### Off to a Good End

### How Back Chaining Can Improve Performance

by Lynn Loar, Ph.D., LCSW

E HAVE ALL watched talented skaters with countless hours of training behind them get rattled after they have fallen on the first or second jump in their programs. Occasionally, the fall really hurt and that compromised the remainder of the skater's performance.

Far more often though, the skater was overwhelmed by the consequences of the missed jump — a place on the podium perhaps — and could not focus

on the rest of the performance effectively enough to salvage the remaining 75 to 90 percent of the program. Where did all the disciplined preparation go? Why, when skaters fall routinely in practice, is the fall on a jump the skater has fallen on often so disconcerting that recovery is not possible? Sure, there is despair at the lost opportunity for stellar scores — but only one point is deducted for the fall, and the skaters know this. There is

immediate deflation that saps energy and enthusiasm, and a temporary unsteadiness that follows a bad fall. But there is something else at work here, namely a flaw in training, and happily a flaw that coaches can readily correct. This technique will not prevent the first fall but will definitely help the skater regroup quickly and deliver an otherwise reliable and polished performance.

# WHAT GOES WRONG: FORWARD CHAINING

When we listen to music, watch a movie or attend a play, we start at the beginning and go to the end. That's fine for the listener and the observer, but not for the performer. The performance is linear,

With back-chained programs, skaters go from weakness to strength, to the always completed ending. Their attention span and stamina have been trained to the duration of the full program.



going from beginning to end, but the preparation should be backwards, that is back chained. Think about people singing the first stanza of a song and the choral refrain with gusto, getting very shaky on the second verse, with words they barely and inaccurately remember, and returning enthusiastically (and with relief) to the refrain, because they know they can finish it correctly.

It's that confidence in finishing well despite a bumpy start that a lot of skaters are missing. Many skating coaches actually, if unwittingly, contribute to this problem by forward chaining when they teach programs. The student starts at the beginning and skates until a mistake is made. The coach stops the music, talks

about the mistake and perhaps has the skater practice the erroneous move, then starts the music at the beginning again. The coach facilitates practicing from the beginning to the rough spot and then stopping, despite goals of having the skater complete a flawless program. With forward chaining, the performer goes from the very familiar and well-practiced beginning to the increasingly unfamiliar and undertrained territory, which is unavoidably stressful due to the length of the program. Skating from familiar and well-trained openings, then falling en route to the less well-trained middle portion of the program is a prescription for ending badly as fatigue and errors combine with the uncertainty of the under-practiced ending.





#### >> HOW TO FIX IT: BACK CHAINING

Here is an example of a gifted piano teacher preparing a 10-year-old student for his first piano recital:

The teacher said to the student: "You are probably going to play very well, so there will be applause when you finish. It is gracious for the performer to bow to the audience during the applause. Let's pick where you will stand when the applause starts and practice the bow."

The boy went to the center of the stage, selected his spot and bowed awkwardly. The teacher and boy discussed the placement of his arms for the bow, and the boy practiced the bow a few more times until he was satisfied.

Next, the teacher said: "You will probably be sitting at the piano when the applause starts, so you will have to walk to your spot to bow to the audience."

So, they went to the piano, the boy turned to face the auditorium, walked assuredly to his spot and bowed without the awkwardness of his first few tries.

Then, the teacher back chained another link by having the boy sit on the piano bench and play the last note of the piece, get up, walk to center stage and bow. The next link was playing the last musical phrase of the piece and continuing through the bow. The teacher had the boy practice adding the penultimate phrase, then additional phrases each time and continuing through the by-now-very-familiar ending through the bow.

The boy's steadiness increased with each trek from the piano bench to his spot. They back chained the entire piece, one phrase or two at a time (so the music makes sense), and the boy's confidence increased as the piece he played got longer. His confidence built as he continued to the most familiar and most practiced ending, filled with the certainty that his playing of the final note would be met with applause. If he missed a note or two along the way, that might annoy him, but it would not change his sure handedness toward the end of the piece or his composure as he approached the final note.

The brilliance of the teacher's lesson was adding a few steps beyond the conclusion of the piece to the end of the chain, the walk and bow to applause — easy steps that reinforced the student's expectations of success. That addition shifted the halfway point into the second half of the piece and imbued the performer with a sense of increasing success as he approached the ending.

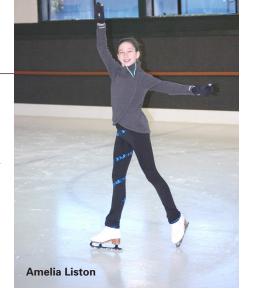
#### HOW TO TEACH A BACK-CHAINED SKATING PROGRAM

First, ask your student to play the music a number of times to become familiar with it. On the ice, start the music at the beginning and skate around with your student moving with the rhythm of the music. Point out a couple of key things a fast part for footwork, a drum beat for a jump landing and the like. End up where the skater will finish the program as the music draws to its conclusion. Play the last note again. Teach the student the final pose that accompanies the last note. Repeat this a couple of times — the student should add a bit of aplomb to show mastery. Then teach the final spin and its entrance (or however else the program ends) and have the skater do that and the final pose. Back chain a segment at a time, perhaps over three lessons if the program has a typical ABA (fast, slow, fast) form.

Your student may or may not miss the most difficult moves at the beginning of the program but will surely concentrate and perform confidently throughout the remainder of the program. Finishing successfully builds confidence and counterbalances the disappointment of a missed opening move. The skater's mindset will match the mathematical realities, a point or two lost along the way of a respectable performance.

## WHY BACK CHAINING IS SO EFFECTIVE

Forward chaining focuses on the first steps, where choreographers put the hardest moves, the ones the skater is most likely to miss. This means that forward-chaining programs concentrate on errors rather than on success, and thus do not develop confidence. Because of the



tendency in forward-chained programs for the skater to stop after a major error, forward chaining also does not build stamina or concentration. Finishing well is a rarity, so confidence is compromised by anxiety as the skater approaches an undertrained ending.

With back-chained programs, skaters go from weakness to strength, to the always completed ending. Their attention span and stamina have been trained to the duration of the full program. This impetus to end well carries the skater past an opening error — the skater loses one point for the fall — unfortunate but not the end of the world. The fall is not catastrophic, because the rest of the program is not compromised as a result of the one-point fall. Instead, the skater puts the error in perspective and continues through the program to its well-rehearsed ending note and concomitant applause.



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