Factors that Affect Performance

Athletes are like Formula 1 race cars, everything has to be working, in the right order, to ensure optimal performance. The same goes for ski racing. Factors that can affect skiing performance and skill development are:

- Environment
- Equipment
- Physical
- Psychological
- Tactical
- Technical

Let’s use the example of developing the skill of vertical movement with entry level athletes. The coach chooses to use the exercise ‘hop turns’ to improve this skill and one of the athletes is having difficulty ‘getting air’ between the snow and their skis. Before intervening the coach needs to consider the following factors that could be affecting the performance.

Environment – Refers to the variables in the physical surroundings that are outside the skier’s control.

Questions a coach should consider - Is the terrain I have chosen too steep or flat or have too much ice? Do the snow conditions allow this drill to be completed with success? Is the weather affecting my athletes’ ability?

Equipment – Refers to equipment that can be modified if necessary in order to allow the skier maximum possibility to control their performance and eliminate outside influences that may contribute to poor performance.

Questions a coach should consider - Can they bend their boots? Are the boots or equipment limiting their range of movements? Are the skis or poles too short or too long?

Physical – Refers to growth and development related issues that may limit a young skier’s motor abilities. These include;

- experiencing a growth spurt,
- being fatigued,
- recovering from an injury.

Growth and development factors can influence a skier’s:

- strength
- flexibility
- balance
- agility
- coordination
- nutrition
- hydration
Questions a coach should consider - Are my athletes capable of doing what I am asking, could they do the drill without skis/ boots or equipment on?

**Psychological** – Refers to growth and development factors that influence a young skier’s mental processes and abilities. Factors include:

- emotional control
- attention control
- self esteem
- self confidence
- fear

Questions a coach should consider - Are my athletes scared or too tired? Have they ever done this drill before? Do my athletes trust the coach? Do the athletes have issues performing in front of each other?

**Tactical** – Refers to factors that affect what the skier does on-snow in certain situations. These include:

- choice of line down the hill
- turn shape
- type of turn
- dealing with environmental factors

Questions a coach should consider - Is the turn shape/ speed and line of the drill realistic to observe success with this exercise?

**Technical** – Refers to factors that limit the progression of on-snow motor movement and form such as:

- basic skiing skis
- planes of balance
- skiing biomechanics

Questions a coach should consider – SO if all other factors are optimal, does my athlete need a better demonstration, explanation or would they benefit by following someone? Does the coach have a full understanding of what level of skill development the athlete is at and can recognize the difference between what is causing the problem versus what effect the problem is causing?

In many instances coaches default to assessing and intervening (or giving feedback) directed towards the tactical and technical performance observed. What a coach should consider is spending more time in the ‘observation’ and ‘assessment’ stages of the skill analysis process and truly understand the difference between what you see and the performance that you expect to see. Then the coach can ask the question, have I considered ALL of the factors that could be affecting the athletes performance BEFORE I make my diagnosis and plan for intervention.

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References
CSCF Entry Level Reference Material, Technical Articles