



Significantly improve your game with

PETTLEP

A more effective visualization technique



The mental game is a necessary component of a holistic approach to reaching one's full potential in the sport of bowling. Accordingly, much has been published on the importance of using visualization and imagery in improving one's bowling game. Several very informative books are available and ongoing monthly columns in BTM and other magazines provide much insight into improving one's mental game. Accordingly, these useful tips should be part of a practice process.

With this in mind, I continually search the research base for effective mental game practice techniques to implement with my clients as well as teams that I work with each season. Through this search for the most effective methods, I have discovered the PETTLEP technique. PETTLEP involves using imagery in an authentic environment with an effort to simulate real-world competition scenarios.

This differs much from many visualization techniques which ask participants to relax as part of the process. This differs from real-world competition, where the feelings associated with competition scenarios impact heart rate, breathing, thoughts, etc.

And, PETTLEP has been proven to be extremely effective paired with physical practice. Specifically, PETTLEP paired with physical practice has been shown to be much more effective than physical practice or visualization techniques in isolation.

In this month's Slowinski at large, I present an overview of the PETTLEP visualization method, along with a summary of several studies that reveal how effective it is in performance enhancement. I conclude with some recommendations on how-to implement the PETTLEP process into your practice process.

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Evidence of PETTLEP effectiveness

The PETTLEP method has shown impressive results. Here are a few short summaries of research projects testing the technique in field hockey, golf, and track and field. These studies represent the study of how the PETTLEP process affects youth, college and adult athletes and demonstrate the wide impact of this method.

Field hockey



Smith et al. (2007) studied 48 varsity field hockey players (24 male and 24 female) who had not previously completed visualization training. These players were in their twenties. The goal of the study was to measure the effectiveness of improving penalty flick proficiency.

The 48 athletes were randomly assigned to one of four groups. The sport-specific imagery group performed imagery wearing their hockey uniforms while standing on their team's competition field. The second group performed imagery in a standing position with their uniforms on while at home. The third group was a traditional imagery group performing imagery in a seated position at home, wearing what they were wearing that day. The fourth group spent time each day reading general field hockey literature.

Imagery activities were performed each day for six weeks. During each session, lasting approximately five minutes, each participant imagined 10 penalty flicks. During the length of the study, all players were involved in their normal hockey practice, training activities and competition matches.

In a pre-post comparison, the PETTLEP group that used imagery in an authentic environment, improved by more than 15 percent, while the group that conducted traditional imagery at home improved by 5.6 percent. The group that completed imagery at home with their uniforms on improved by 9.5 percent, while those who only read hockey literature improved by the smallest amount, only 1.1 percent. The authentically embedded PETTLEP method improved the athletes' performance of penalty shot proficiency by nearly three times over traditional imagery methods and was 40 percent more effective than the imagery performed with uniforms. Imagery in an authentic environment with kinesthetic components yielded more improvement.

Golf



In another study by Smith et al. (2008), golfers who utilized the PETTLEP method improved their bunker shot proficiency significantly compared to physical practice and traditional imagery.

The study examined 34 players who had played golf for a minimum of 10 years. These 34 participants were randomly assigned to one of four groups. The physical practice group hit 15 bunker shots twice weekly. The PETTLEP plus practice group completed authentic imagery activities in addition to hitting the 15 shots twice each week. PETTLEP only performed the authentic imagery tasks at the golf course, but hit the bunker shots on a different day than the visualizations were performed. The control group simply read about golf.

The results confirmed what was found in the field hockey study. Specifically, the PETTLEP plus physical practice group improved by more than 22 percent, while the physical practice alone group improved by only 13.3 percent, and the PETTLEP alone by 7.8 percent. The control group actually got worse by 2 percent.

Track and field



In a third study, Potter and Lane tested the PETTLEP process on 36 junior long jumpers. Participants were randomly assigned into one of three groups: PETTLEP, traditional imagery, or a control group. These athletes trained three times a week for five weeks. The PETTLEP group significantly outperformed the other two groups in all phases of long jumping.



The PETTTLEP group completed visualization in their track uniform while standing on the runway, facing the pit and set-up in the start position. Authentic crowd noise was played throughout the visualization process in which they were asked to imagine executing jumps. Control group members completed long jump drills without any visualization, while the traditional imagery group completed visualization exercises at home. Both the PETTTLEP and traditional visualization groups received imagery training and performed 15 minutes of actual jump practice three times each week.

Okay, what is it?

The foundation of the PETTTLEP method is that visualization imagery that employs kinesthetic movement in an authentic competition environment can improve performance. Specifically, PETTTLEP is an acronym representing a checklist of seven domains that, utilized collectively, yields improvement over time. The seven points include: Physical, Environment, Task, Timing, Learning, Emotion and Perspective.

P Physical

Elite athletes in competition have a calm mind and an aroused body. Most imagery methods call for relaxation techniques that are alien to reality. Consequently, visualization techniques should mirror realistic physical states.

E Environment

Imagery conducted at an authentic venue will provide athletes with the multi-sensory cues

linking the visualization with real performance.

T Task

The actions in the visualization should match the level of the athlete. Specifically, the processes and actions utilized should be at the performance level of the athlete.

T Timing

The speed of motion in the imagery should match the real-time actions of the athlete. The goal of visualization is to develop or reinforce temporal rhythm and movement.

L Learning

Imagery should be dynamic as an individual's skills set evolves and their performance level evolves.

E Emotion

Emotional response is not exempt from competition. Consequently, heart rate and respiration changes are an important aspect of the imagery experience linking the psycho-physiological.

P Perspective

Imagery should be performed from an internal perspective to mirror the reality of an athlete who uses both visual and kinesthetic cues during a performance.

How to use PETTTLEP in your bowling training

As with the studies summarized earlier, implementing PETTTLEP effectively will require a commit-

ment of five to six weeks for each area of improvement. To implement, spend a minimum of two days each week of PETTTLEP, plus physical practice. During each session, complete a visualization of ten shots and follow this immediately with a 30- minute practice of the skill you are developing.

Before going to the bowling center to implement PETTTLEP with physical practice, a bowler must have an area of improvement identified. To begin, pick something specific to improve in your game at the performance level of your current game. For some, this will be improving spare conversion percentage, while others will be adding a release variation or improving their hinge. The task should be very specific, such as improving tenpin spare conversions in tournament play, or being able to throw with 60 degrees of axis rotation more consistently when desired. For example, a bowler who has difficulties with spares in a tournament setting should focus on this area to improve.

Once you decide on a task to improve, you are ready to head to the lanes and begin the process of PETTTLEP. As discussed above, to get the most out of the PETTTLEP method, practice visualization paired with actual physical practice multiple times during the week. This requires you to be at a bowling center. Be sure to tape your thumb, put on your shoes, and wear your bowling shirt, etc. before starting the visualization activities. Recall the importance of the authentic environment. The goal is to be as authentic to the competition environment as possible. If you use skin patch, put it on. If you wear a wrist support, it



should be worn during the visualization. If you scuff your shoe with your brush before setting up, do this during the visualization.

In your imagery, visualize according to your senses and first-person perspective. The sights, sounds and smells should be included. Clearly, being at the bowling center will help this be authentic. The goal is to match your visualization with an authentic execution.

Set the stage for your visualization by setting yourself mentally in a competition setting such as league or a tournament. Feel the situation as accurately as possible. Since you are at a bowling center, the visualization will be vivid. For each of the 10 shot visualizations, stand where you set up on the lane with the ball in your hand. Once you are set up on the approach, close your eyes and begin the visualization.

Get in the set-up position with the ball in your hand. Visualize the execution of the shot in real time. Your visualization will be enhanced with a busier bowling center rather than one with few people. You want your heart rate and breathing to match a competition. Visualize from a first-person perspective going through the full approach and delivering the shot at full physical speed as in real time. See the ball travel down the lane with the intended outcome (e.g., throwing with low axis rotation at the tenpin or rotating the hand to achieve the 60 degrees of axis rotation).

After the shot is completed, open your eyes and put the ball down. Dry your hand and complete the visualization activities again.

The result

Research on the PETTLEP method has revealed that kinesthetic visualization paired with actual physical practice enhances performance. Consequently, to improve your performance, building a routine of imagery and physical practice is important. Visualization should be completed in a first-person perspective as full-speed and in an authentic environment. 

References

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