



Landing Learning Theory on Ice

Increase Coaching Success Using the Secrets of Master Educators©

The Design for Effective Instruction

Successful coaching is evidenced in ice skating rinks across the country every day. Additionally, the advancement of science and kinesiology as it applies to skating instruction technique has made a tremendous impact on technical results in recent skating history.

However, questions remain:

- Are there other ways to increase the rate and degree of learning figure skating technique?
- Does research exist on how to better motivate students and enhance their desire to take increased responsibility for their own progress?
- Can coaches and choreographers help increase student retention of new information?
- What about strategies to more effectively transfer relevant knowledge from one skating element to another?

The answer to all of these questions is “Yes”. Researched and proven teaching techniques can be readily and successfully applied to the coaching of figure skating.

The Design for Effective Instruction is an educational model created at the UCLA School of Education’s Lab School. It is based on a collection of proven learning theories gathered by Dr. Madeline Hunter and successfully integrated into teacher training programs from kindergarten through university-level instruction.

Imagine having easy-to-adapt learning theories in your arsenal of coaching techniques which will increase the speed with which skaters master skills, increase successful execution of elements, own more of the responsibility of training, and transfer skills more readily to related elements.

The learning principles of this model that apply to figure skating instruction include two theories:

- I. Motivation Theory
- II. Retention Theory

I. Motivation Theory

Remember When ...

Think back to a time when you felt great success or satisfaction with something you learned. It may have been on the ice but perhaps it was something you learned in a formal education setting or some other skill or success you achieved. Why did this accomplishment have such meaning for you? Was there an individual who supported, challenged or mentored you to achieve this success? What motivated you to pursue learning this accomplishment?

You can lead a horse to water, but you can't make him drink. However, you can do certain things to increase the probability of his drinking. You can run him hard, withhold water, or even salt his oats.

Motivation, a skater's *intent* to learn, is one of the most important factors in successful accomplishment. All choreographers and coaches suffer frustration when a skater is not putting forth effort to learn. Students may even face us with an attitude of nonchalance or even, "I simply don't care – whatever..."

It is important to realize:

- 1) Motivation is not generic, it is learned.
- 2) What is learned can be taught.
- 3) Teaching is our business.

Therefore we need to become knowledgeable about proven techniques which have high potential for increasing a skater's motivation or intent to learn.

Of course many factors affecting a skater's motivation are out of our control (home life, history and experiences). These factors have already occurred. It is only in the present that we can use the factors of motivation theory to help us increase our skaters' efforts.

Motivation theory has four factors to help increase a skater's level of motivation.

Four Factors of Motivation Theory

1) *Level of Concern* is a motivational factor that can be varied to a moderate degree. How much does your skater care about whether he or she learns? Research shows that a moderate level of concern or stress is essential for a student to maximize their efforts. However, too much concern can get in the way of a student learning for example if they feel exceedingly frustrated or frightened. *A coaching decision should be made about how to instill a moderate level of concern that will stimulate effort to learn. Example: "Be aware that if you turn before the top of the circle you can catch an edge and fall hard on your hip."*

Creating this moderate level of concern can minimize distracting skater behaviors such as drama or excuses. It helps focus students on learning objectives and success. A coach's tone of voice can vary the level of concern as well. There are times when being stern can focus a student's attention but other times a sense of humor or a lighter feeling tone will draw the skater in. Getting very quiet can be effective at increasing a student's attention.

A statement like this might increase the level of concern and set a serious tone for the lesson without the coach having to use a harsh tone.

"The jumping technique we are going to work on today can be quite difficult to master if you are not paying close attention to the details."

On the other hand, if your skater is too concerned that a task will be too hard for them, you can lower their level of concern with a reassuring comment.

"Since you've demonstrated such strong technique over the past few weeks on all of your doubles, I am confident we will have good success learning your triple toe fairly quickly."

2) *Feeling Tone* tells us that how a skater *feels* in a particular situation affects the effort he or she is willing to put forth to achieve learning. Obviously students are most likely to put forth effort to learn if they find the learning situation pleasant and if they anticipate success. This is called *pleasant feeling tone*.

Unpleasant feeling tone also activates a learner to put forth effort.

"We've discussed this before and if you don't get those brackets within the next few weeks, we won't be able to test before the deadline for regionals."

There are times when a negative feeling tone can stimulate a student's motivation. But we should strive to eliminate the possible effect of student avoidance (not practicing, for example) by returning to pleasant feeling tones as soon as the skater puts forth the effort to learn.

"I've put a lot of pressure on you to work on those brackets and you've responded beautifully. I'm seeing progress."

Research shows that instructors should primarily use a neutral to positive feeling tone. Save very positive or negative feeling tone for special emphasis for it to have the most impact on student learning. If using negative feeling tone, always return to a neutral or positive feeling tone.

3) *Success* is a third factor which increases a student's motivation. To feel successful one must first expend effort and have a certain degree of uncertainty about the end result. If a task is easy and requires little effort, we feel little success and are not motivated to continue. If, with effort and no guarantee we can accomplish the learning, we achieve it, we feel successful and are generally motivated to continue to try more.

"It's taken a lot of work but you have gotten the nuance of changing from the outside to inside spirals smoothly. Let's put on your program and apply that same smoothness in your spiral sequence."

The more success skaters experienced in the past, the more optimistic they are about future performance. Even if there is a greater risk of failure, successful students will try.

"Although you used to be intimidated by the double Lutz, you mastered it before your injury. It is OK to be a bit concerned. You can be courageous and still be just a bit afraid! I know that if you apply the technique we just discussed you will be well on your way to landing it."

Conversely, those who experienced failure in the past are less willing to expose themselves to risk because their prediction is they won't make it. To protect themselves

they may subconsciously turn to behaviors that make them appear unmotivated.

Coaches can help by lowering the bar for less-able students. *This does not mean we let them get by with less but that we build in the support and help they need so they can get to the next level.* Success is a building process and everyone's journey is different.

4) *Interest* is the fourth factor which can affect a skater's intention to learn. Interest is not inborn but acquired. It can be promoted by the choreographer or coach in two ways.

- a. The first is using a *student's self-interest*. Relating examples to their life, using their name, giving examples that refer to the skater's experiences, positive statements about the skater's performance or their learning ability are a few possible strategies.
- b. A second way to make instruction more interesting is by *accentuating the novel or vivid*: That which is different or unexpected. Examples might include:
 - Changing your tone of voice or position in the rink.
 - Moving from telling information to asking questions to check a student's understanding.
 - Having a skater they admire demonstrate a skill.
 - Moving from oral instruction to written.
 - Asking the student to take notes in their skating journal.
 - Using the harness.
 - Bringing in different music to create a point.

Anything different from what is usually experienced can elicit an "alternating reflex" in the student's brain and greater attention can result.

"As you know, our coaching team has been checking how well each of you are: 1) practicing, 2) taking responsibility for improving your skating, and 3) coming to each lesson upbeat, prepared and warmed up. So the skater who accumulates the most points over the next 6 weeks will be our guest for lunch on July 16th."

Interest encourages the coach to vary the activities in a given lesson, vary the modalities (saying, showing, drawing, demonstrating, etc.) that are used to make corrections, and adding diversity during the coaching time. When teaching patterns to small children, for example, it might be a great motivator to bring in a turtle to see the pattern on his shell. However, if we brought in a boa constrictor to teach patterns, this might surpass "interest" and frighten them. The point is that adding vivid or unique ideas are motivating but creating fear or too much tension can be de-motivating.

No one factor, *concern, feeling tone, success or interest* is most important. They interact and we use them together to achieve positive results.

II. Retention Theory

Watching coaches and choreographers seeming never-ending patience with their skaters is one of the most remarkable things to witness in the coaching process. Every coach should be rewarded with a "Calgon – take me away" moment each and every day!

Of course patience and many repetitions are needed to learn the many technically complicated elements in figure skating. So much of the learning process is built upon past successes. *But we can apply the learning theory of retention to help decrease the time it takes a skater to learn by helping them remember what they have learned before.*

Research tells us that the way something is taught has a great deal to do with how well information is retained and whether it can be recalled for later use.

Consequently, it is important to know that Retention Theory can help a coach or choreographer with specific ammunition they can use to help their skaters move from, "Never heard of it", into, "Sure I remember!"

To increase retention, create stated objectives (if only in your mind) for your lessons at a level that is appropriate for each skater – not too hard and not too easy. Use the four factors below to substantially increase the probability that students will remember what they have learned.

Four Factors of Retention Theory

1) *Meaning* does not exist in material but in the relationship of that material to a skater's past knowledge and experience. When coaching, consider taking a student's past experience or success and relating it to the present learning or skill you wish to teach or reinforce. If you then relate it to future situations when this skill might be used to achieve a goal or transfer a skill, you greatly increase the chance of retention.

Past knowledge and experience ⇒ Present skill to be acquired ⇒ Future situations to transfer learning

"Once you are landing your Lutz consistently we can start work on your Axel."

"Learning this technique now will cut down on the time we will need to prepare for your Juvenile MIF test."

Meaning can also be added to lessons by providing examples that are personal to each student. Every skater should have his or her own short and long-term goals for skating. When a coach provides a personalized statement about these goals, this can significantly increase motivation and retention.

"You mentioned that you found a piece of lyrical music to consider for next year's long program. In order to skate successfully to that type of music, your skating skills will have to get stronger. Let's make a list in your skating journal of 3-things we will work on to improve your speed, skating skills, and transitional elements."

Examples of Adding Meaning:

- Give out an occasional handout.
- Assign periodic homework that the skater is accountable for.
- Update and review the student's journal periodically and do so unannounced and intermittently.
- Provide specific examples of how other skaters have accomplished difficult tasks.
- Compliment your skater's accomplishment in front of their peers.
- Develop clear practice assignments shifting some of the responsibility for improving and practicing effectively to your skaters.
- Use a variety of modalities (talking, seeing, hearing, drawing, executing) in lessons.

Remember retention is increased if you vary the modalities or ways that a coach interacts with a skater such as: Say something, then write it down or have the skater say it back to you, then demonstrate or add a detail, and then have your skater do the element.

Within 24 hours of being presented with new information most will remember about 40% of what they heard, 60% of what they saw and heard, and 70% of what they say, heard, and "touched" (did physically in this case). *Increasing the use of modalities increases retention.*

To add meaning and to maximize a student's retention of new information provide very specific feedback as to how to improve it. Saying something like, "That was better" doesn't give the skater information on what they should do the next time to achieve the improvement or new skill.

"That was it! You achieved complete rotation because you kept your arms and head to the right side of your body on the take off."

"That was a good try. If you lift your left hip up as you cross your left leg over your right you will achieve a tighter position and rotate more quickly. Please do it again."

"Yes, that was better because you used your under push in a stronger way and more quickly." (Occasionally you might point to a drawing you jotted down or show the skater visually.)

2. Teaching to Both Halves of the Brain or "Hemisphericity" significantly enhances the retention of information.

Brain research tells us that when people process information sequentially, or one step at a time, it is with the left side of the brain. You are probably using your left hemisphere as you read these words. You add what you are now reading to what you just read. Your left hemisphere is analytical and sequential.

The right half of your brain uses visual, non-language and artistic cues and positions relationships.

Your right and left hemispheres are connected by a heavy band of nerve fibers which allows the hemispheres to "cross talk." Neither hemisphere is the more powerful. You need them both. In the same way that you will catch more balls if you use both hands, you will catch more ideas and information if you use both hemispheres.

Many choreographers and coaches successfully incorporate visualization techniques into their coaching. Visualization requires the skater to integrate the logical technical steps they must use (left brain) while visualizing themselves successfully completing the element (right brain). The fact that visualization combines both sides of the brain makes it a great strategy for creating success and retention of skating elements. This technique can be used just before executing a difficult element. It also works well when a skater is off the ice with an injury but still wants to practice technique. The skater can visualize successful elements or even practice their program in his or her head as they listen to their music and create positive transfer when returning to the ice. Visualization can be a powerful tool in the pre-competition warm-up.

In any teaching, but especially in teaching anything as physically technical as figure skating, we need to beam information to both sides of the brain so that a skater can

achieve maximum integration. We need students to intellectually understand the concepts of an element in a logical, step-by-step concrete fashion (left brain). But equally as important, we need students to be able to move physically integrating the logical steps of the technique into the physical execution of the element or move (right brain). Teach purposefully to both sides of the brain.

We frequently see coaches using their USFS Moves in the Field books on the boards at the rink. They show a skater the move in the book (left brained activity) and then demonstrate the move (right brained activity). One coach even draws red lines on pages of his Moves book so students can understand how the short axis works in executing the Moves correctly.

3. Checking for Understanding is another great way to increase retention and reduce coaching time to achieve success. The job of a choreographer and coach is to inspire, not perspire. A question such as, "Do you understand?" followed by a nod on the part of the student doesn't really mean they got the message you intended. Consider asking specific questions that require the skater to supply a specific result demonstrating the knowledge was received.

"OK, tell me the two most important things you learned today about how to complete rotation of your Axel?"

"What is the correct arm and leg position that you need to achieve in order to get that rocker/Choctaw sequence?"

"What did you do differently that time that allowed you to land that one more securely?"

Every coach is painfully aware of how hard it is to break a bad habit in technique. Practice does not necessarily make perfect. Practicing something perfectly does. Teaching proper technique and being sure that the steps are understood along the way increases retention. From an educational perspective, this is called the Degree of Original Learning. If someone learns technique correctly the first time that skill is going to be much easier to master than going back later trying to correct poor technique.

To help your skaters have a strong degree of original learning with all of their elements, *check for understanding along the way*. Learning technique for complicated elements is a developmental process. If you check to see if your skater understands the basics as you are coaching, bad habits will be minimized and a much higher rate of retention will occur.

"If I asked you to teach the elements we just learned for increasing the speed of your step sequence, what would you tell another skater to do?"

When making corrections, first show the skater what they should have done and *then* show them what they did wrong. Research shows that this increases the probability of them doing it correctly the next time because the first visual they saw was the correct way to execute the move. Demonstrating their mistake first unfortunately increases the chances of them doing it incorrectly again.

4. Positive Transfer of Learning is one of the most powerful principles of learning. Transfer is the process of past learning influencing the accomplishment of new learning. Transfer can dramatically shorten or lengthen the time it takes to acquire new skills.

Certainly ability plays a role in a skater's success when learning new elements. But incorporating the essence of positive transfer can accelerate any skater's success. *The process of past learning accelerating the acquisition of new learning is called positive transfer.*

An example of positive transfer would be a skater with good edges who can easily apply the skill of using a strong back outside edge when learning a Lutz for the first time. Or consider a skater who is a fast spinner and also has flexible spirals who can easily apply that flexibility while spinning without losing speed.

The transfer of old learnings is not always positive. Old habits can interfere with the acquisition of new learning and result in confusion or errors. *When old habits interfere with new learning, it is called negative transfer.*

An obvious example of negative transfer is the wrapping of the free leg on certain jumps that transfers to harder jumps as they are learned.

Encouraging Positive Transfer: Hook into previous learning experiences and pull that knowledge forward to facilitate present learning.

Decreasing Negative Transfer: Cut off past learning to prevent the interference of negative transfer to present learning.

Apply the other principles of Motivation Theory and Retention Theory to develop strategies to promote positive retention and to decrease negative transfer. Remember that a high degree of correct original learning will greatly enhance positive transfer.

CONCLUSION

Coaches and choreographers already have a strong arsenal of tricks and techniques for teaching complex skating elements. However, if proven and successful learning techniques are consciously and consistently planned for and applied during the coaching process, the rate and degree of learning will increase. Students will become more motivated and retain more of the learning. Positive transfer of teaching one element as it relates to another will also increase. These proven learning theories also provide strategies and techniques to make skaters more responsible for their practicing and learning. These theories give coaches more options to choose from to help make skaters more accountable and to come prepared for every lesson, including showing up warmed up and with a good attitude.

About **Increase Coaching Success Using the Secrets of Master Educators© 2014**

Merry Neitlich, M.A. in Education, is the Director of the Coach's Edge, a marketing consultant, presentation skills coach and educator. She is also a competitive figure skater who has earned four national gold medals at the U.S. Adult Figure Skating Championships. Since 2009, Merry has been developing enhanced strategies working with coaches to apply proven educational theories and research to the teaching of figure skating to increase the rate and degree of the success of their athletes. This article strives to codify and expand upon the way many coaches organically utilize the principles of the educational models presented herein.