

BOWLOLOGY

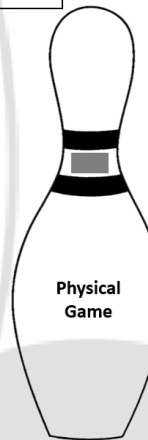
Bowlology Spare-Strike Pillars



Lane Play



Knowledge
of the
Sport



Physical
Game



Ball
Dynamics

Bowlology Presents: *The Bowlology Media Kit*

Bowlology Academy Overview, Bowling Organizations, Becoming a Bowlologist,
Book & DVD Reviews, Bowlology Academy Flyers



By Bowlologist Josh Hyde B.L.P
USBC Silver Coach



Intro to Bowlology Academy

In 2021 Bowlology Academy was formed into courses that a bowler wants to obtain in their bowling career. Bowlology Academy offers a wide variety of classes such as Bowlology 200 and PBA800. There are five courses taught in the Bowlology Academy from a beginner bowler to a professional bowler. Bowlology Academy also offers a one-day clinic. This clinic is the Spare Strike Pillar. Where Bowlers, Pro-Shop Operators and Coaches learn the four key elements of bowling. This clinic is a credited class for the Bowlology Academy.

☑ **Bowlology 200** - which is the basics of the bowling. This includes the history of bowling from 5000 years ago to today, how to make spares, the rules of score keeping, and the method of the perfect strike.

☑ **Ten Pin Staffer 700**— the course is mainly for pro-shop operators and coaches. This introduces bowling ball construction and how to setup a ball for a bowler.

☑ **Striking Mastermind 750** - is for the tournament bowler that may need more help learning how to adjust on the lanes or when to switch balls. This continues with a deep dive into bowling ball physics, how to develop an arsenal and how to read the lanes.

☑ **The PBA 800**— the course is for the bowlers who have tried at least one PBA Regional. In this course, we review the scoring system of the PBA, Lane Courtesy, Player Services, Requirements for joining the PBA and PBA lanes maintenance program.

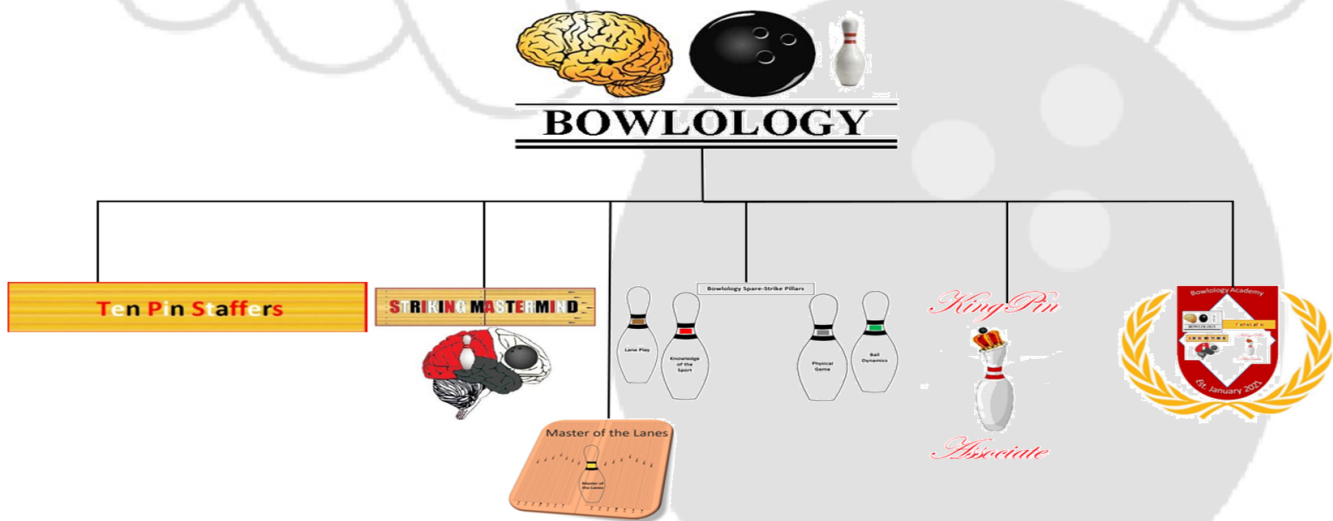
☑ Lastly, but certainly not least, is the **KingPin 900 course**. This course is designed to get people to think critically about the sport and share the knowledge with other bowlers.

Mission Statement:

To expand Bowling Knowledge for Bowlers, Coaches, Pro-Shop Operators in innovative way

Vision Statement:

To impart knowledge to the beginner, intermediate, and advanced bowlers about the sport of bowling through the Bowlology Academy Programs: Bowlology 200, Ten Pin Staffers 700, Striking Mastermind 750, PBA 800, and KingPin Associate 900 and Spare Strike Pillars Clinic.



300 East Prairie, Warsaw, IN 46580
Josh Hyde Bowlologist, B.L.P.
Dean of Bowlology Academy

Josh Hyde's Bowling Accomplishments

Attended a total of 128 PBA Tour/PBA50 Tour/PBA Regional & PBA50 Regional Tour Tournaments, 28 of those were Majors and 64 of them were PBA Tour Events

USBC Hall of Fame Committee Member since 2020

PBA Hall of Fame Committee Member since 2014

IBMA Member since 2010

2011-3rd Place Feature "Bottom 5 of the 50 Greatest"

2010-3rd Place Editorial "World Series of Bowling"

2013-1st Place Newsletter "Josh Hyde's Bowling Newsletter"

2012-1st Place Editorial "Bowling Physics " "Yesterday vs. Today"

2010— 2nd Place Handicap Championship Tournament

2013-1st Place Editorial "Player of the Year Pick"

2013 1st Place Newsletter IBMA Amateur Writing Contest

2013-3rd Place Editorial "Using PBA Publicity"

Six 800 series (837) Highest Series

High Game: Five 300's

May 2013- Bowler's Journal International "Our Man in Indy: Josh Hyde on New Hall of Famer Doug Kent"

Bowlers Journal Interactive September 2014 PBA50 Giving Bowlers New Life

2014— the present PBA Hall of Fame Committee Member

2014 IBMA Amateur Writing Contest Second Place Newsletter

2014 IBMA Amateur Writing Contest Third Place Feature 2015 3rd Place IBMA Newsletter March 2014

2015 50th Anniversary Tournament of Champions Media Kit Author

2015 USBC Bronze Certified Bowling coach

Vise Grips Regional Pro-Staff Member

2015 IBMA 1st Place Editorial "Regulating bowling equipment for Pros"

2015 2nd Place Editorial "Is Bowling a Sport?"

Special Recognition Journalistic Excellence Josh Hyde " for the creation of a comprehensive and compelling PBA Media Guide showcasing the Pro-Bowlers Association Tournament History"

April Edition of the Bowler's Journal International " PB3 comes through for PBA Superfan"

November 2011, Introduce Bowlology to the Josh Hyde's Bowling Newsletter

November 2019, Completion of the Bowlology book

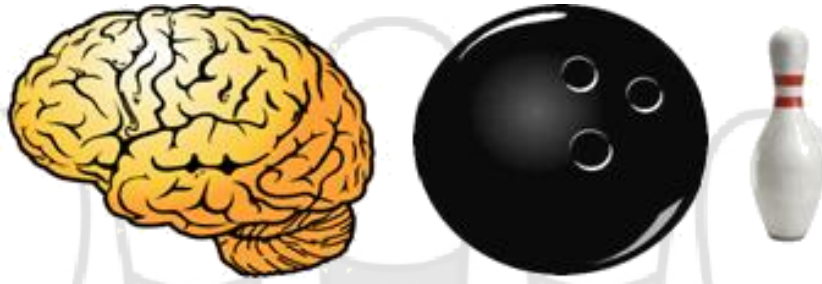
November 2019, USBC Silver Coaching Certificate

2020 USBC Hall of Fame Committee Member

2021 IBMA Writing Competition Division 2 Editorial -Second Place "Career of a Bowlologist"

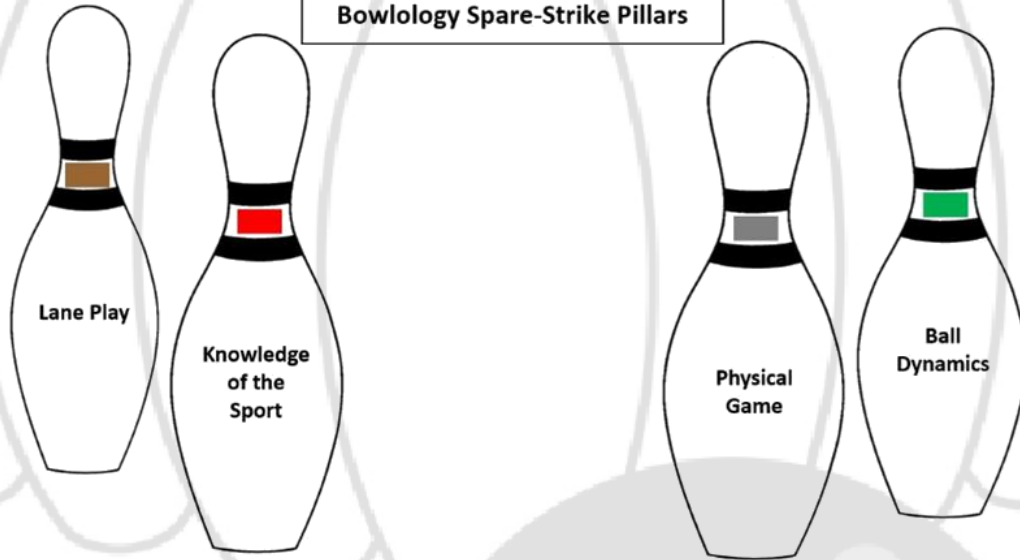
2021 IBMA Writing Competition Division 2 News-Honorable Mention "2021 KIA Playoffs

2021 IBMA Writing Competition Division 2 Feature "Hall of Famers Pass Away



BOWLOLOGY

Bowlology Spare-Strike Pillars



Bowlology Presents: Bowlology Academy Overview, Fact Sheets & Exams

This program will enable bowlers, coaches, pro-shop operators to identify bowling knowledge

**By Bowlologist Josh Hyde B.L.P
USBC Silver Coach**



Knowledge of the Sport

This may sound elementary; however bowlers do not know what they think they know. Some do not even know how to keep score, some do not even know what pins they even left. When they leave a spare. The knowledge of the sport is the foundation to have a great mind in bowling. If a person does not even know what pins they left when they shot a 299, this shows they are not even on an amateur level. The knowledge of the sport is the foundation in helping bowlers to improve in their game. Keeping score in bowling was one of the biggest challenge to learn. As I got better, I thought as if I could absorb bowling knowledge like a sponge. To be a pro-bowler pros know what they need to do when they win a game for a title or to advance to the championship round.

Physical Game

One-fifth of the lanes is the approach this is where the bowler has to put their position to execute properly so they can win a pot game or a small tournament at their bowling center. The text-book style is a good place to start but as a bowler wants to advance their game. They need to work on fundamentals and one advanced move that they can think can do. Timing in a text-book is moving the ball and the feet at the same time. For a pro-bowler this may not be the case. They are more advanced at the game than what the average Joe Bowler is doing with bowling three games a week and a sweeper here and there. Some fundamentals that bowlers see from the pros in their game are textbook like while others are what an experienced and talented pro would do. Coaches would not want their students to emulate what the pros are doing right off the bat as a student needs to learn the basics and how they react on the lanes. The textbook style with a four-step approach would be 1,1,2,2,3,3,4,4. This is an easy way to teach the first-time bowler as the coaches get more advanced. They need to work with what the bowler has and try to help them critique their style of play.

Lane Play

Bowling is a surface sport. Bowlers are going to have to adjust in their league or tournament play. There are all kinds of adjustments, such as hand position changes, that a bowler can make during lane transition. If they expect the lane to remain the same during a game in league or tournament play, they are sadly mistaken. If bowlers know how to play lanes throughout the course of the block, they might have a leg up on the field in tournament play or league. However, if they do not know how to adjust on the lane, they will be at a disadvantage. Smart lane play helps a bowler know what to do when he/she runs into a difficult situation.

Ball Dynamics

In ball dynamics there are a number of layouts that a pro-shop operator can use. In the past bowlers have been told that a pin-down ball will read the lanes earlier. A pin-up will read the lanes later. This is true however bowlers need to rethink as a pin up or pin-down as the delaying or making the breakpoint sooner. Bowlers need to keep in mind that the surface of the ball is more important as to the layout of the ball. There are three types of bowlers the spinner, three quarters and the full roller. Pro-shop operators need to know the bowler's positive axis point to be able to suggest a ball that a bowler could buy. If a bowler has a pin-up ball but is sanded to 1500 the ball is going to read earlier. Vice versa if a bowler has a pin down ball but is polished the ball is going to react later. Since it is polished both balls will still read earlier or later depending the bowlers PAP. In developing an arsenal this is important to know. How many asymmetrical and symmetrical does the bowler want to have.

Spare Strike Pillars

A bowler who applies these four pillars during a tournament or a league will have success. Knowledge of the sport is the foundation of the sport itself. The physical game is also important because the bowler has twenty percent of the lane in which he or she will execute every frame. Lane play is a factor because if the bowler can read their ball on the lane, they will know what adjustments are needed. Ball dynamics are essential to the bowler. The bowler and the pro-shop operator must be on the same page. This will give the bowler a leg up on their competition. These four pillars properly followed can maximize a bowler's game. Bowlers, coaches, and pro-shop operators should have a high degree of understanding of these pillars to be successful on and off the lane.

Greatest Minds of Bowling

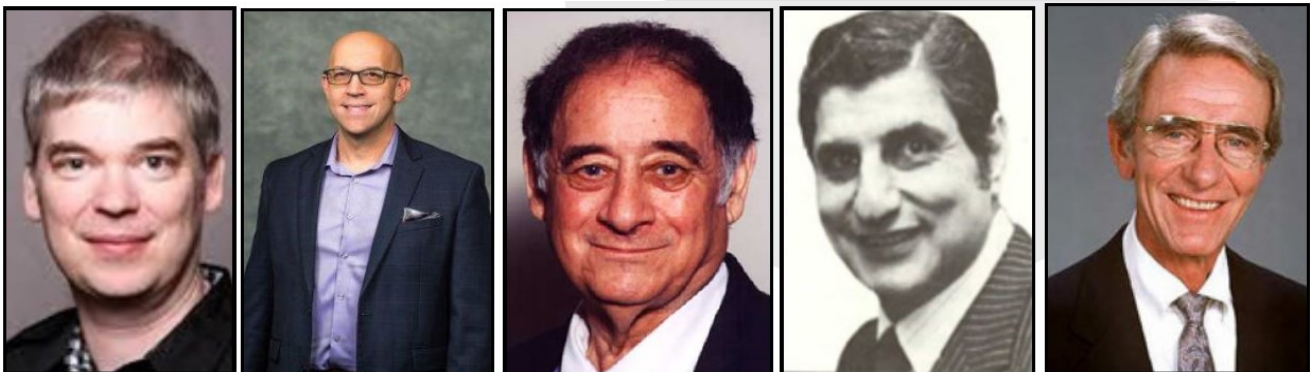
These individuals have studied the game with great detail. This cannot be stressed enough. The Bowlology spare strike pillars are the essentials of the game to become one of the greatest minds of bowling. All of these individuals know these four key areas of the sport. Some of these leaders have contributed to the USBC coaching manuals for the Bronze, Silver and Gold certifications. The second bowler that completed the Triple Crown was Johnny Petraglia. Parker Bohn III has made the statement about Johnny being the smartest person in bowling. Brunswick named a ball after him. Glenn Allison said that Bill Taylor was the smartest person in bowling. These individuals have studied the sport and have made bowlers bowl better. David Ozio talked with Bill Taylor one day. The next day, Ozio went to the bowling center and thought about what he and Bill had discussed. He sat down at the settee area and he came to the realization with what Bill had said totally made perfect sense. Bill Taylor was not a big fan of the new bowling ball technology. However, during the late 70s, he wrote a book entitled **Balance**. The book described how bowlers could drill balls like they do today. He also explained ball reaction in this book. Taylor also came up with the idea of the oil-less lane.

Bowling Innovations

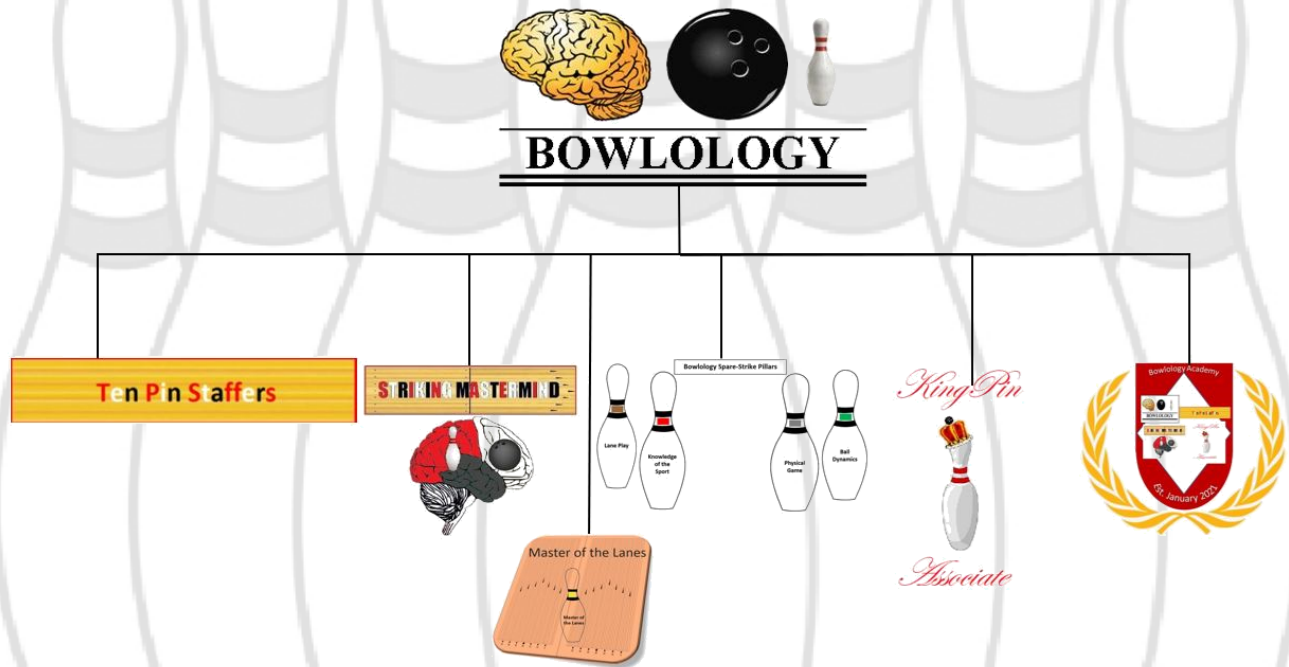
Back in the 1800s, bowlers yearned for more hook out of their ball. Balls were made out of wood back then. To get more hook, they would actually cut the ball in half and put a block of wood (referred to as the "DoDo") in the ball. These balls would hook more resulting in bowlers shooting higher scores. They would invent a dodo scale to find the counterfeit balls that bowlers tried to sneak in. In 1903, they would outlaw the DoDo ball. In 1973, Don McCune would soak his ball in MEK. This would make the ball hook more on the lane. He would win six PBA Tour Titles to become the Player of the Year. McCune revolutionized the game of bowling. Mark Roth and Marshall Holman created the modern power game. Roth & Holman were the first ones to hook the entire lane with the Columbia 300 Yellow Dot. Roth would go straight and hard at the spares. It was a different game back in the 70s. It is getting to be less of a challenge for a bowler to struggle. Bowlers still have to make a delivery on the lane. The ball is not striking on its own. Bowlers today want to drill up the same layout that Jason Belmonte used at the 2020 U.S. Open. This layout may not work out for Joe Bowler because he does not throw the ball like Belmonte. It is important that pro-shop operators & coaches work together to help the Joe Bowlers understand what is needed to attack the lane in order to win a Mega buck scratch tournament or to cash in a PBA Regional Tournament. Joe Bowler may have the same ball that Belmonte used to win his first U.S. Open title; however, it may not be drilled the same way. The coach and the pro-shop operator need to stress to Joe Bowler that he does not need the same layout as Belmonte. Jason Belmonte has revolutionized the sport of bowling, most notably the two-handed ball release. Winning 13 majors on the PBA Tour and becoming the second player to complete the Super Slam is an amazing feat in and of itself. All of these are examples of bowling innovations that applied throughout the history of the sport. Bowlers always want to strike as much as they possibly can. The U.S. Open is the ultimate test of a bowler's skill. In 1958, Eddie Elias founded the PBA which enabled bowlers to make a living by throwing a bowling ball.

PBA Pinnacle of Bowling

The Pinnacle of Bowling is the PBA. Earl Anthony, Dick Weber, Don Carter, Walter Ray Williams, Jr., Pete Weber, Jason Belmonte, and EJ Tackett are the elite group of the greatest players in the history of the PBA. Along with many others the PBA has five majors tournaments. These tournaments are as follows. The PBA World Championship, the U.S. Open, the Tournament of Champions, The USBC Masters, and the PBA Players Championship. Norm Duke, Johnny Petraglia, Billy Hardwick, Chris Barnes, Pete Weber, Mike Aulby are the only players to complete the Triple Crown. In 2013 Pete Weber became the first bowler to complete the Triple Crown twice when he won the Tournament of Champions. These five majors are difficult to score on because of the challenging lane conditions that have less margin of error than a normal PBA tournament. In 2008 the PBA celebrated 50 years of the PBA. Earl Anthony was voted the greatest bowler in the history of the PBA. Ten years later for the 60th anniversary the PBA would come up with 60 greatest moments in PBA History. Don Johnson would have the all-time greatest moments in the 1970 Tournament of Champions by shooting a 299 in the championship game. In 1975 the PBA would have the inaugural PBA Hall of Fame. Dick Weber, Don Carter, and Carmen Salvino would be the first PBA Hall of Famers to get inducted into the hall of fame. Chris Schenkel, Eddie Elias, and Dick Weber were the forefathers at the PBA founding.



Bowlology Organizational Chart



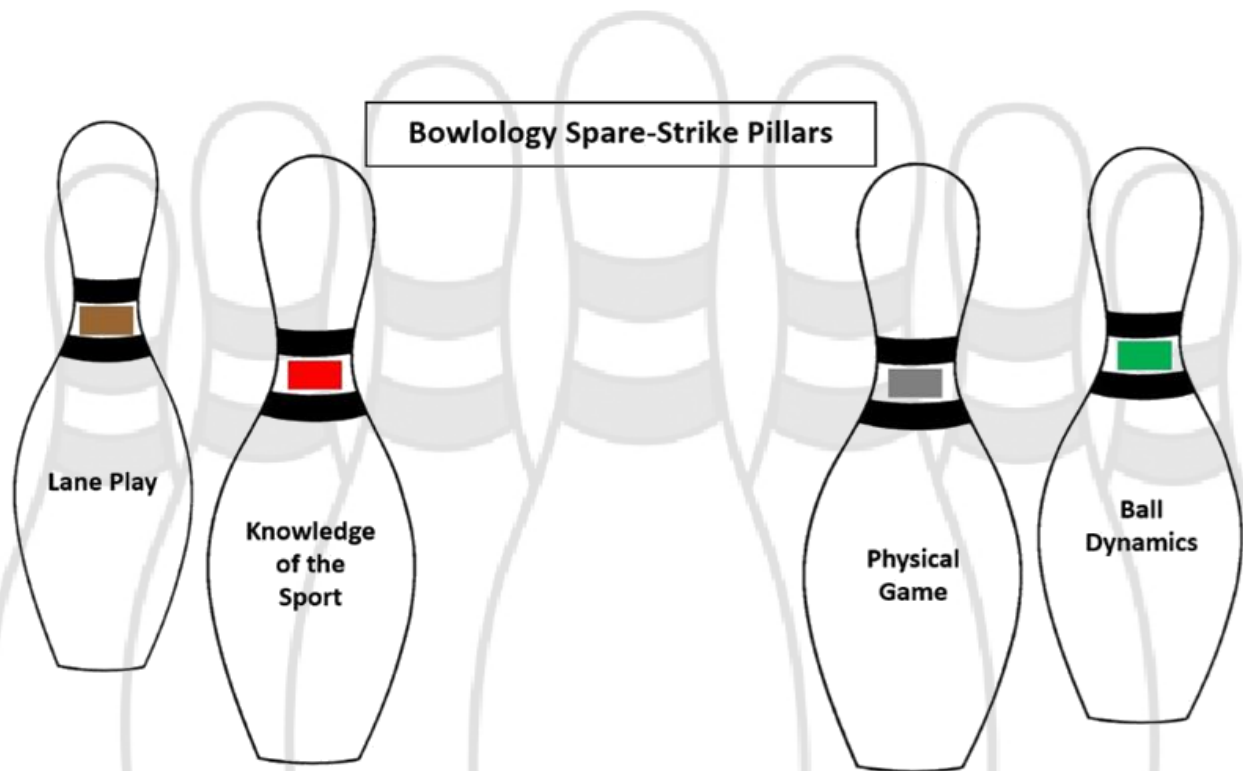
Bowlology was established in 2011 as a column in the Josh Hyde Bowling Newsletter. The first topic was on the perfect strike. The founder of Bowlology, Josh Hyde, wanted to share his knowledge about the sport of bowling. This organizational chart is made up of coaches, bowlers, and pro shop operators that love the sport of bowling. In each area, Bowlology is striving to teach bowlers more about the sport they compete in. Josh Hyde noticed that few bowlers were aware of the fundamentals of the sport. The Ten Pin Staffers and pro-shop operators know the dynamics of the bowling ball and the physical game. Striking Mastermind is for bowlers who compete at tournaments. Ten Pin Staffers, Striking Mastermind and the Spare Strike Pillars are all under the Bowlology umbrella. Authors and/or coaches like Mike Shady, Kim Terrell-Kearney, Fred Borden, Mark Baker, Del Ballard, Jr. and Mo Pinel have been highly influential in bowling instruction. For those people that are interested, they can email Josh Hyde at joshhydeb bowling@gmail.com for more information.

Bowlology Fact Sheet

1895 The ABC was founded currently known as the USBC.
1913 Bowler's Journal was founded.
1913 the Dodo Ball was outlawed.
1916, the WIBC was founded
1932 Bowling was an exhibition sport in the Olympics.
1932 the BPAA was founded by a few bowling proprietors.
1936 the first mechanical pin setter was invented by AMF.
1941 The ABC currently known as the USBC founded the ABC Hall of Fame.
1941 John Crimmons won the first BPAA All-Star tournament now known as the US Open
1951 Lee Jouglaard would win the first Master's Tournament.
1957 Dick Hoover became the first player to win successfully defend his Masters Title.
1958 Eddie Elias founded the PBA.
1958 the Budweiser Team shot a team record of 3858 the team was consisted of Ray Bluth, Don Carter, Dick Weber, Tom Hennessey, and Pat Patterson
1959 Lou Campi won the first PBA Tournament.
1962 ABC broadcasted their first PBA telecast.
1964 Don Carter became the first bowler & athlete to sign a seven-figure deal with Ebonite.
1966- 1970 Don Johnson made the Championship Round at the Tournament of Champions.
1967 Jack Biondolillo rolled the first televised 300 at the Tournament of Champions.
1969 at the BPAA All-Star currently known as the US Open Billy Hardwick became the first player to complete the Triple Crown.
1969 the PBA created the Regional Program giving high level amateur bowlers the chance at professional level competition of the PBA.
1970 Don Johnson had a 299 game to win the Tournament of Champions
1973 Don McCune won six titles by soaking his ball in MEK.
1973 Jim Godman became the first player to win multiple Tournament of Champions.
1976 Marshall Holman became the youngest bowler to win the Tournament of Champions.
1978 Mark Roth won eight titles on the PBA Tour.
1979 George Pappas led the Tournament of Champions wire to wire.
1979 Nelson Burton Jr wins the Doubles and All Events in the USBC Open Championship.
1980 Mark Roth made a 7-10 split on national television.
1981 the PBA50 Tour was founded these bowlers could not the bowl on the regular PBA Tour in their earlier years. It allowed those guys to compete with Dick Weber, Carmen Salvino, and Harry Smith
1982 Glenn Allison shot 900.
1983 Earl Anthony became the first millionaire at the PBA National Championship.
1983 Norm Duke became the youngest player to win a PBA Title.
1984 Mike Durbin became the first bowler to win three Tournaments of Champions.
1984 The Bowling Hall of Fame was opened.
1987 Pete Weber became the fastest bowler to win ten titles at the Tournament of Champions.
1988 Bob Benoit was the first bowler to bowl a perfect game in the Championship Match.
1990 At the Fall Classic in Milwaukee, Wisconsin the United States Bowling Congress finally sanctioned PBA Tournaments.
1991 Del Ballard, Jr rolled a gutter ball on the final ball to lose the title to Pete Weber at the Fair Lanes Open.
1992 Dick Weber became the first player to win titles in five different decades.
1993 Wichita Open Mike Aulby and David Ozio would set the highest scoring match on National Television.
1993 George Branham III became the first African American to win a major at the Tournament of Champions.
1993 Phil Ware would win the first ABC Senior Masters
1994 PBA National Championship Johnny Petraglia would earn \$100,000 on National Television.
1995 ABC currently known as USBC celebrated their 100th anniversary.
1995 John Handegard became the oldest bowler to win a PBA Tour Title.
1995 Mike Aulby would become the fourth player to complete the Triple Crown and Grand Slam.

Bowlology Fact Sheet—Cont'd

1997 Jeremy Sonnenfeld rolled the first sanctioned 900.
1997 Walter Ray Williams, Jr would become the first bowler to earn two million dollars in career earnings.
1998 Mike Aulby would become the first bowler to win the USBC Masters three times.
1998 PBA Founder Eddie Elias passed away.
1999 Eric Forkel would win the very first outdoor tournament in Bryant Park.
2000 Chris Peters a former Microsoft Executive purchased the PBA.
90's to the 2000's Walter Ray Williams, Jr was voted the bowler of the decade for two straight decades.
2000 Jason Couch became the first player to defend his TOC title at the Brunswick World Tournament of Champions.
2000-2001 Jeff Carter set the all-time high average for one season of 261.7.
2001 Carolyn Dorin-Ballard won a record seven titles on the PWBA Tour.
2001 Joe Norris & Earl Anthony passed away.
2002 Jason Couch became the first player in PBA History to win three TOC in a row.
2002-2003 Walter Ray Williams, Jr won two majors while earning \$300,000 on the PBA Tour.
2003 The PWBA had to shut down due to financial hardship.
2004 the USBC Open Championship turned 100 years old.
2004 Danny Wisemen shot 289 at the USBC Masters in Milwaukee Brewers Stadium.
2005 the Bowling World lost two icons Dick Weber & Chris Schenkel
2006 at the PBA World Championship Walter Ray Williams Jr tied Earl Anthony with 41 titles beating Pete Weber.
2008 Earl Anthony was voted the greatest player in PBA History.
2008 Norm Duke also won the three majors in a single year because it was not in the same season. It did not count as three majors in a single season.
2008 the PBA recognized the USBC Masters and the BPAA All-Star as PBA Titles.
2009 Jason Belmonte became the first bowler to win with two hands.
2009 PBA introduced the World Series Of Bowling Tournament in Allen Park, Michigan.
2009 Tom Smallwood went from unemployment to PBA World Champion.
2009-2010 Walter Ray Williams, Jr would become the first bowler to earn PBA Player of the Year in three different decades.
2010 Kelly Kulick became the first woman to win a major at the Tournament of Champions.
2011 The Tournament of Champions had a one-million-dollar purse with \$250,000 going to the winner.
2011 In the Semi-Finals of the Tournament of Champions Mika Koivieumi & Tom Daugherty would set most margins by 299 to 100.
2011 Sean Rash made all the Animal pattern Championships at the World Series of Bowling
2012 Johnny Petraglia became the first PBA Player to win titles in six different decades.
2012 Pete Weber won his fifth US Open.
2013 Pete Weber became the only player to complete the Triple Crown at the Tournament of Champions
2015 Jason Belmonte became the first bowler to three-peat the USBC Masters.
2015 Jason Belmonte became the second bowler defend his Tournament of Champions Title.
2015 Sean Rash became the first bowler to roll two perfect games on National Television at the Tournament of Champions.
2016 Anthony Simonson became the youngest player on the PBA Tour to win at the USBC Masters.
2016 Francois Lavoie became the first player to bowl a 300 in the championship round at the U.S. Open.
2016 Jesper Svensson became the youngest bowler to win Tournament of Champions.
2017 Walter Ray Williams Jr would win his 100 PBA Title in a PBA Regional.
2017 Jason Belmonte became the first player to win three majors in a single season on the PBA Tour.
2017 Liz Johnson became the second woman to win a PBA Title at the World Series of Bowling.
2017 Jason Belmonte became the first player to win four USBC Masters Titles.
2019 USBC Women's Open Championship it turned 100 years old.
2019 Brunswick merged with Ebonite, they now own Columbia 300, Track, Hammer, and PowerHouse along with Ultimate & Radical & DV8 Products.
2020 In the month of August the USBC outlawed weight holes.
2020 Jason Belmonte would join Mike Aulby as the only two players all five majors by winning the U.S. Open.
**Tommy Jones, Chris Barnes, Mike Aulby, Jason Belmonte and EJ Tackett are the only five players to earn Player of the Year & Rookie of the Year Honors.



When Bowology was founded in November of 2011, the Josh Hyde's Bowling Newsletter wanted to give bowlers some knowledge of the sport. These spare- strike pillars are essential to Bowology in that they are the four pillars that a Bowlogist will need in order to help bowlers, coaches and pro-shop operators.

--The First Pillar is Knowledge of the Sport which involves split making, makeable splits, lane courtesy, the perfect strike, score-keeping, playing field, pin knowledge, pin carry, and general bowling knowledge.

--The Second Pillar is the Physical Game. If a bowler does not have a solid foundation, he or she is not going to be able to execute in every frame. Timing puts away the trail leg, the finish position and the arm swing. These are the main attributes of a bowler's physical game.

--The Third Pillar is Lane Play which is how the bowler plays the lanes making hand position and speed adjustments. In most sports, the athletes are not going to have to worry about the surface of the field. However, in bowling, bowlers do have to know what the lanes are doing in order to be a contender in a league match. The same holds true when Jason Belmonte needs a strike to win the U.S Open. Lane play is a big portion of a bowler's game.

--The Final Pillar is Ball Dynamics. This is where the bowler and the pro-shop operator need to be on the same page. Each bowler is different. If a pro bowler wins a Major and Joe Bowler wants to use the same ball with the same layout and surface, more than likely Joe Bowler will not have the same results as the pro bowler due to differences in their game. They may use the same ball except with a different layout and surface. This is why it is so important for the pro-shop operator to know Joe Bowler's game. Pro-shop operators generally know the dynamics of the bowling ball. Ideally, the bowler needs to find a pro-shop operator that has some coaching experience. If he/she has a pro-shop operator and a coach, all three need to come up with a game plan so that the bowler can be successful on the lanes.

These four Bowology Spare-Strike Pillars will enable bowlers, coaches and pro-shop operators to identify bowling knowledge.

Bowlologist Problem-Solving Chart

<u>Open</u>	<u>Spare</u>	<u>Strike</u>
Bowler falls off balance at the foul line	Physical Game	Frame 2
Bowler cannot identify his PAP	Ball Dynamics	Frame 3
Bowler is muscling the ball	Physical Game	Frame 2
Bowler is not choosing the right ball	Lane Play and/or Ball Dynamics	Frames 3 thru 5
Bowler misses spares	Knowledge of the Sport	Frame 1
Bowler is not using the correct surface on the ball	Ball Dynamics	Frame 3 & 5
Bowler is not reading the lanes right	Lane Play	Frame 4
Bowler is using the wrong layout	Ball Dynamics	Frame 3
Bowler is playing in the wrong area on the lane	Lane Play	Frame 4
Bowler is leaving the ten pin and is unable to string strikes	Lane Play	Frame 4
Bowler fails to acknowledge bowlers on adjacent lanes	Knowledge of the Sport	Frame 1
Bowler stands in the same spot every frame and does not adjust	Lane Play	Frame 4
Bowler bowls well on specific pattern but has trouble bowling on other patterns	Lane Play	Frame 4
Bowler misses double wood spares	Knowledge of the Sport	Frame 1

This chart is for Bowlologists to use as a reference to help other bowlers.

The "Open" represents the problem.

The "Spare" represents the four key areas - Knowledge of the Sport, Physical Game, Ball Dynamics and Lane Play.

The "Strike" refers to the specific frame(s) in the Bowlology book.

Bowlers must practice in order to advance their game to the next level. The chart above is of course not a substitute for practicing on the lanes. Bowlers must have always practice to improve their game and maintain their skills. Also remember going hard and straight at spares is the ideal way to convert spares and it will alleviate the pattern of whiffing the spare. Bowlers do not want to do this especially opening up with a double. If a bowler goes double ten pin and makes the spare his/her maximum score is 279. However if they miss the spare. Then they can only max out at a 267 making that spare can add 12 pins at the end of the game.

*****PRACTICE*****
Shooting Spares & Strikes

RIGHT HANDED
SPARE
CONVERSION
CHART

3 PIN
MOVE LEFT 4
BOARDS
AIM BETWEEN THE
2ND AND 3RD ARROWS

6 PIN
MOVE LEFT 8 BOARDS
AIM AT THE 3RD ARROW

10 PIN
MOVE LEFT 12 BOARDS
AIM BETWEEN THE 3RD
AND 4TH ARROWS

REMEMBER- BOWLERS NEED TO OPEN THEIR BODY SLIGHTLY TO THE TARGET.

HEADPIN & 5 PIN SPARES

IF A BOWLER LEAVES THE HEADPIN- NO ADJUSTMENT IS NEEDED- THEY CAN USE THEIR STRIKE SHOT.

IF A BOWLER LEAVES THE 5 PIN- NO ADJUSTMENT IS NEEDED- THEY CAN USE THEIR STRIKE SHOT.

STRAIGHTER IS GREATER- GOING HARD AND STRAIGHT AT SPARES HAS A HIGHER PERCENTAGE RATE THAN HOOKING AT SPARES.

EQUIPMENT NEEDED- PLASTIC BALL- PLASTIC BALLS TEND TO GO MUCH STRAIGHTER THAN THE HIGH-TECH BALLS OF TODAY.

RIGHT HANDED
SPARE
CONVERSION
CHART
LEFT SIDE

2 PIN
MOVE RIGHT 3 BOARDS
AIM BETWEEN THE 2ND AND
3RD ARROWS

4 PIN
MOVE RIGHT 6 BOARDS
AIM BETWEEN THE 2ND AND 3RD
ARROWS

7 PIN
MOVE RIGHT 12 BOARDS
AIM BETWEEN THE 2ND AND
3RD ARROWS

REMEMBER- BOWLERS NEED TO CLOSE THEIR BODY SLIGHTLY TO THE TARGET.

LEFT HANDED
SPARE
CONVERSION
CHART

3 PIN
MOVE LEFT 3 BOARDS
AIM BETWEEN THE 2ND
AND 3RD ARROWS

6 PIN
MOVE LEFT 6 BOARDS
AIM BETWEEN THE 2ND
AND 3RD ARROWS

10 PIN
MOVE LEFT 12 BOARDS
AIM BETWEEN THE 2ND
AND 3RD ARROWS

REMEMBER- BOWLERS NEED TO CLOSE THEIR BODY SLIGHTLY TO THE TARGET.

HEADPIN & 5 PIN SPARES

IF A BOWLER LEAVES THE HEADPIN- NO ADJUSTMENT IS NEEDED- THEY CAN USE THEIR STRIKE SHOT.

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LEFT HANDED
SPARE
CONVERSION
CHART

2 PIN
MOVE RIGHT 4 BOARDS
AIM BETWEEN THE 2ND AND
3RD ARROWS

4 PIN
MOVE RIGHT 8 BOARDS
AIM AT THE 3RD ARROW

7 PIN
MOVE RIGHT 12 BOARDS
AIM BETWEEN THE 3RD AND
4TH ARROWS

REMEMBER- BOWLERS NEED TO OPEN THEIR BODY SLIGHTLY TO THE TARGET

21 MULTIPLE COMMON/MAKEABLE SPARES

Left Hand		
Spare	Move	Target
3-5-6	3 Boards Left	Aim between the 2nd and 3rd arrow
1-3-9	5 Boards Left	Aim between the 2nd and 3rd arrow
3-6-9	3 Boards Left	Aim between the 2nd and 3rd arrow
6-9-10	5 Boards Left	Aim between the 2nd and 3rd arrow
2-4-8	6 Boards Right	Aim between the 2nd and 3rd arrow
2-4-7	6 Boards Right	Aim between the 2nd and 3rd arrow
4-7-8	8 Boards Right	Aim between the 2nd and 3rd arrow
1-5	Strike Shot	Aim between the 2nd and 3rd arrow
3-6	5 Boards Left	Aim between the 2nd and 3rd arrow
3-9	3 Boards Left	Aim between the 2nd and 3rd arrow
2-4	3 Boards Right	Aim between the 2nd and 3rd arrow
6-10	8 Boards Left	Aim between the 2nd and 3rd arrow
6-9	6 Boards Left	Aim between the 2nd and 3rd arrow
5-9	1 Board Left	Aim between the 2nd and 3rd arrow
5-8	Strike Shot	Aim between the 2nd and 3rd arrow
4-7	10 Boards Right	Aim between the 2nd and 3rd arrow
1-3-5-6	5 Boards Left	Aim between the 2nd and 3rd arrow
1-3-6-10	5 Boards Left	Aim between the 2nd and 3rd arrow
1-3-6-9	5 Boards Left	Aim between the 2nd and 3rd arrow
3-5-6-9	6 Boards Left	Aim between the 2nd and 3rd arrow
2-4-7-8	6 Boards Right	Aim between the 2nd and 3rd arrow

Right Hand		
Spare	Move	Target
2-4-5	6 Boards Right	Aim between the 2nd and 3rd arrow
1-2-8	2 Boards Right	Aim between the 2nd and 3rd arrow
2-4-8	3 Boards Right	Aim between the 2nd and 3rd arrow
4-7-8	7 Boards Right	Aim between the 2nd and 3rd arrow
3-6-9	6 Boards Left	Aim between the 2nd and 3rd arrow
3-6-10	6 Boards Left	Aim between the 2nd and 3rd arrow
6-9-10	7 Boards Left	Aim between the 2nd and 3rd arrow
1-5	Strike Shot	Aim between the 2nd and 3rd arrow
2-4	5 Boards Right	Aim between the 2nd and 3rd arrow
2-8	3 Boards Right	Aim between the 2nd and 3rd arrow
3-6	6 Boards Left	Aim between the 2nd and 3rd arrow
4-7	8 Boards Right	Aim between the 2nd and 3rd arrow
4-8	6 Boards Right	Aim between the 2nd and 3rd arrow
5-8	1 Board Right	Aim between the 2nd and 3rd arrow
5-9	Strike Shot	Aim between the 2nd and 3rd arrow
6-10	10 Boards Left	Aim between the 2nd and 3rd arrow
1-2-4-5	4 Boards Right	Aim between the 2nd and 3rd arrow
1-2-4-7	4 Boards Right	Aim between the 2nd and 3rd arrow
1-2-4-8	4 Boards Right	Aim between the 2nd and 3rd arrow
2-4-5-8	6 Boards Right	Aim between the 2nd and 3rd arrow
3-6-9-10	6 Boards Left	Aim between the 2nd and 3rd arrow

REMEMBER- IT IS BETTER TO TAKE AS MANY PINS OUT AS POSSIBLE WITH THE BALL RATHER THAN SOLELY RELYING ON PIN ACTION.

MAKEABLE SPLITS

SPLIT	Move	RH-LH	Target
2-4-7-10	6 Boards Left	LH	Aim between the 2nd and 3rd arrow
3-6-7-10	6 Boards Left	RH	Aim between the 2nd and 3rd arrow
2-4-10	6 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-4-6-7-9	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
4-7-9	10 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-8-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-8-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-6-8-10	5 Boards Left	RH	Aim between the 2nd and 3rd arrow
5-7-9	Strike Shot	RH	Aim between the 2nd and 3rd arrow
5-8-10	Strike Shot	LH	Aim between the 2nd and 3rd arrow
1-3-4-5-6-7	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
6-8-10	10 Boards Left	LH	Aim between the 2nd and 3rd arrow
3-6-7	6 Boards Left	RH	Aim between the 2nd and 3rd arrow
2-7	6 Boards Right	LH	Aim between the 2nd and 3rd arrow
9-10	6 Boards Left	RH-LH	Aim between the 2nd and 3rd arrow
7-8	8 Boards Right	RH-LH	Aim between the 2nd and 3rd arrow
5-10	Strike Shot	LH	Aim between the 2nd and 3rd arrow
5-7	Strike Shot	RH	Aim between the 2nd and 3rd arrow
3-10	6 Boards Left	RH	Aim between the 2nd and 3rd arrow
3-9-10	6 Boards Left	RH	Aim between the 2nd and 3rd arrow
2-7	6 Boards Right	LH	Aim between the 2nd and 3rd arrow
2-7-8	6 Boards Right	LH	Aim between the 2nd and 3rd arrow
1-2-4-10	6 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-6-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-3-6-7	6 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-4-6-7	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
4-7-10	10 Boards Right	RH-LH	Aim between the 2nd and 3rd arrow
4-5	3 Boards Right	RH-LH	Aim between the 2nd and 3rd arrow
6-7-10	10 Boards Left	RH-LH	Aim between the 2nd and 3rd arrow
5-6	3 Boards Left	RH-LH	Aim between the 2nd and 3rd arrow
4-9	10 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-5-6-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
8-9	Strike Shot	RH-LH	Aim between the 2nd and 3rd arrow
1-2-4-7-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-5-7-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-2-4-7-8-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-3-5-6-7-10	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-6-7-9-10	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-2-4-6-7-10	5 Boards Right	RH	Aim between the 2nd and 3rd arrow
1-3-6-7-10	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-4-5-6-7-10	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
1-3-6-7-9	5 Boards Left	LH	Aim between the 2nd and 3rd arrow
6-8	10 Boards Left	LH	Aim between the 2nd and 3rd arrow

Remember: it is better to take as many pins out with the ball rather than solely relying on pin action. Split-making: the smallest number pin standing will take out either the adjacent or diagonal pins.

Ten numbers a Bowlogist should know

The fundamental numbers every bowlogist and/or bowler should know by heart.

10- # of frames in a game.

10-# of pins at the end of the lane.

10-# of times a bowler attempts to knock down in each frame with one or two balls.

12- strikes in a row to achieve a perfect single game.

15- height (in inches) of a bowling pin.

15- feet from the foul line to the arrows.

30- pins maximum number that can be knocked down in a single frame.

60- number of feet from the foul line to the headpin.

75- feet from the back of the approach to the headpin.

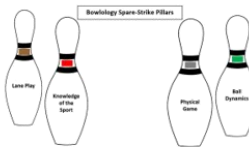
300- the highest score a bowler can achieve in a single game.



BOWLLOGY

Ten Pin Staffers

STRIKING MASTERMIND



King Pin



Associate

These 10 numbers are important in the sport of bowling. For Bowlogists, these numbers are essential for understanding many critical aspects of the sport. Knowing these numbers allows a bowler to achieve the level of a Bowlogist. A Bowlogist should always be able to recall these numbers. This chart is called "Ten in the Pit" to signify that by knowing these numbers, you are assured of a "strike" (having a high level of knowledge about the sport of bowling)



The Bowlology Zones

This picture illustrates the six zones that make up Bowlology:

- Spare-Strike Pillars
- Bowlology
- Ten Pin Staffers
- Striking Mastermind
- Bowlology Academy
- Master of the Lanes
- King Pin Associate

Bowler Inventory Guide

Balls	Bowler needs one plastic ball for spares, a benchmark ball, a ball that gives a bowler a feel for the lane conditions and three more balls with different layouts and surfaces.
Tape	Texture to put on bowlers hands and or finger or thumbhole.
Wrist support	To keep a bowlers wrist in the proper position.
Glue	To re-glue the bowler's finger & thumb inserts.
Finger & Thumb inserts	If a bowler has a Switch Grip by Turbo and Interchangeable Thumb by Vise.
Shammy	To make sure all the oil gets off the ball each time the ball is thrown.
Soles & Heels	A bowler needs spares of these to be able to adjust the different approaches.
Abalon Pads	A low number on the pad, i.e. 500, will give the ball more traction and make it hook earlier. A high number on the pad, i.e. 3000, will make the ball smooth and reduce friction and make it hook later. The bowler must adjust the surface before competition starts. Once the ball is thrown for competition, bowlers cannot adjust the surface for the ball.
Shoes	One pair of good custom bowling shoes for the bowler.
Bags	Two 3 ball rollers and one tournament tote bag
Ball Cleaner	When a bowler get to the lanes. They should clean their balls before throwing practice balls.
Grip sack (Rosin bag)	A bowler can have a grip sack or rosin bag. This aids in keeping the hand dry and removes sweat.
Small Notebook	This comes in handy for a bowler to take notes on many things during competition. For example, if a bowler finds a pair they struggled on earlier, they can look back and make adjustments to figure out how to hit that pair of lanes better.
Extra Shoestrings	Quick replacement of broken shoestrings as a bowler cannot keep their balance on the approach with loose shoes.
Ball Cups	1 to 3 cups. To hold the bowler's ball after they clean or resurface ball so they do not roll away.
Shoe Brush	To clean off the bottom of their shoes to wipe off debris excess oil, etc.

Bowling Resources



Books

Bowling: How To Master The Game by Parker Bohn III
Bowling Knowledge is the Key by Fred Borden
Game Changer by Mark Baker
Bowlology by Josh Hyde
Revolutions I & II by Chip Zleke
Beyond the Basics by Ron Hatfield
Par Bowling: Progressive method of bowling instruction
Bowling Execution by John Jowdy
Balance by Bill Taylor
From Gutterballs to Strikes by Mike Durbin
How to Pick Up Spares by Michelle Mullen
Bowling for Dummies by A.J. Forrest and Lisa Iannucci
Fifty Greatest Bowlers in PBA History
Stone 8 by Len Nicholson
Bowling Fundamentals by Michelle Mullen

Magazines & Newsletters

Bowlers Journal International
Josh Hyde's Bowling Newsletter
Bowling This Month

DVD's

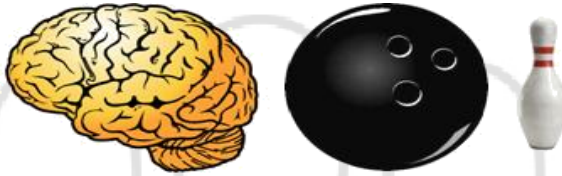
Learn to Bowl Competitively: Bowling Lessons From the Legend by Norm Duke
The System by Mark Baker featuring Chris Barnes, Tommy Jones, Lynda Barnes, Barry Asher
Becoming a Better Bowler with Walter Ray Williams Jr
Beyond the Bowling Basics featuring Parker Bohn III and Brad Angelo
Bowling Lessons from the Pros

Coaching & Training Centers

Kegel Training Center
International Training & Research Center
Bowling IQ

Bowling Manufacturers

Brunswick—Ebonite—Columbia 300—DV8—Track—Hammer—Radical
Motiv
Storm—Roto Grip—Global 900
Dexter
Big Bowling
Vise Grips
Turbo



BOWLOLOGY

This exam is for the beginner

1. How many pins does the ball hit in a perfect strike?
2. In timing what does the first and second # mean?
3. Name 3 out of 7 mistakes bowlers could get into?
4. How does a right hander read the lanes?
 - A. Right to Left
 - B. Left to Right
 - C. Side to Side
5. How does a left hander read the lanes?
 - A. Right to Left
 - B. Left to Right
 - C. Side to Side
6. How does a bowler score a strike?
7. How does a bowler score a spare?
8. How does a bowler score an open?
9. True or False? If a bowler marks in the Tenth Frame they at least get one extra ball.
10. Score Frame 1-3

9	/		x	7	2
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11. In a bowler's spare game what is the best piece of equipment they can have
 - A. Resin Reactive Ball
 - B. Particle Ball
 - C. Plastic Ball
12. A right hander leaves the Ten Pin. How many boards do they need to move and what way?
13. If a bowler leaves a 6-10 spare how many boards and what way?
14. Is it better to throw a straight or a hook at a spare why?
15. In a proper release the thumb will exit the ball first. True or False?
16. Bonus Question: What is perfect game?

Ten Pin Staffers

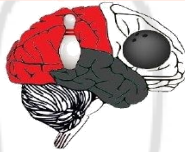
Short Questions:

1. Name the three phases of ball motion.
2. If the lanes are slick, is it better to use a sanded ball or a polished ball? Why?
3. If the lanes are dry, is it better to use a sanded or a polished ball? Why?
4. Using the rule of 31, the length of the pattern is 40 feet. What is the break point?
5. What is "High RG" and "Low RG"?
6. What is "PAP"? What is a flat pattern?
7. What is "VAL"?
8. What is a flat pattern?
9. Is it better to go straight or hook the ball at single pin spare?
10. What does 2 and 1 mean, in reference to a bowler's technique adjustment?

Essay Questions:

1. A bowler is having difficulty getting to the pocket. The bowler moves right, and the ball hooks more. The bowler moves left, and the ball hooks less. What should the bowler do?
2. A bowler is 80 over and the cut is 100, with one more game to go, what does he need to shoot in order to make the cut?
3. A bowler goes into the pro shop looking to purchase a ball. Normally, bowlers want to get a ball with the most aggressive hook. How would a Pro Shop operator help make this determination?
4. A bowler is having trouble getting out of the ball. Is this due to too much forward pitch, or too much reverse pitch? How would the bowler best correct this problem?
5. The cut after 5 games was at 130 over. The cut went to 100 over. What happened to reduce the cut and why?

STRIKING MASTERMIND



The Striking Mastermind program is for the higher average bowlers that bowl PBA Regional, local scratch tournaments, and “megabuck” tournaments. This quiz will enable a bowler to know more about the game and succeed in tournament play. Each question is worth five points to pass this exam the bowler must get a score of 80 out of 100. It is an exam in that hopefully tests the bowlers knowledge. This program was founded by the Ten-Pin Staffers and Josh Hyde Bowling.

1. If a bowler comes into a pro shop that has an asymmetrical ball the pro shop operator will be able to drill the ball stronger than symmetrical ball.
 - A. True
 - B. False
2. Why is it important to have a good fitting grip in all of your bowling balls?
 - A. To keep the hand in good condition
 - B. To ensure a clean release
 - C. To be able to switch bowling balls without worry
 - D. All of the above
3. In a five step approach to achieve neutral or textbook timing when should the ball and foot begin moving together?
 - A. First step of five
 - B. Second step of five
 - C. Third step of five
4. How can a Pro Shop operator help you improve your bowling ball selections?
 - A. Proper fit
 - B. Drilling layouts
 - C. Coaching
 - D. All of the above
5. Bowlers should know what and how all of their equipment reacts in order to choose the proper ball and surface in competition?
 - A. True
 - B. False
6. What is a flat pattern?
 - A. 12 to 1
 - B. 3 to 1
 - C. 1 to 1
7. If a pattern is longer in length, what type of surface grit does a bowler want on the ball?
 - A. Higher
 - B. Lower
8. Compared to a house pattern, a sport pattern typically has an oil ratio of?
 - A. 4-1 or less
 - B. 2-1 or more
 - C. 3-1 or less



9. What phase of ball motion does the ball need to be in at the backend of the lane in order to have its best chance to strike?
 - A. Roll phase
 - B. Skid phase
 - C. Hook phase
10. What is PAP?
11. When a ball is skidding too far down lane and does not get into the roll phase, what adjustments could you make?
 - A. Change to a ball with a lower surface grit
 - B. Decrease ball speed
 - C. Both A & B
12. If you need the ball to have maximum backend reaction at what degrees should the ball be rotating after the release?
 - A. 0 degrees
 - B. 45 degrees
 - C. 90 degrees
13. When shooting cross lane at a single pin spare conversion, it is better to roll your plastic ball across the lane using 0 degrees rotation so the ball goes straight toward the pin?
 - A. True
 - B. False
14. What is axis rotation
15. What is axis tilt
16. When is it better to hook at a spare, and why?
17. The typical amateur bowler most likely changes balls after the ball does not strike. Why is that not always the best thing?
18. The typical bowler will more than likely go into a pro-shop to get the most hooking ball. Why is this not always a good idea?
19. In a PBA Tournament what is lane courtesy?
20. Why should a bowler learn to tape up their ball.


King Pin



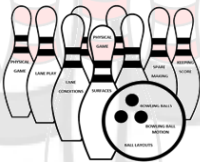
Associate

1. Should Glenn Allison's 900 be recognized by the USBC? Why or Why not?
2. Is today's bowling equipment hurting bowlers? Why or why not?
3. Should the Tournament of Champions come back as a tournament in which only PBA Tour titlists can bowl, rather than including Regional and/or PBA50 Tour titlists. Why or Why not?
4. Who was the greatest bowling coach and why?
5. Should bowlers aim for the PBA or should they try to succeed in a MegaBuck Tournament and stay an amateur player?
6. As of August 1st of 2020, USBC outlaws weight holes. Is this a good idea or not?
7. Is using urethane or resin reactive equipment better for the pros?
8. Rank each of these tournaments using one through five with five being the highest: PBA Players Championship, USBC Masters, U.S. Open, PBA World Championship and Tournament of Champions. Explain the significance of these majors on the PBA Tour.
9. Should bowlers have a house shot average or a league shot average or both in order to join the PBA?
10. Should the U.S. Open be a limited field or have a multitude of bowlers bowling in this tournament?
11. In 2009 the PBA voted Earl Anthony the greatest bowler in the history of the PBA. The second greatest bowler according to the PBA was Walter Ray Williams, Jr. Which one do you think is the # 1 or do you think someone else from 1958 to 2009 should have been nominated? Give an explanation as to your answer.
12. Jason Belmonte and Mike Aulby are the only 2 players to win all Majors on the PBA Tour. Which one was the best?
13. Which was or is the best bowling innovation(s) in the history of the sport? Why?
14. Who had the best bowling form in the history of the sport? Why?
15. Who revolutionized the game the most and why?


These answers are for essay responses rather than for the purpose of receiving a certificate. It is highly recommended that the answers be concise. Bowlers and pro-shop operators can email their answers to Josh Hyde, founder of the Bowler Intelligence Agency, at joshhydeb bowling@gmail.com. They will receive a return email from Josh once he has reviewed and critiqued their answers.




BOWLOLOGY



*Presented to
Joe Bowler
For Scoring 80% to passing the Bowlology
Exam*




Dean of The Bowlology Academy
Josh Hyde B.L.P




BOWLOLOGY

Ten Pin Staffers

*Presented to
Joe Bowler
For Achieving at least 120 out of 150.
Ten Pin Staffers Exam*




Dean of The Bowlology Academy
Josh Hyde B.L.P




BOWLOLOGY


STRIKING MASTERMIND



*Presented to
Joe Bowler
For Scoring 80% to passing the Striking
Mastermind Exam*




Dean of The Bowlology Academy
Josh Hyde B.L.P




BOWLOLOGY

King Pin

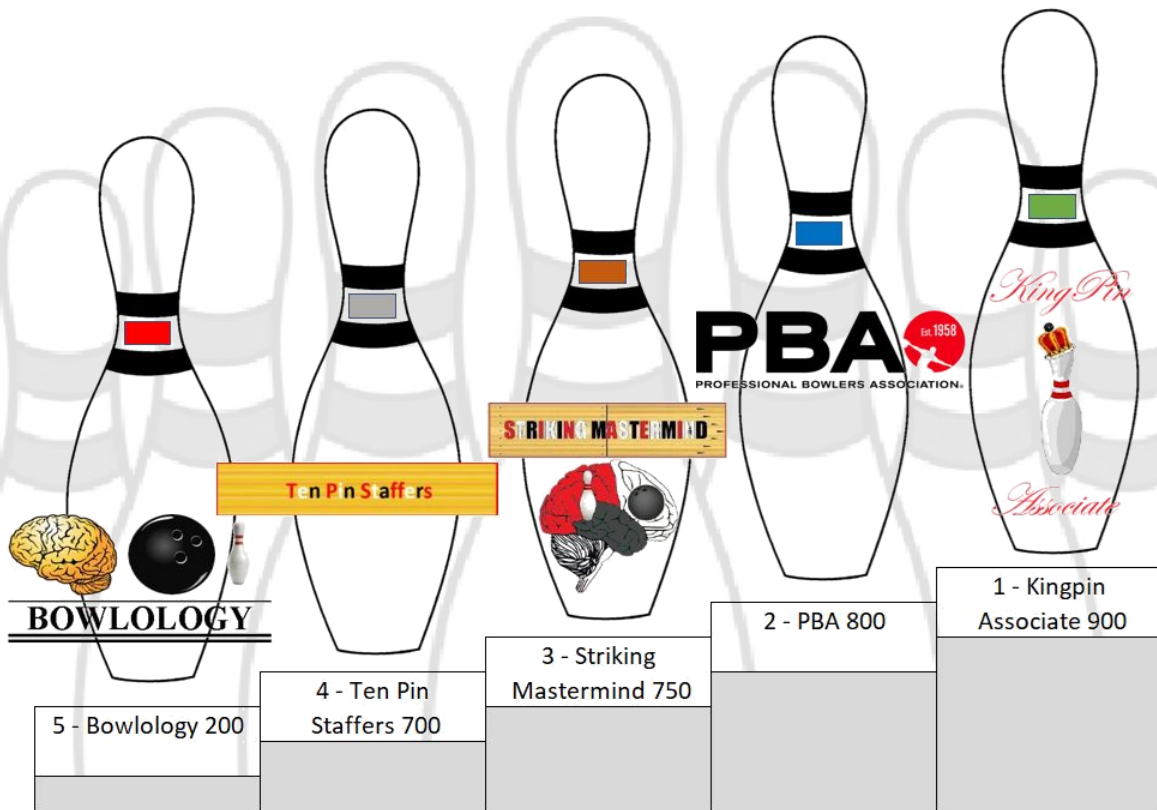


Elite

*Presented to
Joe Bowler
For Achieving an Elite level of Knowledge of
the Sport of Bowling*



Dean of The Bowlology Academy
Josh Hyde B.L.P



Bowlology 200— is knowledge of the sport of bowling. Examples are: knowing how to keep score, correctly making spares, lane courtesy, and just basic knowledge of the sport of bowling. Bowlers that are interested in joining Bowlology will receive a certificate once they pass an exam with a score of 80% or better.

Ten Pin Staffer 700— is for coaches and pro-shop operators who know the physical game and the dynamics of a bowling ball. In order to become a Ten Pin Staffer, a bowler is required to score 130 out of a possible 150 to pass. These individuals know how to help bowlers improve their game.

Striking Mastermind 750— the Striking Mastermind exam is for the tournament bowler that wants to advance their game to the next level. The Striking Mastermind takes a score of 80 out of 100 to pass.

PBA 800— the PBA 800 course is designed for the high scratch bowler that might have cashed in a PBA Tournament as an amateur - who had a good shot early in a tournament but fell short the last couple of games. Additionally, bowlers in the class will learn how to conduct themselves as a high-level bowler. This class reviews the non-member orientation meeting more in depth.

Kingpin Associate 900— is for those individuals who know a depth of knowledge of the sport of bowling. The greatest bowlers have gone to coaches like Fred Borden, Mark Baker, John Jowdy and Del Ballard, Jr. The Kingpin Associate is for people who know the sport. In addition to knowing how to attack the lanes and bowling ball dynamics. Those who are interested to learn more about this program can email Josh Hyde at joshhydeb Bowling@gmail.com.

Bowlology Academy Presents Becoming a Bowlologist

A detailed description of the various areas of expertise a Bowlologist needs and the tools of the trade by

Josh Hyde B.L.P. Bowlologist



BOWLOLOGY

Knowledge Requirements of a Bowlologist

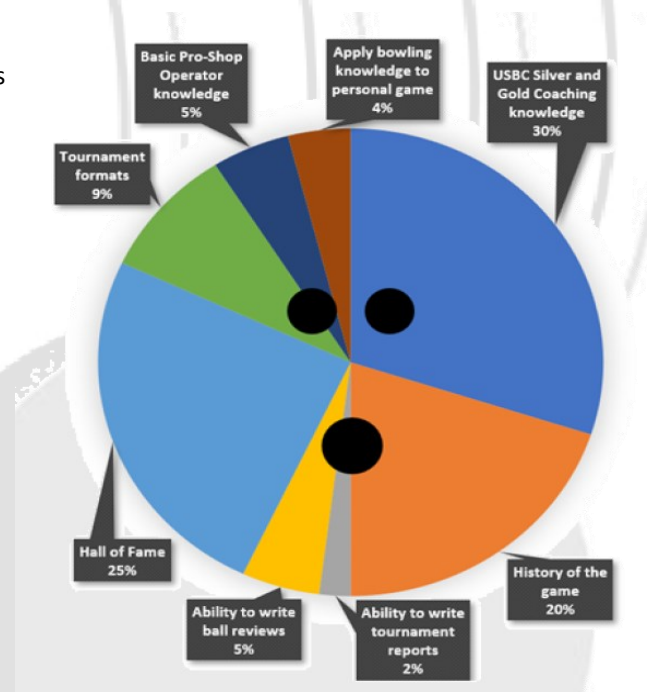
From covering Tom Smallwood at the 2009 PBA World Championship to the passing of legendary Mark Roth to the latest bowling ball, I cover it all as a Bowlologist should when it comes to the sport of bowling. Items included are how to bowl, running a tournament or league, knowing the history of the sport, the latest equipment announcements, the ins, and outs of tournament analysis, how to score a game and coaching from a beginner to an advanced bowler. A Bowlologist also understands the physical game on the lane, the must knows of the rules of the game, and being an ambassador to the sport. A Bowlologist would also know how to run a pro-shop and know the fundamentals of ball design. Knowing the distance of the patterns and knowing how many milliliters of oil is on the lane are other points a Bowlologist would know. In December of 2021, I did a bowling pin study on how many degrees a pin must fall in a successful single pin spare. If any bowlers have a thought-provoking question, Bowlologists should be able to provide information and data based on analysis.

These are knowledge requirements that are essential for a Bowlologist.

Bowlologist Job Description

This is a breakdown of a Bowlologist's tasks and responsibilities

- USBC Silver and Gold Coaching knowledge
- Knowledge of the sport
- Physical game
- Lane play
- Ball dynamics
- History of the game
- Ability to write tournament reports
- Ability to write ball reviews
- Hall of Fame
- Tournament formats
- Basic Pro-Shop Operator knowledge
- Apply bowling knowledge to personal game



A Glimpse into the Career of a Bowlologist

In the past, Josh Hyde's Bowling Newsletter has included articles about how to become a Bowlologist. In November of 2020, I became part of the United States Bowling Congress committee member for the Hall of Fame. I am humbled by this great honor. At one time, the USBC had 10 million members in its entire organization. All bowlers have had to join the USBC to achieve their PBA card. Bowlers like Dick Weber and Earl Anthony are members of the PBA Hall of Fame and USBC Hall of Fame. This is the grass roots to becoming one of the best bowlers in the world. I have obtained the USBC Hall of Fame committee status because of my 10-year IBMA membership. This all started when I approached PBA President Steve Miller in 2001 at the PBA National Championship (now known as the PBA World Championship) and asked him how I could become a PBA member. A week later, I got my PBA card and a personal note that said "Congratulations to our #1 fan!". Two years later, I began my coaching career. I took a Level 1 USBC Coaching class. Five years after that, I started this publication. Three years later, I started the Bowlology column. The first column was on the Perfect Strike. In 2015, I began to take bowling modules for the USBC coaching program. Then I was able to obtain my Bronze Level coaching credential. Four years later, I would receive the Silver Level coaching credential. Along with these coaching accolades, my main purpose was to promote the PBA. In 2009, I ran into the Editor of the *American Bowler* at a PBA Regional where he asked me to write an article about that tournament. He would also help me publish my first book in 2012—"Bowling from Another View".

Below is a glimpse of my accomplishments that enabled me to become a Bowlologist:

- Started Nov 2011 Bowlology column
- 2001 Honorary PBA member
- 2003 Level 1 USBC Coaching program
- 2009 Wrote article for "American Bowler"
- 2012 Balls of the Lanes column (includes Brunswick logo); I write column in exchange for Brunswick bowling balls)
- 2012 Authored "Bowling from Another View" book
- 2012 Bowling modules
- 2008 Josh Hyde's Bowling Newsletter
- 2015 Regional staff member for Vise
- 2015 Bronze Coach Level
- 2012-2013 Josh Hyde's Bowling PBA Media Guide
- 2015 50th Anniversary TOC Media Kit
- 2014 PBA Hall of Fame committee member
- 2020 USBC Hall of Fame committee member
- 2017 1st 300 game
- 2019 Silver Coach Level

A Note from a Bowlologist

The Mount Rushmore of Bowling is Dick Weber, Earl Anthony, Walter Ray Williams, Jr. and Jason Belmonte. All four of these bowlers know how to throw strikes when needed. Over the years, I have studied the game in depth. I have been fortunate to know the greatest bowlers on Earth. In writing this book, I had the opportunity to receive my bronze and silver certifications from the USBC. I would like to thank the USBC coaching staff for allowing me to obtain these two coaching certifications. Every bowler wants to get ten pins down in one shot—this is called a strike. Then, they would like to get a 300-game. A few years ago, I came up with a number: 10-30-300. This number represents the three main numbers that a bowler would like to attain. A bowler strives to get ten pins down in one shot on the first ball. Then, the bowler would like to get 30 in the first frame. Finally, but certainly not least, they would like to get a score of 300. Therefore, 10-30-300 represents the bowling number. In becoming a Bowlologist, a person must have the knowledge to coach a fellow bowler about bowling ball dynamics and the history of bowling. From gutter balls to strikes, bowlers want to get better. A bowler may ask themselves this question: How can I get better? The answer is both simple and complicated. It depends where they are in their bowling game. It takes one more spare to increase their average by ten pins, rather they want to win the league championship or win the U.S Open. It all comes down to making repeatable shots.

Writing this book has been the biggest project in my bowling career. I really want bowlers to understand the game, advancing their personal game to a higher level. Watching bowling tournaments and bowling at my local center has given me experience and helped me write about the sport of bowling. Growing up there were a number of bowling manufacturers that made their own bowling balls. Today bowling ball manufacturers are making bowling balls stronger and more powerful.

If bowlers looked back throughout the 20th Century, they would see how scores have drastically skyrocketed. It was a different surface and different oils. Bowling centers would use an old bug sprayer to oil the lanes. Bowlers would know where to throw the ball. A board would be marked to have a decent score. If bowlers did not play that the area of the lane, they were not going to score that night. It was a tougher game back then. It was very rare for a bowler to throw an 800 series. Now days, 800 is easier to shoot with the bowling ball and lane technology that a bowling center mechanic applies. Bowlers need to know their equipment in order to score. When a bowling center has a house shot, it is easy to score. However, there is still going to be pins left on the pin deck after the first ball. Bowling a 300 is still an art and an achievement. Bowlers that have been bowling for 40 years might say there is a scoring epidemic, in that the bowling ball technology makes bowling easier. However, when a bowler does not have the correct form and does not have the proper ball in their hand, they are not likely to have high scores.

Becoming a Bowlologist

Back in 1997, my mom and I went to the Bowling Hall of Fame & Museum in St. Louis, Missouri. This was my second visit there. I had always wanted to see old bowling films and talk with the curator about bowling history. He said that he would give me a tape to watch anytime I wanted to. On the way back home, I had told my mom that I really wanted to be a bowling specialist. Then she preceded to make up a word for me, Bowlologist. I totally believed that it is what I have become. Back in November of 2011 of this publication, I had started the Bowlology column. It highlighted my knowledge about the sport I passionately loved.

When I was growing up, I was going to amateur and professional tournaments. By going to both of these types of tournaments over the years, I was able to observe a number of bowlers bowl, study how they played the lanes, and analyze their physical game. I also studied bowling ball dynamics, learned the history of the game including PBA Trivia, and attended over a 100 PBA tournaments. I became an honorary member of the PBA. Throughout the years, I have studied the game. When I was growing up I would watch the video by Don Johnson titled **"A Pro's Guide to Better Bowling"**. Going to countless pro and amateur bowling tournaments has helped me along the way as I watched the great-est bowlers. I also had a mock pro-shop and would bowl mock PBA tournaments. This helped me throughout my entire bowling career. I have been to a number of pro-shops and bowling centers around the Midwest and East Coast in the USA.

I am so thankful to my Mom and Dad for taking me to these tournaments. Roger Hyde, my Dad, was the most skilled pro-shop operator and ball driller in the area. He knew the dynamics of the bowling ball and was adept at drilling for the ABC (currently known as the USBC). He helped me understand a great deal about the bowling ball. This is what my Dad taught me.

To fully become a Bowlologist, a person has to get to a bowling center and start applying their skills and knowledge to see what works and what does not. In the past, I have written about how to make adjustments from changing balls to moving a bowler's feet. There have been a number of times in which I have made adjustments with my ramp, and I have changed balls to get the correct ball motion in order to score higher. On December 2, 2018, I was using the Quantum Edge® ball and could barely shoot over 150, but then I switched to my Forest Green Quantum® and averaged 219. Another time, I changed zones but used the same ball and was able to score higher. The knowledge that I have learned over the years is through my Dad (Roger Hyde) and Parker Bohn III. These individuals have strengthened my knowledge of the sport that I love.

Back when I was a kid, I would imitate the greatest bowlers of all time. I watched Mike Miller who was a two-finger bowler and saw him win the PBA National Championship in 1991 beating PBA Hall of Famer Norm Duke for the title. Now that was impressive! Kelly Coffman was a bowler who had an impressive strike ball. I watched Jason Belmonte using a two-handed style to knock over ten pins with a bowling ball. Here are some of the pros that I have seen throughout my career as a Bowlologist. Walter Ray Williams, Jr. is perhaps the greatest of all time. He moved from playing inside to moving outside. He was still able to have the same ball reaction to score. Pete Weber is perhaps the greatest bowler to have never won the Chris Schenkel Player of the Year honor. He won ten titles with various types of bowling ball technology. Early on ('95-'96), he had a difficult time with resin reactive balls. Weber then retooled

and discovered what he needed to do with these balls in order to compete on the PBA Tour. It does not get any better than that. This is what a Bowlologist should be striving for

Bowling Essentials

Throughout my bowling career, there have been two main elements that I have tried to cover. Since 1989, I have been a PBA fan. When Mike Aulby won the 1989 Showboat in Atlantic City, New Jersey, I was hooked. The very next week, he would go on to win the Budweiser Open in North Olmsted, Ohio. By 1990, I attended my first major tournament which was the Seagrams Cooler U.S. Open when Ron Palombi Jr. won his first major. In 1989, Mike Aulby would win his second jewel of the Triple Crown of bowling at the U.S. Open by defeating Jim Pencak. That same year, Aulby would win the first of his three Masters titles. Learning how to keep score in bowling was probably the hardest fundamental to learn. By 1995, I became a pro at learning how to keep score.

There are two binders that I have been working on. These bowling essentials are covered in these binders: one is PBA-related and the other is instruction on how to bowl. Even though I write the Josh Hyde's Bowling News-letter, JHB covers both amateur and professional tournaments. I have also established Josh Hyde Bowling. I have three letters—I, T and P. They stand for Instruction, Tournament and Professional Bowling. These are the three main elements of bowling. These three key factors of bowling are what makes bowling a sport. In recent months, I have written about becoming a Bowlologist. I also know a great deal about the sport of bowling—how to throw the ball. Bowlology is my own bowling instruction to improve a bowler's skills, from the physical game to ball dynamics.

The USBC is the national governing body for bowling. They have created uniform rules and standards that apply from local to national tournaments for amateur and professional bowlers to gain a foundation as they aspire to become PBA members. USBC has rules and guidelines in which bowling can be regulated for every bowler in the United States. Other countries are modeling their own homegrown versions of the USBC after the success of the United States Bowling Congress. USBC promotes bowling for everyone—from the Joe Bowler that bowls his local league to the Jason Belmonte and other PBA greats. USBC offers tournaments at the local, state, and national levels. They even have different patterns red, white, and blue. The USBC honors scores are as follows 300, 299, and 298. The governing body of bowling allows bowlers to compete for national titles. This tournament is called the Open Championships. The United States Bowling Congress will build eighty lanes for the 20,000 teams that will participate in the tournament. In previous years, bowling centers used to be able to buy the actual lanes to add to the lanes in the bowling center.

The PBA Tour should be educational and interesting. When Joe Bowler fine-tunes his game, he can try out his talent on the PBA Tour. When I created the bowling tournament hierarchy, I wanted bowlers to understand what they are up against when they try the grass roots of bowling tournaments — local and PBA Regional tournaments

Is bowling a Sport

[The word “sport” is defined as “an activity involving physical exertion and skill in which an individual or team competes against another or others for entertainment.”]

Some bowlers today may say that bowling is not a sport. This is because of the bowling ball technology. Another reason why they may say bowling cannot be considered a sport is because the athletes do not have to run or break into a sweat.

However, bowling is indeed a sport. If people do not think that bowling is a sport, I would like to ask them: “What do they call throwing a 16-pound ball down a lane and hitting ten targets?”

Bowling is indeed a difficult sport to come by, even if bowlers are able to drill a ball to do specific tasks at hand. If a ball does not see friction on the lane, no matter how much of a strong layout they have drilled into the ball, it will not hook. The bowlers still must have the skill to throw the ball to knock over pins. The ball cannot get a strike by itself.

Bowling is a sport because a bowler must make a delivery to knock over the pins. Until the bowling industry makes a remote control bowling ball, in my mind, bowling will always be a sport.

We all love to bowl. We love the competition. Whether it is in a league or a tournament, for a local-town trophy or the Tournament of Champions, bowlers are competing to win. Throwing a 16-pound ball to get down ten pins in one or two shots is not an easy task. Even though today it may be slightly easier to roll a 300 game now than it was in the 70s, a perfect game is still a perfect game and is still an extremely difficult feat.

For people who may think that bowling is not a sport, I would suggest they try a sport (local) bowling league. These are more challenging lane patterns and are used on the PBA Tour. When they can average 230 a game on these patterns, maybe I will rethink my stance. Until then, bowling is definitely a sport.

Regulating Equipment for Professionals

The PBA is the greatest entity in the sport of bowling. Yet it affects everything from how different bowling balls are marketed to which shoes and gloves are acceptable on the tour.

In 2011, Lenny Nicholson was on Xtra Frame (now known as Flo-Bowling), talking about how one of the traditions of bowling was not letting pros use high-tech bowling balls. This may sound like a good idea, but in reality, bowling fans do not want to see low-tech balls going down the lane. For all the scratch bowlers that watch the PBA Tour, this would not let them see the type of ball motion they are considering when purchasing a new ball.

What might be a better answer is not regulating the angles which a PBA player can drill. Making regulations on drilling layouts limits the excitement of bowling. This could be one of the area that the PBA could look into, enabling players to know what they need to do in order to hit the pocket in a direct way.

Johnny Petraglia told bowling digest that in making the lanes harder, the USBC could regulate how much adaptation a bowler could do to their ball. This is one area that make bowling more of a challenge. If the PBA could investigate in this procedure, more people might consider bowling more a sport due to the added difficulty.

The plastic ball championship was a good tournament, but some players were not as happy because they could not use their full “arsenal.” This would be like NASCAR race only allowing cars to go a certain speed or MLB players only being able to use one weight of bat. Sports fans want to see the best players face all possible variables.

Bowlologist Philosophy

“Bowology”—the study of bowling with the desired result being that the student gains more knowledge of and more respect for the sport.

Serious bowlers know the bowling lingo today. However, when there are new bowlers or a family of four going out to bowl—they are not aware of some of the specifics of the sport of bowling.

I went bowling one time, and my caregiver stepped over the foul line nearly falling. She did not know that there was oil on the lane, so I told her. She asked why, I explained to her that it is like golf where there are trees, bunkers, water hazards, and rough. I also explained that this helps the bowler know where to throw the ball and where not to throw the ball. Then she was able to understand.

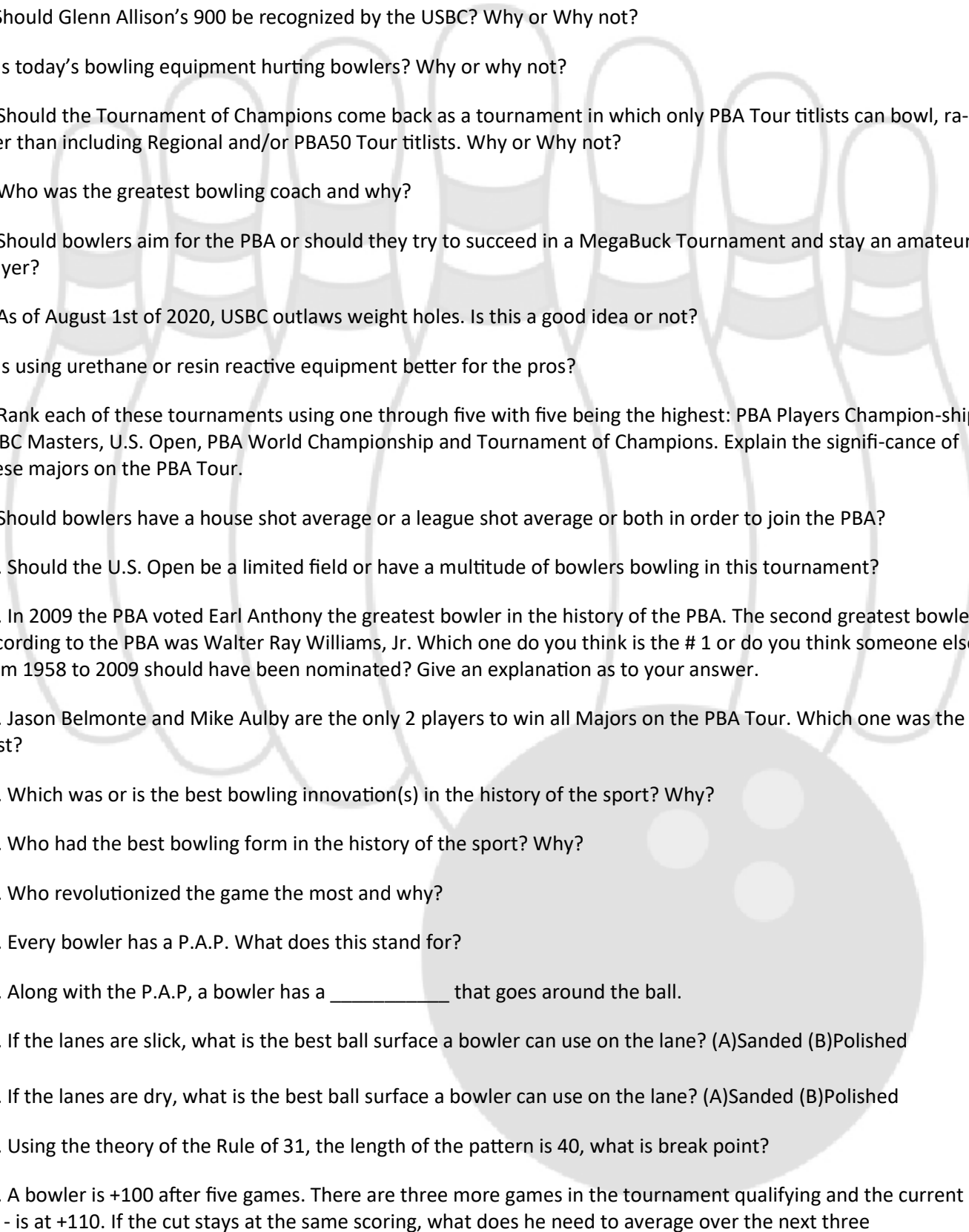
I had another caregiver who bowled and had high-performance bowling balls yet could not describe pin location to me. She also told me she had bowled a 240-game and a 250-game, but did not shoot a 600 series. On top of that, she told me she was better at converting splits than spares. She was a right-hander but slid on the right foot instead of the left foot.

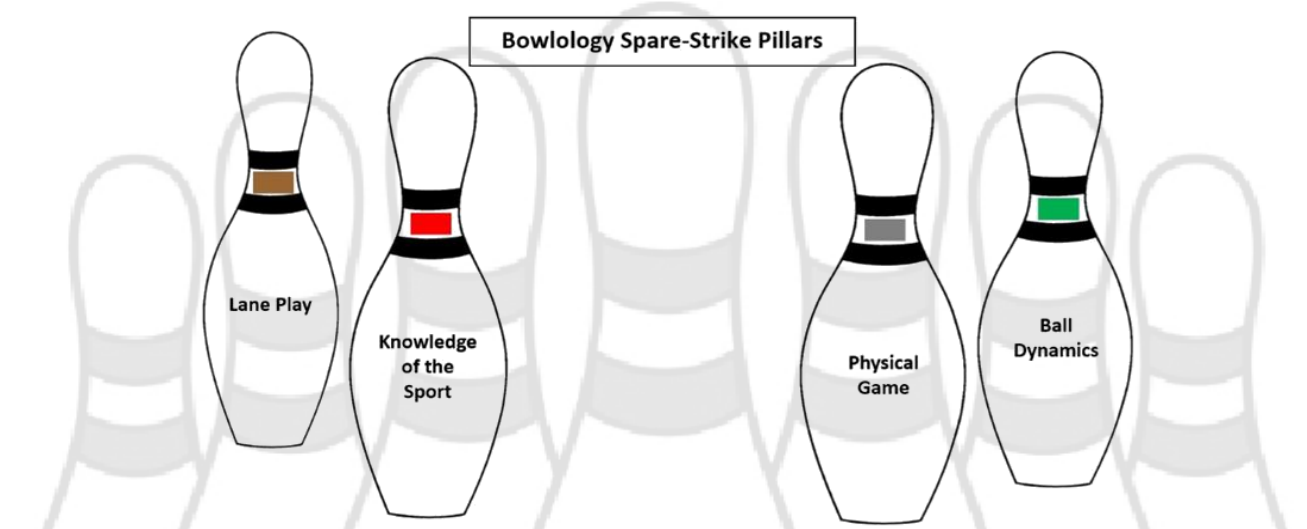
A golf professional that I know once told me that he would take a first-time golfer out on the range and work with them on their driving, chipping and putting before they could even go play a round of 9-holes.

There is no expectation for a first-time bowler. Many, when they start, do not want to get serious about the game. At the same time, there should be some guidance for first-time bowlers to learn basic bowling techniques. There is generally no one at the bowling center to help first-time bowlers learn more about the game. Yes, they may just want to bowl one time a year; but if they want to learn something more, there is no one to help them strengthen their knowledge of bowling.

The caregiver with the high performance bowling balls would have been better off with a simple ball and instead focused on learning bowling basics.

The difference between the pro bowlers and amateur bowlers is that amateurs look at where the ball enters the pocket as opposed to pros looking to see how the ball goes through the pins. If a bowler can make the ten go out on a half pocket shot and also carry the solid pocket hit and have a light hit pocket and strike they know they are going to be able to score throughout the tournament or league. All bowlers are trying to strike in different ways. The US Open pattern on the PBA Tour is by far the hardest pattern to string a number of strikes together. Just ask Pete Weber, winner of 5 US Open titles. This is not an easy task to complete.

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1. Should Glenn Allison's 900 be recognized by the USBC? Why or Why not?
 2. Is today's bowling equipment hurting bowlers? Why or why not?
 3. Should the Tournament of Champions come back as a tournament in which only PBA Tour titlists can bowl, rather than including Regional and/or PBA50 Tour titlists. Why or Why not?
 4. Who was the greatest bowling coach and why?
 5. Should bowlers aim for the PBA or should they try to succeed in a MegaBuck Tournament and stay an amateur player?
 6. As of August 1st of 2020, USBC outlaws weight holes. Is this a good idea or not?
 7. Is using urethane or resin reactive equipment better for the pros?
 8. Rank each of these tournaments using one through five with five being the highest: PBA Players Championship, USBC Masters, U.S. Open, PBA World Championship and Tournament of Champions. Explain the significance of these majors on the PBA Tour.
 9. Should bowlers have a house shot average or a league shot average or both in order to join the PBA?
 10. Should the U.S. Open be a limited field or have a multitude of bowlers bowling in this tournament?
 11. In 2009 the PBA voted Earl Anthony the greatest bowler in the history of the PBA. The second greatest bowler according to the PBA was Walter Ray Williams, Jr. Which one do you think is the # 1 or do you think someone else from 1958 to 2009 should have been nominated? Give an explanation as to your answer.
 12. Jason Belmonte and Mike Aulby are the only 2 players to win all Majors on the PBA Tour. Which one was the best?
 13. Which was or is the best bowling innovation(s) in the history of the sport? Why?
 14. Who had the best bowling form in the history of the sport? Why?
 15. Who revolutionized the game the most and why?
 16. Every bowler has a P.A.P. What does this stand for?
 17. Along with the P.A.P, a bowler has a _____ that goes around the ball.
 18. If the lanes are slick, what is the best ball surface a bowler can use on the lane? (A)Sanded (B)Polished
 19. If the lanes are dry, what is the best ball surface a bowler can use on the lane? (A)Sanded (B)Polished
 20. Using the theory of the Rule of 31, the length of the pattern is 40, what is break point?
 21. A bowler is +100 after five games. There are three more games in the tournament qualifying and the current cut + / - is at +110. If the cut stays at the same scoring, what does he need to average over the next three



When Bowlology was founded in November of 2011, the Josh Hyde's Bowling Newsletter wanted to give bowlers some knowledge of the sport. These spare- strike pillars are essential to Bowlology in that they are the four pillars that a Bow-lologist will need in order to help bowlers, coaches and pro-shop operators.

--The First Pillar is Knowledge of the Sport which involves split making, makeable splits, lane courtesy, the perfect strike, score - keeping, playing field, pin knowledge, pin carry, and general bowling knowledge.

--The Second Pillar is the Physical Game. If a bowler does not have a solid foundation, he or she is not going to be able to execute in every frame. Timing puts away the trail leg, the finish position and the arm swing. These are the main attributes of a bowler's physical game.

--The Third Pillar is Lane Play which is how the bowler plays the lanes making hand position and speed adjustments. In most sports, the athletes are not going to have to worry about the surface of the field. However, in bowling, bowlers do have to know what the lanes are doing in order to be a contender in a league match. The same holds true when Jason Belmonte needs a strike to win the U.S Open. Lane play is a big portion of a bowler's game.

--The Final Pillar is Ball Dynamics. This is where the bowler and the pro-shop operator need to be on the same page. Each bowler is different. If a pro bowler wins a Major and Joe Bowler wants to use the same ball with the same layout and surface, more than likely Joe Bowler will not have the same results as the pro bowler due to differences in their game. They may use the same ball except with a different layout and surface. This is why it is so important for the pro-shop operator to know Joe Bowler's game. Pro-shop operators generally know the dynamics of the bowling ball. Ideally, the bowler needs to find a pro-shop operator that has some coaching experience. If he/she has a pro-shop operator and a coach, all three need to come up with a game plan so that the bowler can be successful on the lanes.

These four Bowlology Spare-Strike Pillars will enable bowlers, coaches and pro-shop operators to identify bowling knowledge

Ten numbers a Bowlogist should know

The fundamental numbers every bowlogist and/or bowler should know by heart.

10- # of frames in a game.

10-# of pins at the end of the lane.

10-# of times a bowler attempts to knock down in each frame with one or two balls.

12- strikes in a row to achieve a perfect single game.

15- height (in inches) of a bowling pin.

15- feet from the foul line to the arrows.

30- pins maximum number that can be knocked down in a single frame.

60- number of feet from the foul line to the headpin.

75- feet from the back of the approach to the headpin.

300- the highest score a bowler can acheive in a single game.

BOWLING ORGANIZATIONS

Bowling Resource Guide

United States Bowling Congress

The United States Bowling Congress serves as the national governing body of bowling as recognized by the United States Olympic & Paralympic Committee (USOPC). USBC conducts championship events nationwide including the largest participation sporting events in the world – the USBC Open and Women's Championships – and professional events such as the USBC Masters and USBC Queens.

Founded in 1895, today USBC and its 1,519 state and local associations proudly serve more than a million members. USBC is headquartered in Arlington, Texas, working toward a future for the sport. The online home for USBC is BOWL.com.

About the Bowling Proprietors' Association of America

The Bowling Proprietors' Association of America, Inc. is a non-profit organization — the only one in the world that serves the specific, yet diverse, interests of bowling center owners.

About the International Bowling Media Association

Located at the International Bowling Campus in Arlington, Texas, the International Bowling Media Association (IBMA) promotes bowling journalism as a career choice to youth bowlers throughout America and provides awards and recognition to professional and amateur bowlers, industry volunteers and bowling writers.

The IBMA was formed when the Bowling Writers Association of America (BWAA) and the National Women Bowling Writers (NWBW) merged into one group in 2007, forming the new BWAA. The name was changed in 2011 to include more forms of media.

Membership in IBMA is open to individuals and corporations who support the ideals of the organization. Corporate membership fees help fund the \$5,000 Chuck Pezzano Media Scholarship presented by the Billiards and Bowling Institute of America.

The Bowling Writers Association of America, founded in 1934 by 16 charter members attending the organizational meeting in Peoria, Ill., was dedicated to developing professional writing, broadcasting, and photographic skills within the sport of bowling, while subscribing to the highest ideals in communicating the word of bowling throughout the world.

The National Women Bowling Writers was organized on April 18, 1948, in Dallas, Texas. Their primary purpose was the promotion and circulation of material to aid writers in their work and to increase interest in bowling among women throughout the nation.

The strength of NWBW was in the effectiveness of its grass roots members to communicate the story of bowling to local bowlers.

About the PBA

The Professional Bowlers Association (PBA) is an organization of more than 3,200 of the best bowlers from 27 countries who compete in PBA Tour, PBA International Tour, QubicaAMF PBA Regional Tour, PBA Women's Regional and PBA50 Tour events. The PBA is in its 57th consecutive year of nationally-televised competition, reaching bowling fans around the world who follow PBA activities through the PBA Network which includes Xtra Frame, the PBA's exclusive online bowling channel, ESPN and CBS Sports Network, and the PBA on Facebook, Twitter, and YouTube. PBA sponsors include Barbasol, Brunswick, Ebonite International, GEICO, Grand Casino Hotel and Resort, HotelPlanner.com, MOTIV, 900 Global, PBA Bowling Challenge Mobile Game, QubicaAMF, South Point Hotel Casino and Spa, Storm Products, and the United States Bowling Congress, among others. For more information, log on to www.pba.com.

About the PWBA

The Professional Women's Bowling Association (PWBA) originally was formed in 1960. The PWBA Tour has events throughout the country, offering high-level competition and top prize money for women bowlers. The PWBA is supported by the Bowling Proprietors' Association of America (BPAA) and the United States Bowling Congress (USBC).

About the International Bowling Museum and Hall of Fame

Discover the region's premier sports museum brimming with one-of-a-kind bowling artifacts, a unique bowling experience and a cutting-edge glimpse at the far-flung future of this global pastime. Pass through Bowling's Hall of Fame where rare photos and vintage film clips tell the stories of bowling's greatest legends. The International Bowling Museum and Hall of Fame collects, preserves and exhibits the 5,000-year history of the worldwide sport of bowling. From the ancient Egyptians to British monarchs to an enterprising German immigrant, follow the sport's journey from archeological digs... to American taverns... to today's cutting-edge computer assisted training centers. No visit to the International Bowling Campus is complete without experiencing the Inter-

Bowology Book Review

The Game Changer

By Mark Baker

Chapter 1: "Discovering a Coaching System That Works for All Bowlers"

"Whoever can generate the most momentum with the least amount of effort and the greatest degree of control will have the best chance to win."

"As their slide foot got flat on the approach, their swings were both parallel to the floor."

"At that moment, I decided I was going to conduct an experiment with my late-running client and see if I could get him to 'the timing spot' during our lesson. After tweaking a few things with his footwork and timing to get him closer to the spot, he saw immediate improvement in his game-THAT SAME DAY!"

"Almost every great contemporary bowler matched! Mark Roth, Dave Husted, Amleto Monacelli, Doug Kent, Chris Barnes, Bill O'Neill-each of them highly successful, world-class players-they all matched. Then I looked at a few of the all-time great woman bowlers like Robin Romeo, Leanna Hulsenburg (formerly Leanne Barrette), Liz Johnson and Kelly Kulick-they all matched!"

"The first thing I needed to look at when I evaluated a new client was: Does the bowler possess footwork and a swing that promotes consistency?"

"What I discovered again was that the great bowlers had a lot more in common at certain points in the delivery (namely, during the pivot step, the timing spot, the release point and the finish position) than one might imagine at a casual glance."

"Did the bowler have problems hitting his target? If the answer was 'yes', I'd start by looking at the footwork and the swing path from the back. If the answer was 'no', and the issues tended to be more a lack of consistent speed control or rev rate, I knew the problem had to be in the timing, so I'd watch from the side."

"Drift pattern-The measurement of the direction of your steps throughout your approach."

"I'll never forget his words after watching that comparison video: 'I can't believe how much better it looks now! But I never even felt a thing the whole time! You changed me without ever making it feel like I was changing!'"

"That is my philosophy of coaching: to make you better within the context of your natural game."

"Our goal is to make your game as easy to repeat as possible."

Chapter 2: "How I conduct a Lesson"

"Unless you're averaging under 160, you don't need to throw it BETTER, you just need to throw your best shot MORE OFTEN."

Textbook Pushaway timing: "Bowlers with this kind of timing tend to have a lower rev rate than other bowlers and must rely on accuracy and consistency to knock down the pins."

"There are really only four misses in the sport of bowling: miss right, throw it too fast; miss right, throw it too soft; miss left, throw it too soft; miss left, throw it too hard;"

"Miss right, throw it too soft and Miss left, throw it too soft are characterized by the following symptoms; You tend to bowl better the 1st game of league and then struggle toward the end as the lanes start to hook more, You have trouble generating adequate ball speed, your rev rate is lower than you'd like it to be, you tend to drift right, you have trouble keeping your balance, and you can't stay behind the ball and tend to 'top it'."

"I discovered a way of measuring timing that is universal-that nearly every Hall of Fame-caliber bowler fits in. The best part is, as bowlers get closer to fitting this mold- which they can do regardless of their style- their games tend to improve rapidly."

"There are three categories of timing (represented by three Hall-of-Famers) and every bowler fits into one of them."

"If you want to improve, you must first identify what kind of timing you have, then identify your most common misses."

"I evaluate direction issues from behind and timing issue from the side."

"Set a goal that, when you reach it, will make you a champion at your level."

Chapter 3: "Why Do I Miss My Target and How Do I Fix It?"

"What is Consistent Direction? Hitting your target at the arrows is important, but only if your footwork and swing path are allowing you to throw the ball with consistent direction."

"In every other successful instance, I've done it the other way around and changed the footwork to improve the swing."

Why has this worked? Because good footwork allows the ball to swing freely and unimpeded, ultimately leading to an improvement in power, consistency and score-all while reducing the amount of effort required to throw the ball."

“The quality of a bowler’s footwork is directly proportional to the quality of his overall game.”

“What is good footwork? In general, it is relatively straight from start to finish, well balanced, well-paced, (meaning there are no abrupt starts, stops or lengthy pauses) and matches well with the bowler’s swing path and rhythm. In other words, it complements the direction and the speed of the swing!”

“The swing is where any weaknesses or inconsistencies with your footwork are likely to show.”

“It is ultimately your swing (even if the swing’s direction is determined mostly by your footwork) that will determine your accuracy and your ability to throw good, consistent shots. More specifically, it is the *path* of your swing that will determine how simple your delivery is to repeat-and what you will find is that bowlers who possess the straightest, most relaxed swings-swings that stay in line with their shoulder and fall directly under the head- tend not only to have the most consistent direction but also have the greatest capacity for generating power in the form of speed and rev rate.”

“Measuring the swing at four points; 1) during the stance, 2) at the bottom of the swing as the ball is coming back, 3) at the top of the swing and 4) at the bottom again as the ball is coming through.”

“It is more important to match the ideal positions at the peak of the swing and at the bottom coming through than it is during the stance and at the bottom going back.”

“The best players tend to have pushaways that are very simple and very repeatable and get the ball into the swing with a minimum amount of effort, tension and, most importantly, no lateral movement.”

“Your goal with the pushaway then, should be to get the ball from its starting point in the stance to as close to under your head as possible as the ball goes back into the swing.”

“The length and speed of this step is predicated on your category of timing: bowlers with Tommy Jones timing will usually make this step quicker because the swing is already on its way to the top, while a bowler with Chris Barnes timing will make it slower(to allow the ball more time to reach the peak of the backswing). Bowlers with Carolyn Dorin-Ballard timing will be somewhere in between the two.”

“Footwork is the most important factor (even more important than the swing) in determining a bowler’s shot-making consistency.”

“It is better to drift away from your target than toward it.”

“Bowlers with better footwork can play inside line much more effectively and are also more powerful, accurate, and consistent in playing all angles than bowlers with less solid footwork.”

Chapter 4: “Why is My Timing Off and How Can I Fix It?”

“I prefer to see the distribution of effort between the upper body and the lower body in the ballpark of 30 percent and 70 percent, respectively”

“Remember: legs are for power. The arm is for direction.”

“flat spot is that it is “the line made by the two points represented by the position of your hand at the bottom of the swing and at the release.”

The Release: “But the one thing that all of these good bowlers do is that much as we saw with the spine tilt, there is a window in which these bowlers release it from, and individually, they all happen to be extremely consistent with releasing the ball from the same spot time after time.”

“More specifically, their hands tend to stay in the center of the ball vertically, while remaining close to the equator in the horizontal direction.”

“Another thing the pros do during this release move is that they do not rotate their forearms with their wrists and hands.”

“Chris Brane’s Circle would be about the size of a half-dollar. The 160 bowler’s circle would be about the size of a dinner plate. That’s because Chris Barnes’ release point (not to mention his direction) is going to be much more consistent than his 160-average counterpart (and you would hope so considering Chris bowls for his living).”

“The cause of this problem varies (sometimes it’s length of his push away (*Bill O’Neill*) other times it is caused by pulling the ball back into the swing and, occasionally, his third step will get a little slow), but you can see it very clearly when you look at Bill’s swing from the timing spot to the release point.”

“When Bill is on, his swing is completely flat is at the bottom, which allows him to get away with these slight misses and to feel as if he can miss a little bit to the right and still get the ball back, and also miss a little bit left and get the ball to hold it’s line.”

Chapter 5: “How Can I Tell When Everything’s Going Right?”

“We’ve seen in detail how direction, balance, timing and generating momentum are absolutely fundamental when it comes to improving your ability to play the sport of bowling. When you do everything in a way that is fundamentally sound according to what we’ve discussed so far, you’ll suddenly begin to notice a set of things you now have in common with other good bowlers.”

“Since the sport of bowling is made up of three main categories of variables(the physical game, lane play and equipment) learn-

ing to control your physical game by throwing the most consistent shots possible will help you eliminate one of those variables (you!) so you can simply focus on lane play and equipment adjustments.”

“Finally, we all want to be one of the “cool kids” and, in the sport of bowling, the cool kids are the pros. We all want to throw it like them, and the purpose of this book up to this point has been to help you identify the key fundamentals shared by the pros that you can incorporate into your game to produce better results than you’ve ever experienced.”

“What this looks like is this: their weight is balanced perfectly on top of the left leg, the head and shoulders are behind the knee, the throwing arm is swinging freely back and forth with the front of the forearm facing directly at the target, and the pivot leg is extended out to the left with the foot turned down towards the floor.”

“For bowlers who haven’t quite yet reached that level, the finish position can encompass all sorts of interesting, telltale configurations—from the lean-back, to the lean-forward, to the fall-off, to the fake-post.”

“But on the demanding conditions of tournament bowling, these small mistakes are often the difference between strikes and 2-8-10’s and big fours, which, at the wrong time, can cost you making the cut, making it to TV or winning the title.”

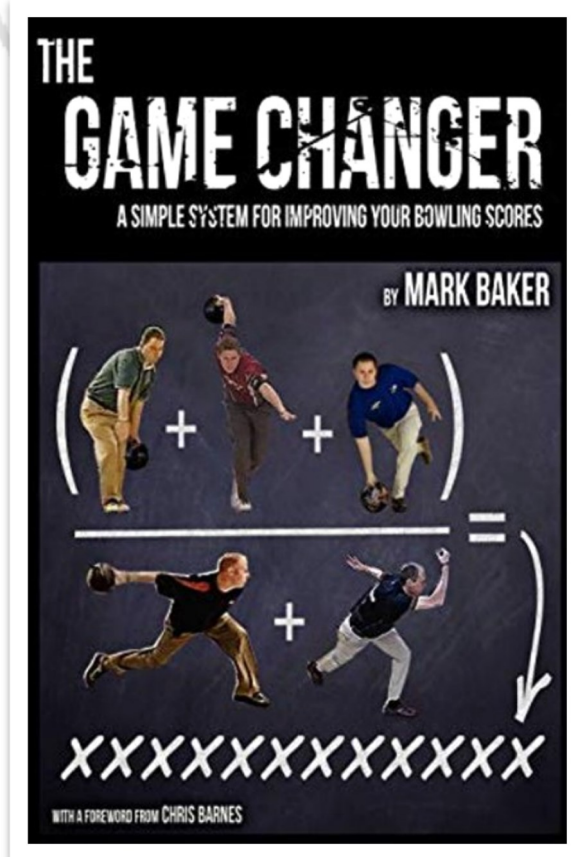
“When it comes to bowlers that haven’t reached the pro-level, the finish position tells me that there is an issue with balance, and the telltale sign of that is what I call “falling off” the shot.

“From the side, there are a couple of big keys that illustrate the universal finish position, namely: the position of the head and shoulders in relation to the slide knee, the level of the hips, the amount of shoulder rotation, and the spine tilt. All of these elements are related, and if you see one going wrong it usually sets off a chain reaction causing each of the other pieces to falter as well.”

“If you rank the all-time career PBA title winners by number of titles, then classify each of them as either “Stone-Cold-Shot-Maker” or “Unique”

“Norm Duke is one of the best examples of excellent footwork in the history of bowling. He employs perfect crossover steps prior to his push way and on the pivot step (both of which clear space for the ball to pass right under his head unimpeded), his steps are a fairly even length from start to finish, his spacing is consistent and his balance is as close to perfect as you will see.”

In this book bowlers can find a way to strike more rather they want to strike to win the league or strike to win a PBA regional title. The best bowlers have these qualities built into their game. It is important to understand that to have a sound game a bowler must repeat shots over and over. If they are already falling off a shot. They really need to look at their game to improve their league average. Even if they are just interested in bowling in a PBA regional competition on a regular basis. They need to figure out what they can do better and fix what they need too. This book will help bowlers on all sort of levels. The Game Changer is an appropriate title for the book that Mark Baker wrote.



Bowlology DVD Review

The System

By Mark Baker

Featuring Tommy Jones, Chris Barnes, Lynda Barnes, and Barry Asher

This DVD is intended to get a bowler's game on a solid foundation. Mark Baker was a great pro in 1985-1991 but now he has turned his attention to coaching bowlers. In the introduction to the DVD, Mark states the goal of his program which is to help bowlers from amateur level to the pros make more best shots, more consistently with more power. Whether they want to just improve their scores or bowl a perfect game.

Mark breaks the game down to ten Hall of Fame Positions. These positions will help bowlers become more accurate, powerful, and consistent in their game, improving their average. The absolute key thing is the timing step. Mark refers to this as the ball is parallel to the lane. The slide leg is still behind the head. Chris Barnes, Lynda Barnes, and Barry Asher are all at the same point at the release. They may not all get there in the same way or same manner, but they do indeed get there. What does this produce? It makes a bowler more accurate and more fluid to their approach. Baker also describes how every good or bad shot in bowling adds up to 100%. He encourages bowlers to use the only ten percent during the first two steps of the approach so that bowlers can retain more energy for the power at the end of the release. If a bowler uses 30% on his or her, they only have 70% left for the remainder of the approach. Hall of Famers practice this time and time again in order to be more accurate on the release of the ball.

Mark Baker analyzes the Hall of Famers games and focuses on what points they are at in each of their bowling approaches to the foul line. He also describes some of the amateur bowlers that he coaches. One amateur his ball is way out. This bowler thinks that he can get a straight swing in fact. The ball is pointing to the seven pin on the adjacent lane. Mark recommends that the bowler's ball should coincide with seam of their shirt. Mark Baker has broken down the game so that Joe Bowler can get better at whatever level he wants to be at.

In the DVD Baker points out that some of the greats have early and late timing. However, they still end up in the hall of fame, rather it be the PBA or USBC Hall of Fame or both. The question is how a bowler can be consistent throughout his or her game. One of the key things is their swing parallel to the floor, when they start to slide. Baker tells bowlers how to videotape themselves correctly so they can achieve the Hall of Fame positions to get where the bowlers want to be. An incorrect way is following the bowler from the start of the approach. Baker does not want to see the ball in the stance of the bowlers. This causes the bowler to make an adjustment in the middle of their shot causing them to think about their game. When a bowler steps on the approach the brain needs to turn off. Bowlers should not be thinking about the mechanics, ball choice, and/or adjustment. This process needs to take place in the settee area that's where the bowler's sit while they are waiting on the next frame.

Before Baker goes into the Ten Hall of Fame Positions, he informs the viewers of how they need to videotape their game. First the bowler needs to see their footwork and swing in the same frame. Second, when filming from behind it must be from straight behind and not at an angle. Third, when filming a bowler from the side, the camera should be two lanes down, with next to the gutter cap and foul line. The bowler should be in the center of the frame where their entire approach can be filled from start to finish. Do not track the ball after the release of the ball. Finally, when filming the ball get on the concourse behind the bowler to film the motion of the ball from start to finish.

The Six Steps of the System

The Stance- the stance is where the ball should not be visible from the back. Teammates or fellow bowlers should not be able to see the ball from directly behind. Bowlers should be putting their ball in line with the seam of their shirt.

The Push Away- is designed a smooth downswing, by keeping the bowler's shoulder soft. The bowler's energy in the push away should be 10% with the remaining 90% being used in the rest of the approach. This usually means two long steps followed by three short steps at the end or slow at start/fast at finish.

The Swing- top of the swing ball should cover the top of the bowler's head. It comes directly under the bowler's head on the down swing.

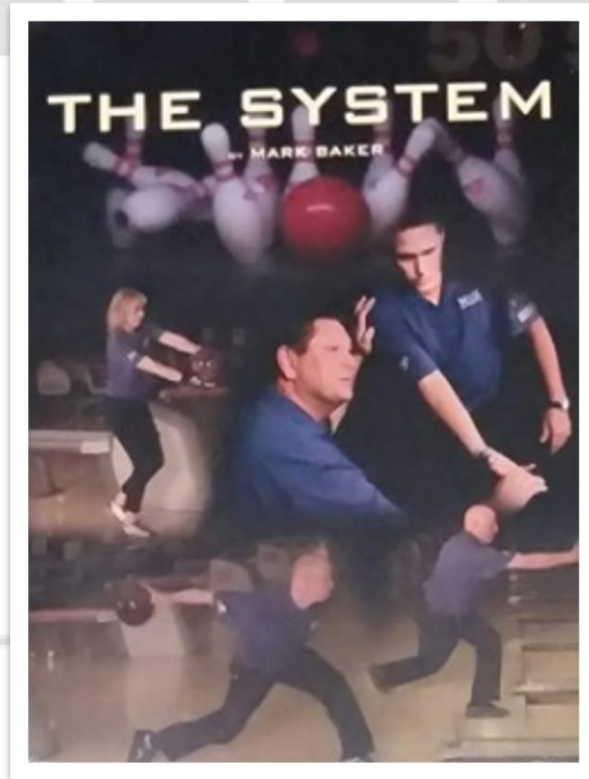
Footwork- this involves the cross-over step which will generate the ball to get on right direction. The pivot step should be slightly inside the bowler's head. On the slide, the upper body should be using about 30% of a player's energy while the lower body should be using 70%. Foot speed should be slightly greater than swing speed.

Timing Spot- this is the key piece of a bowler's game. If the bowler can get the swing parallel to the floor, then they are able to generate more power to make a great shot.

Finish Position- the head should be behind the bowler's knee not the head in front of the knee. The bowler will fall off the shot and not be accurate causing a great deal of frustration because they are always falling off the shot. Bowlers want to be fluid in the approach and stable at the end of the shot.

The Release of the ball

It is very important to keep the right hip low and steady in the release. This allows the arm to keep a consistent arc for the ball and the hand to release from behind the ball. If a bowler allows the hip to rise, the arc of the ball will remain the same, but the hand moves on top. If a bowler feels like they have a “chicken wing”, came over the top, or did not stay behind the ball, this hip position could be the main cause. The bowler needs to stand tall at the beginning of the approach instead of standing tall at the release point. Chris Barnes stated that he focuses on staying tall at the beginning of his approach as a way he keeps his right hip low.



Bowlology DVD Review

Learn to Bowl Competitively

By Norm Duke

Norm Duke is a 40-time PBA Tour Champion along with two Players of the Year honors and a total of eight majors. He was the first bowler to win three majors in one calendar year. Duke was the first bowler to win the regular U.S. Open and the Senior U.S. Open. Duke was the youngest bowler to win a PBA title. Learn to Bowl Competitively for the higher average bowler who wants to advance their bowling game. This DVD gives bowlers drills, tips and other insights on how to take their game to the next level.

The Lessons

Setup Parts 1 & 2

In this lesson Duke emphasizes on how bowlers need to have basic setup mastered so has to fall short of the foul line on the release. They can use the four to six and a half steps drill from the foul line to ball return. Norm stated that when bowlers open their feet, they are also opening their waist. In order to create more speed bowlers can hold their ball higher in their stance. Duke also points out that raising ball speed is done by raising the arms in the setup position to lower ball speed one should lower their arms. Bowlers should always have their arm swing synchronized with their walk.

Finish Position Drill

This is the essential bowler's position just after release of the ball where a bowler has a bent left knee/straight right leg or the opposite if they are left-handed. The non-bowling arm should be a counterbalance. The bowling forearm should be facing toward the ceiling and the target.

Ball Placement

The center of the ball should be centered over the right leg or the opposite if you are left-handed. Extending the bowling arm is a key for ball placement and allows an arc to form with no sharp edges.

Free Swing

A bowler's swing of the ball should be like a pendulum. Norm recommends a practice drill using a medium size tuna fish can to practice the pendulum swing.

Turning the Ball Early

Keeping your arm from chicken winging. Let the ball fall on the top of the swing do not pull it down with your arm.

Keep your forearm always pointed straight. The palm of the hand should be on the ball with fingers in a V.

Timing & Approach

Timing in bowling is the synchronization of the approach and ball swing leading a bowler to arrive at the line at the same time with their slide foot and the ball.

Tight Rope & Grip Pressure

The tight rope drill keeps your feet close, and the approach compact so you do not have bobble head. Grip pressure is how you grip or hold on to the ball. This is something that you should visit a pro-shop on, so they can drill a ball appropriately. If this is done correctly the bowler's fingers should ripped out or twisted.

Grip

This is a crucial topic for a bowler that Norm goes over which is the position and thumb holes on a ball. A bowler should not have to jam their fingers and thumb into a ball to maintain control of it on the swing and at the moment of release. A bowler can easily be injured with the wrong fit of the ball and suffer poor performance.

Weak Wrist

This is a drill for strengthening the wrist so that your wrist is stable when you release the ball. A bowler should place the ball in their hand and go through some carrying motions without putting their fingers or thumb in the holes.

Power Source

This is getting torque from tension generated between the upper and lower body.

Revs

The thumb should easily release before the fingers release. The more time between these two the more revs a bowler will impart to their ball. More revs equal's more power and more pin action down lanes.

Release Drill

Norm shows bowlers a simple but effective release drill. A bowler kneels at the foul line with their right knee behind their slide foot. The bowler should have several balls on standby as they push the ball down the lane practicing straight ball, big hook, and the back up ball.

Swing Planes

Norm explains this as the setup with vertical and horizontal gridlines. The vertical lines is for positioning and the horizontal is for speed. Norm shows with the use of graphics the V shape a bowler should use for getting a perfect

hook. The breakpoint is on the right of the V(opposite for left handers)

Low Ball Drill

Bowlers have a natural tendency to miss a single pin spare. An easy way to work is the low-ball game is quite simple hit the 7 and 10 pins without the ball going in the gutter or knocking the other pins down.

Reading the Lanes

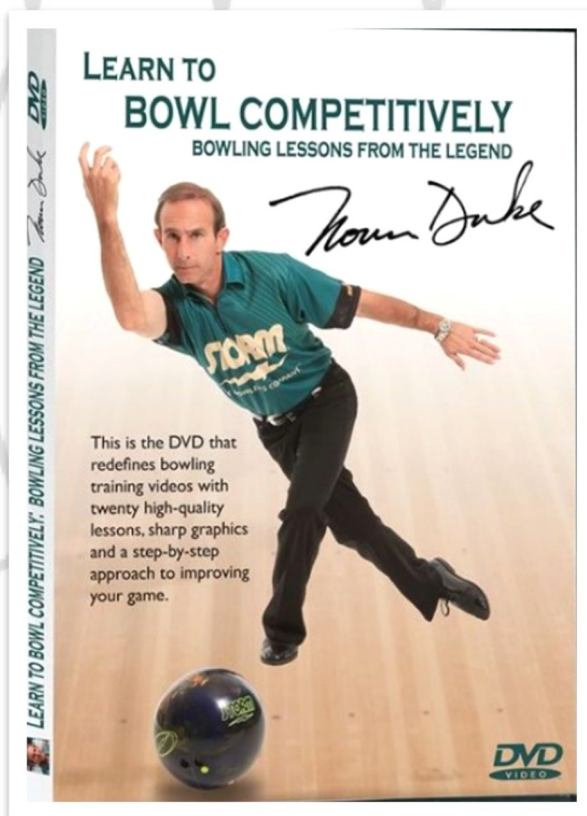
This is learning how to read the oil pattern on the lanes and the boards and the rule of 31 to find the breakpoint.

Lane Transition

Norm explains this crucial concept the oil pattern breakdown during a tournament as oil is removed from the lane after each shot. As bowlers use the oil pattern parts of it start to carry down the lane creating more variance with spots that could have more oil or less oil creating the potentials for more hooking or less hooking.

Carry and Pin Fall

A bowler should watch how a ball exits through the pin deck. The ball should have power going through the pins not lightly knocking them over.



Bowlology DVD Review

Becoming a Better Bowler

With Walter Ray Williams Jr

The All-Time Title Holder on the PBA Tour and All-Time Career Earnings

The Grip-

The House balls are drilled generic to fit all sizes of fingers and thumbs. Bowlers should not have to squeeze to hold onto the ball as this could result in injuries. A serious bowler will get a customized ball, so they have a relaxed grip. The thumb hole should be drilled bigger to allow for the insertion of tape of varying amounts. Power players have their pinkie finger tucked to get more lift on the ball.

The Targeting System

Targeting is getting your body and the ball pointed in the right direction using the pins, arrows, and dots to line up the ball to hit the pocket or the spare pins. Bowlers can use the arrows, dots, or even bowling pins or the foul line to use as the targeting method. Walter recommends using the arrows to bring your target closer.

Hand Releases

To get a big hook on the release, use a bent elbow on top of the back swing to receive more power. He shows bowlers how to go up to the foul line to emulate different hand positions so that the bowler can feel the release. To pick up spares, learn to throw straight. The thumb and fingers stay in line with the target.

Step Drills

These are meant to get the bowlers to feel what is natural to the bowler in getting the ball to the release point. For the 1-step drill - Start in an athletic position, ball position starts near the body. Let the weight of the ball guide your tempo. At the top of the backswing, take a step. Get a nice loose armswing. Finish in a balanced, swing position. Work on a nice tempo.

Nuances of Bowling-Hitting the Pocket-

Bowlers can hit the 1-3 pocket with the ball, but that does not guarantee a strike. Leaving a weak 10 means hitting the light in the pocket. Walter has seen Michael Fagan leave a 5-7-10 split at the Tournament of Champions after hitting the pocket. Michael Fagan has a big hook. Walter wants bowlers to hit the pocket as often as they can and not focus on trying to plow the whole pin deck down.

Lane Play-

To bowl, good bowlers must throw the ball well and play the lanes properly. Striking in practice should not be the main focus. Bowlers should practice playing different parts of the lane so they can get better at knowing what parts they can play and what they cannot play.

Common Problems-

Walter wants bowlers to be in time, so their feet are matching their arms in the approach and the swing. He says the best way to catch whether you are doing this right is to have a camera setup from the side on the approach to film what you are actually doing, not what you think you are doing.

Two-Hand Release-

Can create more hook and revs on the ball. Bring both hands close to each other with a lot more wrist on the ball. Jason Belmonte throws a big hook on his strikes. That is why he is one of the best bowlers of today.

Spare Shooting

For shooting single pin spares, bowlers need to learn how to make their spares straighter. Use a plas-

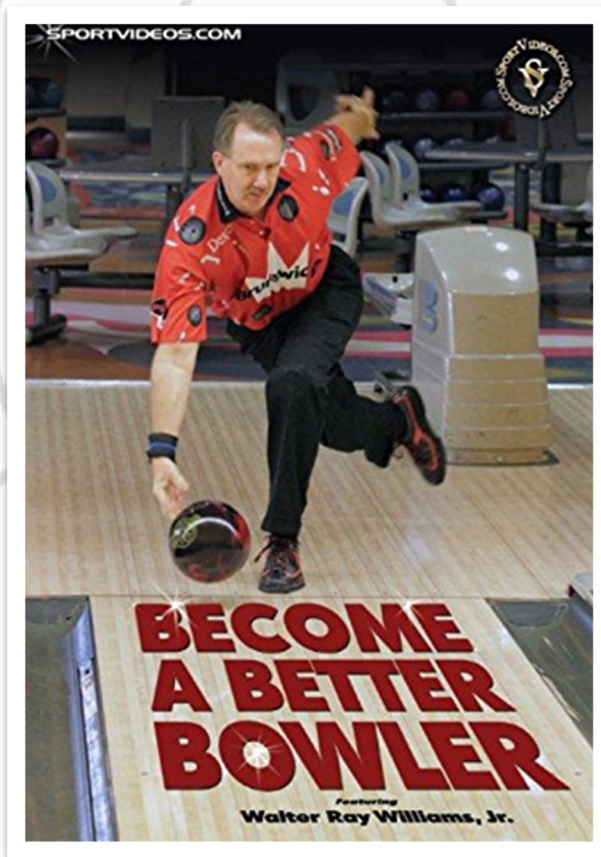
tic ball for spare shooting in competition because plastic does not hook as much. Use a strike ball to practice spare shooting. Bowlers should give themselves plenty of room for error when making spares. The only spares that bowlers should hook, at is when there is a sleeper 10.

Practice Tips-

If possible, practice on challenging lanes. Pros should be doing at least 20 to 30 games a week. Bowlers should be practicing more spare shooting. Get negative reinforcement to make more positive shots than positive reinforcement on negative shots. Stretching is a necessity in addition to lane practice and avoiding injuries.

The Mental Game-

When a bowler is competing, try not to think about the minute details of techniques but the outcome instead. A bowler should worry about what they did wrong afterwards and keep a positive but realistic attitude and expect some form of success. Bowlers should expect that some days are going to be better than others no matter what you do or how hard a bowler tries to bowl their best.



Bowlology DVD Review

Beyond the Bowling Basics

With Parker Bohn III & Brad Angelo

PBA & USBC Hall of Famer, Two-Time Player of the Year,

Bowling Equipment-

Grips

Conventional Grip-for a conventional grip the fingers will fit up to the first or second knuckle. A pen should be able to fit snugly in between the palm and the ball.

Semi-Fingertip Grip-In this grip the fingers should be between the first and second knuckle.

The thumb should always be inserted all the way in thumb hole no matter the grip.

Fingertip Grip-Will give the bowler more revolutions and power. The thumb should be inserted all the way into the thumb hole with the ball resting on the palm. A proper span is indicated by a pen or pencil fitting in between palm of the hand and the bowling ball.

If a bowler wants to become a serious contender, they will see a pro-shop operator to get properly fitted ball.

Bowling Shoes- Bowlers should get their own shoes preferably ones that allow you to change the soles and heels to suit the particular conditions of the approach to a lane. Some approaches can be rough and others slippery depending on a variety of factors. As a bowler advances their game, they are going to want to fit their bowling shoes.

The Right Bag- Beginning bowlers usually will start out with one or two ball bags. As a bowler increases their average they will need to add to their equipment. The three-ball bag will allow to take two strike balls and one spare along with room for their shoes and other essentials.

Other Equipment- This should include a towel or shammy to wipe the oil of the ball, Rosen bag to keep your hands dry, interchangeable grips, skin tape to prevent injuries to the thumb and fingers, extra heels, soles, and laces. Abralon pads to put the right surface on a bowler's ball for the right lane conditions. Rule of Thumb the slicker the lanes the lower grit a bowler will need. The dryer the lane the bowler will need to use a less abrasive grit on the pad.

Preparing to Bowl-

Stretching- a bowler should get loosen up by doing wrist curls, back stretches, back bends, squats, and leg stretches.

Mental Preparation- scope out the lanes before you start at your lane and see what the other competitors are doing in their games with how they are making strikes and spares.

Pre-Shot Routine-wipe your ball off then check the bottom of the bowler's shoes. Dry your hands and then check left and right if both lanes are clear. Bowlers need to think about how they are going to play the next shot when they are in the seatee area.

Beginners are going to have two or three balls as a bowler increases their average, they will be more likely to grab more balls. Keep in mind that a bowler should always see their pro-shop operator.

Building Your Shot

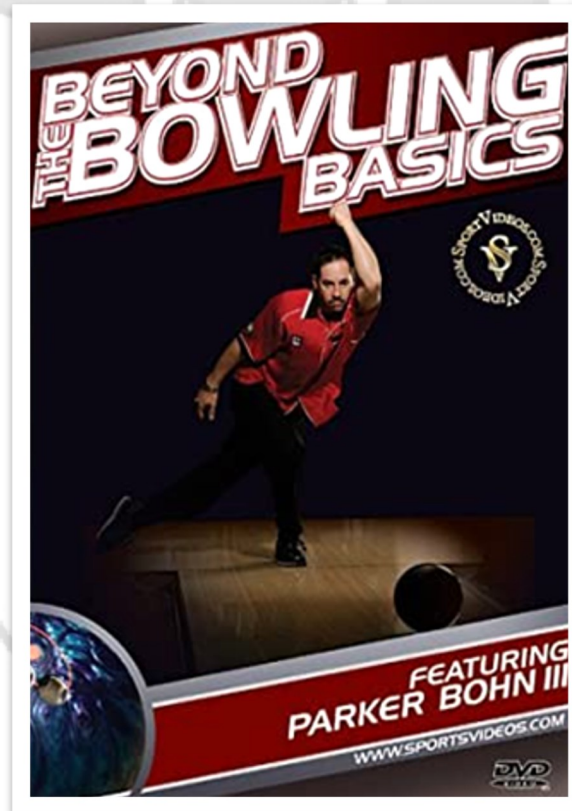
Four or Five Step Approach- First step is lock and get the ball straight, second is the trail leg, third step is the back swing, and the fourth is the slide and release.

Releases-locked, leading, full-cupped wrist toward forearm

Bowlers need to maintain how much they can hook the ball and keep it under control.

Spares and Splits – Bowlers can use the 3-6-9 method for spares or the throw hard and straight at the single pin spares. The best piece of equipment for their spare game is a plastic ball. Plastic will go much straighter and will take the lane conditions out of play. Bowlers do not need to break the pins in half they should be able to touch the pin with the side of the ball in order to knock them over.

Both Brad Angelo and Parker Bohn III emphasized the bowler's spares. The pros can throw strings of strikes. They can also stay clean and make their spares. Parker also said to lock their arm in place after a bowler pushes out from a ball.



The Game's Changed Video Series—OneHander

Spectro Bowling / Strike Seeker

Mark Baker—Great shot has two feels-The ball off the hand and the breakpoint.

Pros work the inside and amateurs work the outside

All bowlers are feel players

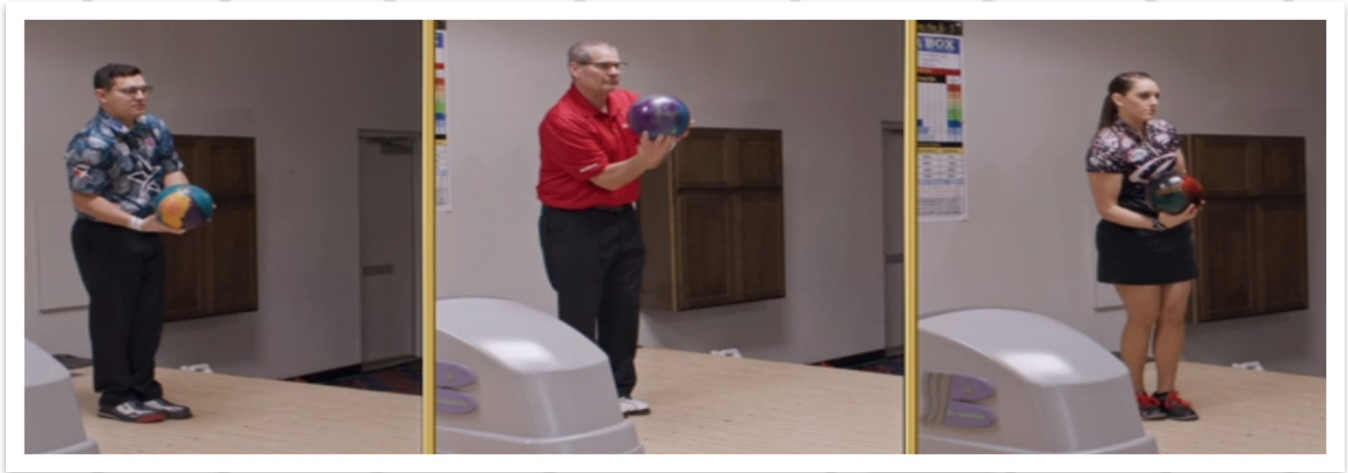
1-handed physical game

Sequencing matching the lane to your arm.

Finish the throw before the rotation.

Lane 60 Feetlong—The first 45' is for accuracy/momentum and controlled by the forearm. The last 15' is shape /rotation and controlled by the hand

Start by Standing tall, no knee bend, and no dropping of the hips.



First Step— no knee bend head directly above knee & foot.

Second Step— foot directly under head ball is forward. The more steps a bowler can stay in balance during the approach , the easier it is to post a shot at the release.

Stand tall always bowling is about walking forward and release. It should be a normal walk without dropping the hips. If the hips drop, the bowler will end up pulling the ball and miss the target.

Something has to stabilize the swing a fulcrum is needed for a swing.

Pushout-In balance for a shot and swing back

Third step—head on top of third step



Pivot step

Slide foot is parallel to the arm swing



On the third /fourth step there are no body parts in the path of the swing

Timing Spot– When the bowler's slide foot gets flat in front of your head. Your swing should be parallel to the ground.

Swing is parallel to the head before the release.

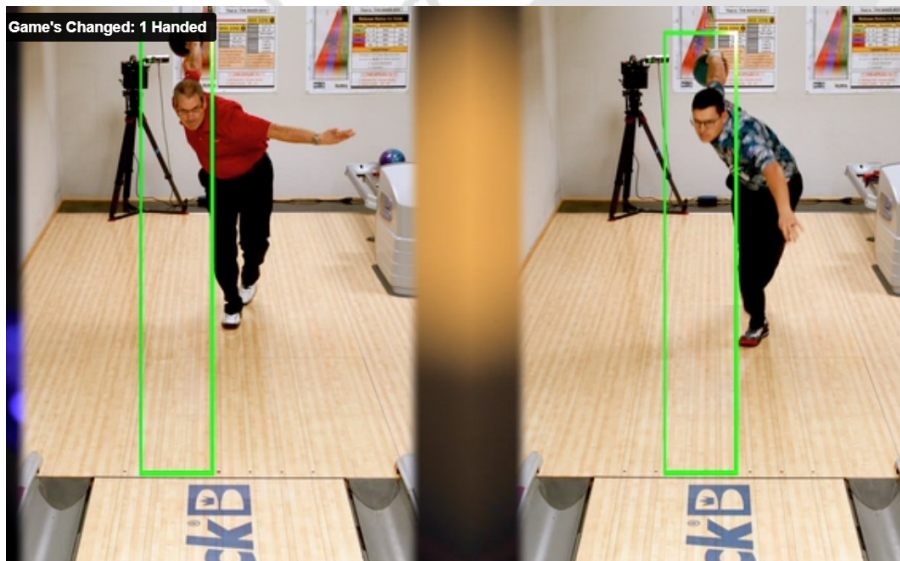
On the final step the chin is above the knee

Moving the air forward. Not up or down always forward

Before the release the ball it should be next to the ankle.

The bowler's hand is responsible for the timing spot, moving the air forward, and **breastplate faces breakpoint.**

The pivot step comes after the third step. There is no need for a cross over step. No body part in the way of the ball release.



The Game's Changed Video Series—Two Hander

Training items for all bowlers:

1. Timing
2. Balance
3. Accuracy

Notes on Jason Belmonte / Anthony Simonsen

1. Stance—very neutral. Stand tall. No knee bend in 2nd step and his head is over his knee. He is centered over the knee and has not dropped his hip.
2. Swing Set—the shoulders stay square and just tilts forward on hips. Stay tall in first three steps.
3. Conveyor Belt— The ball comes back flat. If you drop to early on your hips the end will rise up incorrectly.
4. Long Left Arm—Drops the left shoulder tucks under his chin to create a long left arm.
5. Titling/Not Dropping— Tilt forward on his hips after fourth step. Not dropping the knees, but tilting on the hips
6. Lag—A long left arm allows for lag time. It the amount of space between the ball and the body before the timing spot.
7. Timing Spot— When his head is over his slide foot and his left arm is parallel to the ground. The ball should not be down my the knees, that is too early and doesn't allow the right leg to power the ball. His head is not moving with his right shoulder as it comes forward. If you move your head in relation to the shoulders, you lose the power and accuracy. Consistency Balance=Accuracy
8. Release Sequence—The sequencing of the lane needs to match the sequencing of your release. The forearms are for the first 45' for accuracy and momentum. The hands are for the last 15' for shape and rotation. The hand is only adding rotation. Make sure the breastplate is flat and facing the breakpoint and the forearm is at the target.
9. Finishing Position

Anthony

1. Stance—He starts neutral, but starts to tilt earlier. He keeps his head over his foot and is still in balance. No crossover step.
2. Swing set—Just a tilt and does not drop.
3. Conveyor belt—Very flat
4. Long left arm—gets his shoulder way under his chin without rotating his head. His arm is very straight.
5. Lag—A long left arm allows for lag time.
6. Timing spot—
7. Release—Move the air forward. Keeps his head super level and his head ends over his knee.

Both guys have a wide third step. This sets up the pivot step to replace the third step and gets the left shoulder above the left hip

Baker Box—

Step 1—bowlers find their favorite place on the lanes. Zone 1-3

The bowler is trying to hit the Baker Box which is the area at 42'-46' on boards 5,6,7, or 8

Bowlers adjust between zones based on the feel of the game. Moving between zones only takes a small adjustment. It shouldn't feel like a 50/50 split between momentum and rotation

A bowler uses the "miss Zone" to determine what they need to change. Miss zone 1 is when you hit boards 5,6,7,8 but at a distance of 36'-40' and ios noticed when you leave the 2pin, Flat 10, Solid 9, or 3-6-10. Bowlers are over rotating the ball. Miss zone 2 is on boards 11, 12, 13, 14 and is almost always a physical game change in order to correct the direction.

The "Ultimate" Goal In Bowling: Splitting the 8 - 9

BAKER BOX

The Baker Box is where the ball is most EFFECTIVE in SPLITTING the 8-9, resulting in optimal carry.

Boards:	5, 6, 7, 8
Distance:	42' - 46'

There are 3 breakpoint zones that bowlers often hit, and only one of those zones allow a bowler to split the 8-9 consistently.
That is THE BAKER BOX!

Release Ratios by Zone

Zones	Boards	Momentum	Rotation
ZONE 1*	1 - 10	90%	10%
ZONE 2	11 - 20	80%	20%
ZONE 3	20 +	70%	30%

* EXCEPTION *

In Zone 1, the Baker Box can start as soon as **38 ft**, for these players:

- Speed-dominant
- Urethane

**** THIS APPLIES TO ****

- Almost ALL house shots
- Sport shots: 38' - 43'

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MISS ZONE 1

Boards:	5, 6, 7, 8
Distance:	36' - 40'
Cause:	Early Right/Over Rotation
Common Layouts:	<ul style="list-style-type: none"> ⊙ 2-pin ⊙ Flat 10 ⊙ Solid 9 ⊙ 3-6-10

Your ball missing in this zone is almost always physical, like early timing or over rotation of the upper body.

These are indicators that your ball changed direction (i.e. breakpoint/core laying down) in the "miss zone".

MISS ZONE 2

Boards:	11, 12, 13, 14
Distance:	40' - 44'
Cause:	Direction/Early Timing

**** THIS APPLIES TO ****

- Almost ALL house shots
- Sport shots: 38' - 43'

Norm Duke

Norm Duke has one of the greatest minds in Bowling. He has won two US Opens, three PBA World Championships, one USBC Masters, and one Tournament of Champions title. In his DVD, Learning to Bowl Competitively, he talks about the sport in which bowlers can relate and discusses how bowlers can improve their game. Norm Duke can play up the gutter and hook the lane just as much as Jason Belmonte. Duke has a great insight on the game when it comes to being knowledgeable about getting to the foul line, understanding what ball motion a bowler needs to adjust, and to reading different lane conditions.

Duke has bowled a 300 on National television in 2003 against the great Walter Ray Williams Jr. He is still the youngest player to win a PBA title 1983 when he was only 18 years old. In 2008, he became the 4th player in PBA history to complete the Triple Crown and the second player to complete the Grand Slam. He made a tough 2-4-5-8 bucket spare to win the 2008 US Open. He is the only player to win Majors in one year. Duke has a great talent and is very knowledgeable about the sport of bowling.

Duke's knowledge of the game is exceptional when comes to different types of releases of the ball. Duke can get other bowlers to release the ball differently for various types of shots. Duke can master throwing his strike ball at a single pin spare just by his expertise on releasing the ball with strike ball instead of going to a plastic ball. He feels doing the low ball drill can give an advantage of shooting a six seven ten split by doing the low ball drill when he is doing the low ball drill he is seeing how the margin of error works so if he leaves a difficult split. Norm is good at manipulating his releases. Norm does not like to use a plastic ball because the ball will feel differently on his hand. Bowlers are going to leave more spares than they will strike. Bowlers must learn to make their spares if they want to win bowling's toughest tournament the U.S. Open. In Norm's DVD he talks about how crucial spare making is to be one of the best bowlers in the world.



Johnny Petraglia



Johnny Petraglia is the only bowler to have won a PBA or PB50 Tour Title in six different decades. He has become the second player in PBA history to complete the Triple Crown in the 1980 PBA National/World Championship. One of the highlights of his career was when he shot on national television which paid for his kid's college tuition. One of the icons that Brunswick is Johnny Petraglia LT-48 bowling ball. Back in 1997 Brunswick made the Johnny Petraglia LT-48 Gold. Most bowlers love had the LT-48 bowling ball when talking to the legend. I always learned something about the game that will be of use to me. He was the sixth player to shoot a perfect on national television.

He is also a member of the USBC & PBA Hall of Fame's. When Parker Bohn the III was inducted into the PBA Hall of Fame. Johnny was the speaker who gave opening remarks before Parker's acceptance speech. One of Parker's statements was that Johnny was the smartest man about the sport of bowling.

Johnny knows the game like the back of his hand. He knows what bowlers need to execute for their game to be a success. Johnny has adapted his game to become competitive back in 2013. He did well at the Masters and had a chance to become the third bowler to win the Grand Slam. The only bowler who has held the PBA President position three times. He has sat in meetings trying to get contracts extended to have the PBA televised.

Petraglia has been a great ambassador for the sport of bowling. Bowling is lucky to have him as an ambassador for the game.

Mo Pinel

Mo Pinel is the 6th greatest mind in bowling. He had designed numerous bowling balls. In his opinion, there are five parts of ball motion. He thinks the transition is part of ball motion. Most bowlers would think it would be skid, hook and roll. He thinks from skid to hook is actually the second phase of ball motion. The fourth phase would be from hook to roll. Pinel has come up with another technique to drill bowling balls is a dual drilling system. This enables bowlers to have more options in their arsenal. Late in the 90's, he helped to design the second Pink Hammer 3D Offset. Many bowlers had success with that ball. He had his own ball company named Mo Rich. One of his pro-staffers was Walter Ray Williams Jr the greatest bowler of all time. He has designed multiple balls at Brunswick, Fabbal, MoRich, Radical, and AMF. He developed the Shift Bowl Technique which is a way for a bowler to smoothly get their body and ball in motion.

Mo has hosted numerous seminars on drilling bowling balls with the Dual Angle Technique. He also developed the Mass Bias concept which is another part of the bowling ball. Mo knows balance holes to get the ball to react differently on the lane. This way a bowler can experiment with putting different sizes of holes and depths to get the ball to match the bowler and the lane pattern. He theory is that the coverstock is the important thing on the ball followed by the mass properties and then the static weight. He says, "Once an oil pattern is applied to the lane, the decisions made by the ball driller are the single most important factor in how much a bowler enjoys bowling on the lane conditions." If bowler wants to understand the physics of the bowling ball, they only need to study what Mo writes.



Mort Luby, Sr.—Founder of the Bowler's Journal International



He really put bowling writing on the map by starting *Bowlers Journal International*. In order for bowling to survive, Luby knew that bowling needed a bowling magazine. He founded the *Bowlers Journal International* in 1913 making it the oldest bowling publication. Luby is one of the pioneers in bowling writing. Luby also suggested the creation of a bowling hall of fame. His son and grandson are the only three generations that have been inducted into the hall of fame. Luby was also the founding father of the Bowling Writers Association of America (currently known as the International Bowling Media Association). He also developed the Bowlers Journal Sweeper at the USBC Open Championships. Each participant would receive a free subscription to the *Bowlers Journal International* magazine. The IBMA recognized Luby's contributions to bowling and named the Hall of Fame award after him—the LFor bowling writers, it is the IBMA correctly named the Hall of Fame the IBMA Luby Hall of Fame award.



Bruce Pluckhahn—First curator of the Bowling Hall of Fame



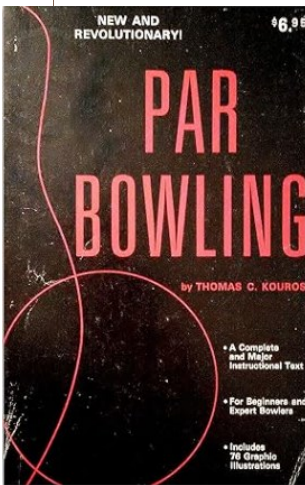
Pluckhahn was instrumental in forming the National Bowling Hall of Fame. He also was very knowledgeable about the international aspect of bowling. He is often regarded as one of the top experts on the sport. For nearly 40 years, Pluckhahn was a driving force in the bowling industry—from a newspaperman to the ABC (currently known as the USBC) Public Relations Department and the National Bowling Hall of Fame and Museum. The establishment of the Pioneer section of the USBC Hall of Fame was largely due to his research and dedication.



Tom Kouros—Bowling Coach



In 1976 Tom Kouros wrote his best selling book “Par Bowling” and it’s sequel book “Par Bowling: The Challenge” sold hundreds of thousands of copies. Tom was a world class bowling instructor of seasoned professionals to top amateurs and a bowling center owner of the River Rand Bowl in Des Plaines, Ill. He was also founder of the Institute of Professional Bowling Instruction was accredited by the Department of Education, State of Illinois, and is the only course of its kind. In addition Tom has served as technical adviser to the World Tenpin Bowling Association and cofounder and past president of the Mid-America Bowling Writers. A 30 year veteran writer for the Bowlers Journal International. Kouros was named 2002 International Coach of the Year Award (first recipient) by the World Bowling Writers. Kouros started out as a pinboy in his youth being named one of the best pinboys in the nation from 1939 to 1941. He then went on to become a member of DePaul University's 1953 Midwest Intercollegiate Championship team and won 11 singles and doubles events from 1949-55. Tom’s career over the decades can be best described as an example of what a “Bowlologist” would do before the term was even invented.



Eddie Elias—PBA Founder



At the 1958 USBC Masters, an attorney from Akron, Ohio, went and watched one of the finest bowling tournaments of the United States at that time. He found some of the greatest bowlers at the Masters. Notable names were Don Carter & Carmen Salvino. He asked them to put up the \$50.00 as seed money. The next year there were three PBA Tournaments that were held. One was won by Lou “Wrongfoot” Campi. The other two were won by Dick Weber. In the first year of the PBA Tour, the total prize money was \$49,500. Eddie Elias was the father of the PBA. He got a contract with ABC TV to put bowling on every Saturday during the winter. This would be the longest running show in bowling history lasting 35 years.



Bill Chrisman— Co-Founder of Storm Bowling



Bill Chrisman started making bowling ball cleaner in the early 1980s and co-founded Storm Bowling. He made his first bowling ball in a KFC chicken bucket. One of his first Storm staffers was Pete Weber who was winning with Storm bowling balls at the Majors. Bill revolutionized the sport of bowling. His next major staffer was Jason Belmonte who has dominated the PBA and the Majors. Bill was a bowler and a pioneer in the sport of bowling. His company is one of the three leaders in the bowling ball industry. This includes Storm, Roto Grip, and 900 Global.



John Archibald—Bowling Journalist



John Archibald was one of the greatest bowling writers in the history of the sport. He covered tournaments such as the BPAA All-Star (currently known as the US Open), World Invitational and the Tournament of Champions. Archibald was a history buff in the sport of bowling. He paved the way for bowling writers. Archibald is in the USBC & PBA Hall of Fame for meritorious service. He served for 25 years as the writer for Encyclopedia Britannica for the sport of bowling. He won a total of 50 bowling writing awards of which six were of the PBA. Archibald also served as the President for the IBMA International Bowling Media Association in 1970. Now, it is known as Bowling Writers Association of America.



There are numerous bowling instructional books and videos on how to bowl. Bowlology takes the sport to a whole another level in bowling. In this packet proprietors, pro-shop operators, coaches, and bowlers can get a summary of what Bowlology has to offer in the education of the sport of bowling. There are more ways to contribute to the sport of bowling. Each bowler when they bowl league or a tournament might want to be the next Jason Belmonte, Walter Ray Williams, Jr, or Earl Anthony. Bowlers are able to realize they cannot be the greatest to throw a bowling ball. Bowlology gives them the resources to figure out what other options are there in the sport of bowling. Bowlology is not just throwing a bowling ball and knocking down ten pins in one shot. Bowling is being a league secretary or league officer, pro-shop operator, or coach or tournament director. Bowling proprietors have a chance to offer serious bowlers to pass this information to their league bowlers. Pro-shop operators have the same opportunity with this brief summary of Bowlology.

