Black Widow Experience Index of Teaching Points

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Stance

- Chin lock
- Balanced "tripod" stance
- Foot placement
- Proper arm position/alignment
- Adequate clearance
- Comfort

Grip

- Neutral hand position
- Uniform tension throughout stroke, no "clenching"
- Perpendicular Forearm at impact

Bridge

- Stable throughout stroke
- Proper Open Bridge
- Closed Bridge
- Rail Bridges--open, closed
- Elevated Bridge--obstructing balls, jump shots

Practice strokes

- Approach/address cue ball at exact target spot you wish to strike
- Stop at cueball and use eye movement before starting strokes
- Equal speed and length of strokes as intended final stroke.
- Make sure strokes stay on intended track both ways.
- Final pause at the cue ball

Pause

- Use eyes to confirm aim
- Before final swing
- At the top of swing
Transition/Stroke

- Slow, straight backswing—let it pause at top of swing
- Like underhanded softball toss
- Smooth transition
- No body motion throughout
- No elbow drop
- Accelerate straight through the cue ball

Follow through

- Tip finishes straight and downward
- Check your tip finish before getting up.

Position Play

- Natural Roll—show patterns to help us recognize (drills)
- Stop Shots—stop shots at different speeds and distances (drills)
- Tangent Line—how to recognize and change cue ball path based on tangent line

Strategy Lessons

- Choosing first shot
- Going backwards from 8
- When opponents ball is in pocket

Break Instruction

- Use Break Rak

Extra Topics

- Hanger Material
- Safety play
- Jump Shots
- Diamond Systems
- Reading the rack
Proper Alignment and Setup

PROPER = Bridging arm is straight and firm. Stroking arm is positioned directly over the shot line. Notice chin, eyes, stroking elbow, and stroking hand are centered on the shot line. The cue is as level as possible.
A = PROPER = A view of a proper stance. Back toe is on the shot line. The front foot is diagonal from the back heel; providing balance, strength, and clearance. Toes are pointed as if walking naturally forward for ease in assuming the stance and for comfort. Back leg is straight to give more consistency. The front leg can be bent as shown if comfortable.
B = PROPER = Another version of a proper stance. In this stance the right toe is still on the shot line, but the left foot is turned parallel to the shot line. Our hips and bodies are different so the exact foot/toe direction is not as important as the foot placement itself being diagonally from the shot line.

C = IMPROPER = Any stance that takes your back leg away from your shot line will change your entire alignment. It will prohibit you from keeping your elbow, hand, chin, and hips all on one plane. It also leaves the right elbow hanging too far away from the body. It forces your shooting arm to hang too far away from your body, and makes proper alignment very difficult.

D = IMPROPER = When the back foot goes beyond the shot line, it brings the cue too close to the body. Make sure your toe is right on the shot line, and if you need more clearance, move your front leg away in a diagonal direction rather than moving your back foot off the shot line.
Types of Bridges

The Open Bridge – The cue rides in the “V” made by your thumb and index finger. The hand is angled a bit so the cue touches nothing except the “V.”

The Closed Bridge – Again the cue rides in a “V” made by thumb and middle finger, but then the index finger loops over the cue and presses against the thumb. The hand can be angled a bit so the cue shaft also rides against the flesh between the index finger and thumb, providing a guide as you stroke.

The Closed Rail Bridge – The cue rides against a straight edge made from your index finger on the outside, and the thumb and middle finger on the inside.
The Elevated Open Bridge – For shooting over obstacles and for jump shots. The cue rides in the “V” of the index finger and thumb. The fingers of the left hand are pressed firmly into the table so the elevated “V” does not move at all during the stroke. Make sure to minimize the cue elevation as much as you can to avoid curve on any unintentional off-center hits. To achieve the elevation more easily, address the ball as you would for a level cue shot, then angle your entire upper body forward as you bend your left arm. Note the right arm is still perpendicular at address (you will need to move your grip hand more forward than usual, since you are bending your left arm during this shot, which shortens the usual distance between the right hand and the bridge).

Mechanical Bridge – Eyes are still centered over the cue, the bridge is held firmly against the table during the stroke (not up in the air unless obstructing balls make it necessary. As with your regular stroke avoid ANY movement of head or body during the stroke. Make sure to set up at address with the cue tip very close to the cue ball. It is a common error to leave too much distance between tip and cue ball at address, then the cue will be decelerating at impact instead of accelerating.
Stroke Fundamentals

We all want to be more consistent as players. The biggest thing I’ve learned these last ten years, especially, is how much having great fundamentals can improve your consistency. You can know all you want about bank shots and cut shots, but what you need to be able to do is make your cue stick move in way that makes the cue ball go EXACTLY where you aim. You’d be surprised how large our circle of error is with bad mechanics.

The best and quickest way to improve YOUR game is to work on fundamentals — building a straight, precise, and consistent stroke. Do not just aimlessly hit balls thinking that quantity will get you there. Work on making small improvements in your fundamentals, and success will follow.

Setup = Grip + Bridge + Stance

You should cradle the cue in your grip hand. Make sure that it is fairly loose and not too tight. Any excess muscular tension in your grip hand can cause tremor and wobbling in the cue during your stroke — even miniscule “wobbles” can reduce your accuracy and consistency. Make sure your grip tension does not change at all during your stroke.

Your bridge hand should not move or wobble at all during the stroke. I personally think the open bridge is the best bridge. An open bridge provides a clear line of sight along the cue, and many players will use this type of bridge on simple soft shots and severe cut shots where accuracy is critical. A closed bridge provides the best control and support, and helps keep the cue on track during power shots. Whether your bridge is open, closed, made on the rail, or improvised over an obstructing ball; make SURE that it doesn’t move or wobble during your stroke. “Wobbling” reduces accuracy; stability improves accuracy.

Whatever stance you choose, make sure that it provides balance, stability, and clearance. Make sure that your torso and chest do not interfere with the free
movement of your stroking arm. Also make sure that your feet and body are setup and
aligned with your shot (the line the cue ball will be travelling) the EXACT same way
every time (when you can make your bridge without stretching or interference by rails
or balls). Make sure your weight distribution is even so you have nice balance. Get
used to setting up the same way each time. Most of us don’t even think about it, but
it’ll make you more consistent if you set up the same way each time.

ANY change that you make in your fundamentals will initially feel uncomfortable, but
with practice they will BECOME comfortable.

Stroke

You should strive to make every stroke the same – during practice and competition.
You should practice your pre-shot routine, setup, practice strokes, actual stroke, and
post-shot routine so that they are fairly automatic and so that you do them
consistently the same.

During your pre-shot routine you must decide on the shot, visualize the results, and
decide on the speed of stroke and location of cue tip impact on the cue ball that will
give you the desired result. Do all of your thinking and decision making while you are
“up”, before getting down into your stance. This way, once you get down, you can fully
focus on making your cue stick move straight.

Assume your stance the same way each time if possible, and then begin your practice
strokes. Try to make them of uniform length. Often you will be controlling the speed
of your stroke by the length of your backswing, so make sure that your practice
strokes are the same length as the actual stroke is going to be – think of them as a
rehearsal for the stroke.

After your practice strokes you may consider inserting a pause in your routine to make
a final check on alignment, and making sure everything feels “right” before pulling the
trigger.
During the actual stroke, take the cue back smoothly (let it “come to a stop” at the end of the backswing, rather than “make it stop”). Make sure that the transition from backswing to foreswing is as smooth as possible, gradually accelerating the cue forward and “through” the cue ball, not “at” the cue ball. Keep the cue as level as possible (to avoid unwanted “squirt” and “curve”); you can check by making sure that a cube of chalk will not fit between your cue stick and the table rail as you assume your stance. Develop the habit of evaluating your cue tip finish BEFORE letting your body move and get up out of the stance after each shot (your post-shot routine).

During the stroke your body and head should be completely stable and motionless – even very slight motion can cause a miss. You may be unaware of this minor movement without using videotape, or having someone observe you.

Also develop the habit of not dropping your stroking arm elbow during the stroke – move your stroking arm only from the elbow down. During your post-shot routine you can check your cue tip to see if it is angled downwards against the cloth (a good sign that you did not drop your elbow). Checking your tip finish should become your best friend!

Coordinate all of these fundamentals into your routine until they are fairly effortless and automatic. A person who is consistent is dangerous and it’s visible to everyone that watches you.
Shooting System Self Evaluation

Videotape 10 shots from the side and 10 shots from in front; then view them. Evaluate your overall performance in each area. What was good, what wasn't? I know it's worth it to do this! You'll be amazed at what you see and it'll only motivate you to work harder. Ask yourselves these questions. If you want, use this as a full evaluation or as a short checklist.

1. **Decision Making** – What shot am I shooting? Where is my cue ball going after the shot? What will be the cue ball path, ball speed, and final destination?

2. **Aiming** – Did I use my eyes while standing to move back and forth along the shot line and visualize it? Get really detailed here. Pick your exact target. Sometimes we find ourselves choosing an area on the ball instead of getting really exact. You get out what you put in.

3. **Approach** – Did I lock my chin on target and then step into the shot with my back foot on the shot line? Did I check my stance for alignment, balance, and clearance? Once you really build this into a habit, you will no longer need to think about it.

4. **Eye Movement** – Once down, did I recheck my aim with my eyes to confirm aim BEFORE I started practice swings?

5. **Practice Strokes** – Did I synchronize my eye movements with the practice strokes? Did I pull my cue back slow and straight? Were the backswings equal in length and matching the final stroke? Did I make sure my foreswing returns back on the same track as the backswing with a slow, accelerating follow-through.

Shooting System Self Evaluation | Page 1
6. **Pause** – Did I pause at the cue ball before the final stroke? Did I use my eyes to confirm aim during that pause?

7. **Final backswing** – Was it slow, straight, and equal in length to the practice strokes? Did I change the focus of my eyes at the start of the backswing?

8. **Transition** – Was it smooth – did the cue "come to a stop" or did I "make it stop?" Did I start the foreswing slowly and gradually? Did I pay attention that I followed through straight on track at what I aimed for rather than just letting it move forward aimlessly?

9. **Final Stroke** – Did I smoothly accelerate the cue through impact? Did I keep my elbow up? Was there any head or body movement

10. **Follow-through** – Did I check to make sure the tip finished past impact with the tip pointing down before getting out of my stance? The tip will finish 4”–6” inches past impact on most shots and 2”–3” inches past impact on softer shots because softer shots require a shorter swing both ways.
Actual vs. Perceived Contact Point on the Cue Ball

As shown above, when topspin is applied, the cue tip actually strikes the cue ball at the very lower edge of the tip. If you turn the photo upside down, you will have some idea of the contact point when you apply backspin. When you lower your target one tip lower than center, you will get almost no draw – because as you lower the target, the impact point moves upward on the cue tip (the reverse situation occurs when you raise your cue tip for follow). Take this phenomenon into account when learning draw and follow.

If you draw an imaginary line from the position where your eyes are while stroking, over the top edge of the cue tip, all the way to the cue ball; you will see that the actual contact point on the cue ball is different than the way you see it when you address the ball. This difference in viewpoints contributes to the common flaw of amateurs not cueing low enough to achieve effective draw, nor high enough to achieve effective topspin.

MWDW
Cuetip Accuracy Using Chalk Marks

1A Entry level player

1B Average amateur player

1C Average professional player

1D Elite professional player
Ghost Ball Aiming – Aiming Point vs. Contact Point

Aim the cue ball to take the place of the ghost ball at the moment of contact with the object ball. On anything except a straight in shot, the aiming point will be different than the contact point.
Position Play Basics

Natural Forward Roll and Speed Control

The first basic element of position play is mastering the use of natural forward roll and speed to attain the cue ball position you desire. If you strike the cue ball near the center of its vertical axis, it will "slide" forward a certain distance (depending on the force of the hit) before attaining its natural roll. If the cue ball does not have natural roll and is sliding to some degree at impact, it will tend to proceed along the tangent line for some distance after contact with the object ball and will not immediately move forward along the expected line. The speed and direction of the cue ball after contact with the object ball are much easier to predict with natural forward roll.

To assure that your cue ball is rolling naturally as soon as possible after contact, you must strike it several millimeters above center on the vertical axis. Remember that as you strike above center on the cue ball, it is the BOTTOM of your cue tip that strikes the ball (the cue tip is rounded). As you set up, your eyes will be looking over the TOP of the cue tip; many amateur players misinterpret this information, thinking they are striking higher on the cue ball than they actually are. The closer the object ball is to the cue ball, the more difficult it will be to achieve natural roll before contact - you must strike the cue ball WELL above center in this situation. Watch a friend strike a "follow shot" from the side, at table level, and see how amateur players tend to hit too close to center on the vertical axis.

Stop Shots and Tangent Line

To improve your position play skills, you must master the concept of the stop shot. If the cue ball is sliding (no forward roll) at the moment of impact with the object ball on a straight-in shot; the cue ball will stop in its tracks. If the shot is an angled shot, the sliding cue ball will proceed along the tangent line (a line at a 90 degree angle from the object ball path) - but it is really just a variant of the stop shot. The harder you hit such an angled shot, the further along the tangent line the cue ball proceeds after impact. In my opinion, this is the most important concept in beginning the mastery of cue ball control.

Here's a drill that you can use to develop your stop shot skills. Set up straight in shots across the table. Make sure that you can "stop" the cue ball with both a very powerful stroke (striking closer to center on the vertical axis) and a very soft stroke (striking further below center on the vertical axis). These are all straight-in shots, but learning to stop the ball with varying speeds from varying...
distances is the key skill for high level position play. Learn this and you will be well ahead of most of your opponents.

Another drill that you can use to improve your judgment of how hard to strike the cue ball to achieve “slide” at impact, and to develop the skill to send the cue ball varying distances down the tangent line after impact is by putting equal amounts of extreme draw at different speeds and note when the cue ball turns over to forward spin.

**Draw and Follow – More Tangent Line Value**

Set up a simple slightly angled shot to see what happens when you strike the cue ball progressively higher or lower than center. On an angled shot, a cue ball that has excess forward (cue ball spinning more than once for every circumference distance it proceeds along the cloth) or reverse spin at impact initially leaves that impact with the object ball along the tangent line, then breaks forward or backward from the tangent line. The faster the object ball is moving at impact, the further along the tangent line it proceeds before “breaking” forward or backward.

**HANGERS**

The “dean” of pool instruction Jerry Briesath refers to object balls hanging in the jaws of the pocket as “the professional’s friend and the amateur’s nightmare.” While pocketing them is easy, position play off them can be a monster. I included a few sheets that illustrate Jerry’s method for predicting position after pocketing hangers. Remember that these position routes are just estimates. A very slight overcut or undercut of the object ball can drastically affect the cue ball’s performance on these shots – these are NOT easy shots. Use a naturally rolling cue ball (avoid excess topspin) and attain your position by using different speeds to make the cue ball proceed along the indicated paths. A little practice using these will go a long way to improving your performance on these difficult shots.

**DRILLS**

All these drills should stay fun for you. Keep your expectations high and require that you give a 100% and note your improvement. Make sure to concentrate on perfecting your fundamentals during every shot you shoot while practicing, and the drills will be much more valuable.
When struck with draw or follow, the cue ball initially travels along the tangent line after contact with the object ball; then bends forward or backward from the tangent line. The more forcefully the cue ball is struck, the longer it stays on the tangent line before the spin overrides momentum and it bends away from the tangent line. The higher or lower the cue ball is struck, the more sharply it bends away from the tangent line when it leaves.
Set up the shot as indicated, with a modest angle. Use your best "stop shot" stroke to make the cue ball travel exactly down the tangent line. You will need to use a variety of speeds and tip placements to achieve the positions indicated. You will see that even a very slight difference in shot angle changes the distance the cue ball travels along the tangent line dramatically – it is a very sensitive shot and will test and develop your precision.

1 = soft, pro-grade backspin

2 & 3 = somewhere in between

4 = firm, center ball hit
Ball in Hand - Softer and Simpler is Better

From cue ball position A, use lag speed, very thin cut, and natural roll.

From cue ball position B, you would have to use firm speed, 45 degree cut angle, and medium amount of draw. More variables to control = lower percentage of success.
Mental Game Checkup

Practice

1. On EVERY shot, go through a pre-shot routine. Decision, picture, target, shoot. Did you decide on the proper shot, picture/visualize the exact path and speed of the balls and visualize the exact final resting position of the balls? Find your smallest possible target on the ball. Then, get down and shoot the ball. (This is where your “shooting system” will come into play. Once you are down shooting the ball, focusing on your target and a perfect swing is all you should be thinking about. Really try to commit yourself to doing this and it will really help your consistency and minimize your careless unforced errors.

2. Are you exhibiting the proper attitude during practice; hungry, focused, and open-minded, non-judgmental, enthusiastic?

3. Are you succeeding in evaluating the quality of each stroke; rather than “judging” yourself based on whether the ball was pocketed or not?

4. Are you devoting the majority of your practice to improving your “perfect” stroke?

5. Are you becoming a student of the game? Enjoy the journey, not just the destination.
Competition

1. Are you viewing stressful competitive situations as a challenge and opportunity?

2. Are you making time to get comfortable with your environment and possible distractions?

3. Are you reminding yourself of what you are like when you play your best pool and recreate that?

4. Are you staying in the moment? Make yourself keep out any negative thoughts. This is pretty tough to do. It’s something you have to practice doing at home for it to work during competition.

5. Have you developed “mantras” or statements that you use internally to reduce stress during competition? “Stalk like a panther”. “A decisive decision is the best decision, I want this more than her and I’m going to take it”. “I’m not going to wait for her to hand it to me. I can rise to any occasion”. “How I begin is not necessarily how I finish!”

6. Do you think you are mentally tough yet? What are you doing to work on that? Read some books but also, remind yourself who you want to be, where you want to be. Put good discipline in your practice and focusing will feel natural during competition.
Use a naturally rolling cue ball and a $\frac{1}{4}$-ball hit. Position zones are indicated by the shaded circles.
Practice using varying degrees of cut and spin to see the possibilities. The standard reference shots are shown above.
When you have a fairly straight shot like this, try using a rail first hit to obtain position.
Stop Shot Drill

Shoot a striped ball (start with the ball oriented with the stripe parallel to the table bed) down the table as indicated. Shoot towards the corner pocket using a below center hit. Note where the striped ball stops spinning backward - if there had been an object ball at that exact point, you would have delivered a stop shot. Practice using a variety of speeds, and at a variety of distances below center. You should be able to have the backspin wear off along this path at any point of your choosing, and at any speed of your choosing.
Elevated Cue Strokes

Set up the balls as indicated, with the cue ball about a half inch off the rail. Elevate your cue enough to stop the cue ball after pocketing the straight in shot. Repeat 10 times. Remember to follow your usual stroke procedure, though the motions will seem unfamiliar.
Set up the table as indicated. Start with ball in hand for the 1 ball, and see if you can pocket all 6 balls in rotation. No banking, caroms, kicks, or combinations....just get good position each shot.

Attempt this 10 times per day for three days.

You will find that attaining perfect position is very challenging. Since the object ball is very close to the rail, there is little room for cheating the pocket, and the speed control of the cue ball coming off the rail is difficult to control. Using sidespin is permitted in this drill, and the cue ball is also allowed to touch cushions (but may not touch any object ball except the one being pocketed). You will need all of your tools to pocket all six.
This Drill is all about building your accuracy on being able to hit center ball on the cueball with absolutely no side spin as well as your accuracy in hitting where you aim. Set up the cue ball as indicated. Using your best ideal stroke technique, use 4 rails of speed and keep the cue ball tracking within a ball's width on either side of the spot. Shoot 10 times and grade each effort.
Set up the balls as indicated. Start with ball in hand on the first shot, and see if you can run the table in rotation. Make sure that the balls near the rail are a full ball’s width off the rail...it makes it harder (more fun).

Attempt to run this layout 10 times a day for three days.

This is a very enjoyable drill, and deceptively simple. You will find that it is difficult to move the cue ball from side to side, and from end to end if you do not get the perfect angle on each shot. This will test both your positional and your pocketing skills. You can consider yourself a very good player if you succeed even three out of 10 attempts.

MWDW
Call Shot and Position Drill

Break a full rack; if you scratch, spot any balls made on the break. Take ball in hand for your first shot, then try to run the rack. You may call and shoot any ball that you want (as in straight pool), but you MUST ALSO call the next ball you will shoot each time and then shoot it. For more challenge, increase the number of balls you call in advance.

Do 10 racks and record how many balls you make each rack before missing. This is important in helping you stay motivated and keeping track of your progress!
Efren Reyes Drill

Set up the balls so that when shooting in rotation, you could theoretically have a stop shot on every shot if you hit each one perfectly. Take ball in hand for the 1 ball, then attempt to clear the table in rotation. The cue ball must not hit a cushion or your inning is over. Score the number of balls pocketed before missing or hitting a cushion.

Attempt this 10 times a day for three days.

As you will see, once you make even a slight error the rest of the shots get much more challenging. Only an elite pro could finish this seemingly simple rack with 15 stop shots – but you can still negotiate an entire rack if you develop the ability to kill the cue ball’s travel on the angled shots that result when you miss position even slightly.
Set up the balls in the exact number order indicated. Start with ball in hand and shoot the balls in numerical order WITHOUT ever letting the cue ball touch a rail or another ball. It's really, really fun and great for your focus. Not an easy drill!