills' is required in order to achieve and maintain effective balance over the outside ski and to be able to steer the skis efficiently. A good combination of rotation, edging and pressure control is needed in order to make the turns flow from one to the other. Once this task is more accurately achieved a **pole touch** or **plant** can be added to aid timing and co-ordination to the turns.

The terms pole touch and pole plant are used deliberately, as a pole touch is more about the timing of the edge change process, while a pole 'plant' suggests a firmer action that offers support as well as timing. The corridor being skied and how much the turn is rounded off, or finished, will determine whether a light touch or a firm plant is more appropriate.



Both skis remain parallel throughout the turn with both skis being actively steered.

Additional Activities

As part of the learner's journey through the CSD stages there are a number of additional activities that can be used and practiced to help develop the 'skills' but also to make it easier to cope with the varied terrain that is encountered especially for those in a more mountainous environment. Some of these are 'assessed' as part of the instructor certification but all are useful for our guests when helping them to progress and develop. They include **traversing**, **side-slipping**, **falling leaf** side slip, **garlands** and **swing to the hill**. More detailed descriptions of these can be found in chapter 9, which looks at using the skills for piste performance.

Conclusion

As skiers progress through the stages of Core Skier Development we, as instructors, must aid them to understand how simple the process is rather than putting blockages in their way. It is a *journey* from sliding to parallel turning. We use appropriate drills, based on the Skills Model, to aid them to stand well over their skis and through our knowledge box of anatomy and biomechanics we can help them to manoeuvre their skis to achieve the required outcomes to progress through the CSD stages. Further reading of chapter 8 – using the skills in CSD, will provide you with more insight into the various facilities/slopes we teach on and give you appropriate drills to use to help your guests achieve their goals. On the next page we give some examples of these facilities two of which are in Ireland.

And finally: An important point to remember, as an Instructor, is that this progression gives a structure which allows us to **recognise where our students are** in their development towards parallel skiing. We DO NOT TEACH CSD but instead use Basic Principles as the outcome using the IASI Skills Model to help our guests navigate the journey..

Snowsport venues

In addition, to on-snow venues in mountainous environments here are some examples of snowsport venues where IASI members work and where Level 1 courses, in various disciplines, take place.



The Snow Centre, Hemel Hempstead, England



Above the Ski Centre rolling carpet slope, Sandyford, Co. Dublin and below the Ski Club of Ireland, Kiltarnan, Co. Dublin



Summary - key points from this chapter

- CSD is a *journey* from sliding on snow to parallel skiing.
- CSD is not only for beginners as proficient skiers can benefit from developing their movement patterns at slower speeds. Often times, "speed masks accuracy".
- The CSD *journey* is seldom linear, and the amount of time it takes to progress varies from one individual to another.
- The key goal in straight running is to develop confidence and balance whilst sliding.
- In ploughing the choice of terrain is vital so that the learner does not become defensive and use too big a plough.
- For plough turning the goal is to control speed through turn shape. "Use the C not the V".
- For plough parallel remember that your learners need to match the inside ski and continue to steer both skis through the end of the curve.
- Increased speed around the arc and slightly steeper pitches are the keys to helping your learners progress toward parallel (but not necessarily both at the same time).
- We do not teach CSD but instead we use the Basic Principles as the outcome(s) and teach the skills as described in the IASI Skills Model using a range of drills from our knowledge box.



Suggested reading and resources

This chapter has presented the CSD model and explained each of the stages and while the photographs help to bring the words to life the most useful resource to accompany this chapter is the outcome standard videos – levels 1 to 3, which all include demonstrations of the CSD stages performed by members of the education team.

References

IASI Technical Assessment Criteria – Levels 1 to 3, Documents section, www.iasisnowsports.com

Tate, D. (2007). Parallel Dreams Alpine Skiing: Taking your performance to new levels. *Parallel Dreams Publishing*. ISBN: 978-0-9556251-0-7

Skiers featured in the photos are: Jamie Kagan, Federico Sollini and Shona Tate. The action photos taken on the 'artificial slope' with Shona Tate demonstrating are at Firpark Ski Centre, Tillicoultry, Scotland.