

3Dimensional Coaching: Fact or Fiction

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Abstract

“Sport is a great vehicle by which life skills can be taught,” Dr. Jeff Duke. This very sentence is the reason that the 3Dimensional Coaching model is starting to become more and more relevant in today’s world. This method wants coaches to look past the physical skill and game fundamentals that many of today’s coaches only worry about. 3Dimensional Coaching involves the body, mind, and spirit. The specific characteristics are everything from those game specific skills to the player’s motivations for being on the team and to go even further it wants coaches to begin looking into individual’s values and motivations. The purpose of this study was to try and find some evidence that supports 3Dimensional Coaching that it does not only help make these kids into better people but still allows them to perform at a higher level.

Literature review was done to try and find other sports that used a similar model. I looked first more in depth at what exactly 3Dimensional Coaching is through their website and through an interview with Dr. Jeff Duke from the University of Central Florida. The second source I looked at was information from the United States Tennis Association. They have identified several psychological skills that are necessary for heightened levels of performance. These skills correlate strongly with 3D Coaching and the Athletic Coping Skills Inventory. Finally, I looked at the culture created at the University of California Los Angeles by quite possibly the greatest coach in the history of sports, John Wooden. His pyramid of success has been adopted by countless coaches, including the staff I work for at Superior High School, and is another great example of what 3D Coaching is promoting.

This study involves six participants that all filled out the Athletic Coping Skills Inventory prior to the 2014 Wisconsin High School football season. These same participants were then evaluated at three different points throughout the season by their position coaches on the basis of alignment, assignment, and technique used. Seasonal statistics were also collected to show performance. The results from this can be found at the end of the report. Future implication for this study can also be found at the end of the report.

Literature Review

3Dimensional Coaching

The two most powerful words are “Coach said.” This was true 10 years ago and this is still true today. However, the athletes being told this are much different and are experiencing different problems. Coaches need to be prepared for several different problems. However, a study that the people behind 3Dimensional Coaching conducted shows that a vast majority of coaches still only focus on the fundamentals of the game and what is known as level 1 in the 3Dimensional Coaching model. The purpose of 3Dimensional Coaching model is to go beyond this. To truly help an athlete deal with whatever it is. There are three tiers to the 3D pyramid. The three tiers are explained more fully below

- *Level 1: Physical/Body*: The first level is the level that most coaches are very familiar with. This is termed the Physical/Body level. It deals with mainly game fundamentals. Major characteristics are strength, speed, technique, power, quickness, and cardiovascular endurance. The main way to teach these specific characteristics is through repetition.
- *Level 2: Body/Mind*: The real point of this model is to get past just focusing on level 1 characteristics. The Body/Mind tier which is level 2 contains all the characteristics of level 1 but also includes some new characteristics to try and effect. These include a player’s motivations, emotions, and confidence. This level also emphasizes the importance in nurturing team cohesion.
- *Level 3: Body/Mind/Spirit*: Similar to the second level the third level combines the first two and adds on top of it. Ideally this is where all coaches should be. This level tries to go even deeper with an athlete into whom they are and who they could be. Some of the specific characteristics that are looked at are the athlete’s values, self-worth, identity, character, and significance. Coaching at this level should allow that player to not only reach a high level on the field but also be a better person on and off the playing surface.

Sports Psychology: Mental Skills for Achieving Optimum Performance

All information from this particular article was taken from or adapted from the United States Tennis Association’s High Performance Coaching Program. Sport psychologists have continuously been looking for psychological skills that help tennis athletes’ performance. Some of the skills they have identified are explained below.

- *Building Self-Confidence*: Self-confidence is the realistic expectation of being successful. The best thing that a coach can do to help foster this in an athlete is to set the example. A coach should be confident in themselves and what they are teaching and should also always encourage their athletes to maintain high expectations and positive thoughts.

- *Goal Setting/Developmental Planning:* Setting goals makes tennis players more responsible for their own actions and the potential consequences associated with them. This allows them to hopefully move beyond negative thoughts and fears of bad performance. The USTA identifies ten principles for goal setting. These ten principles center on setting SMART goals. This means that goals need to be specific, measurable, achievable, result oriented and time bound. To make sure that a player sets appropriate goals a coach needs to continually meet with the player and talk about what their goals are.
- *Stress Management:* With too much stress on a player, poor performance is much more certain. As a coach there are several things you can do to help a player better deal with stress. One is to help make the situation less uncertain. A coach does this by not only preparing their players as best they can but also encouraging and continuously coaching on the day of the game, match, or event. Cognitive techniques can be used by the athlete to recognize negative thoughts and replace them with more positive ones. Somatic techniques can be used to help with relaxation.
- *Imagery and Visualization:* Imagery is a popular technique among tennis athlete and research supports its effect on performance. Imagery is more powerful if the player is able to imagine vivid pictures, control those pictures and relax prior to using the technique. By using this technique players can visualize most situations that could take place during the match and hopefully visualize a solution to the situation.
- *Concentration and Attention Control:* This could potentially be the most important skill for tennis players. Players must be able to shift attention rapidly. This skill can be strengthened by reciting key phrases to oneself, remaining centered in the present, sustaining attention even while faced with distractions, and engaging in imagery and self-talk.
- *Motivation:* This mental skill is defined as the intensity and the direction of effort. A major decision that athletes face is the one between intrinsic and extrinsic motivation. Intrinsic motivation correlates with pride and satisfaction while extrinsic motivation refers to external factors such as rewards.

John Wooden: Pyramid of Success

Coach Wooden was the former head coach of the UCLA men's basketball program. He is considered by many to be one of the greatest coaches of all time. However, he did not achieve this because he had some special play or some secret basketball knowledge. Coach Wooden's entire program was based around his pyramid of success. He stressed several different characteristics that are each briefly described below.

- *Industriousness*: Plain and simple means very hard work.
- *Friendship*: Respect and camaraderie for others on the team.
- *Loyalty*: The center to the foundation of the pyramid. Truly powerful characteristic and allows leaders to achieve higher goals.
- *Cooperation*: Sharing ideas, information, responsibilities, creativity, and tasks.
- *Enthusiasm*: Infusing hard work with inspired power.
- *Self-Control*: Controlling oneself in all situations. Avoiding temptation, emotionalism, and peaks and valleys in effort.
- *Alertness*: Seeing the full picture.
- *Initiative*: The ability to act.
- *Intentness*: The ability to stay the course even when the course is most difficult.
- *Condition*: Well-conditioned both physically and mentally.
- *Skill*: At the very center of the pyramid. An athlete must know what to do and how to do it.
- *Team Spirit*: Selflessness
- *Poise*: The ability to not be thrown off or rattled regardless of the situation.
- *Confidence*: Well-founded belief in yourself.
- *Competitive Greatness*: Having a real love for the hard battle.

Methods

3Dimensional Coaching

All information regarding the 3Dimensional Coaching model is from their website and from an interview the 3Dimensional Coaching team. I conducted an interview over the phone with Dr. Duke to further understand what the real reasoning behind 3D Coaching is.

Superior High School Football

Information regarding the Superior Spartan football program comes from first hand observations. I have been a coach at the school for the last four years where there has been a significant culture change. The results are explained in further detail in the results section.

Study Participants

All the participants for this study were chosen from the starters of the 2014 Superior High School varsity football team. They were chosen based on projections from the beginning of the season on who would play the most. They were also chosen based on position. They are all either linebackers or defensive backs who may have played on both the defensive and offensive side of the ball.

Psychological Skills Inventory

A survey was given to each of the players in the study to measure sport psychological skills. These skills come from the Athletic Coping Skills Inventory developed by Smith et al in 1994. These skills are explained in further detail below.

- *Coping With Adversity*: This is the ability to stay calm and positive even when things are going bad. This skill also assesses the ability to quickly bounce back from personal mistakes.
- *Coachability*: This skill simply assesses whether or not the player is open to and able to learn from instruction. It also measures their ability to take constructive criticism.
- *Concentration*: Measures whether or not the athlete becomes easily distracted and is able to focus in games or practice even when things aren't going their way.
- *Confidence and Achievement Motivation*: Measures confidence and whether or not an athlete gives 100% in both practice and game situations. Also looks to measure how hard an athlete works towards improving skill.
- *Goal Setting and Mental Preparation*: Assesses whether the player sets and works toward specific goals and mentally prepares for games. This also looks at if the player has a set game plan for performing well.
- *Peaking Under Pressure*: Looks to assess whether the player is challenged rather than threatened by high pressure situations and performs well under these pressure situations.
- *Freedom from Worry*: Assesses whether an athlete puts pressure on themselves by worrying about performing poorly or making mistakes. It also measures whether or not they worry about what others will think if they make mistakes.

Coach Ratings

The players were rated by their position coaches at three different points during the regular season. Game 1 is from the beginning of the season, game 2 in the middle, and game 3 was the final regular season game. The coach ratings come from assignment, alignment, and technique based on film review by their respective coaches. They were then rated on an overall scale from 1-5 with 5 being the highest.

Physical Performance

Game statistics were collected individually for the same three games as the coach ratings and for the season as a whole. Performance statistics were collected in several different categories for both the offensive and defensive side of the ball.

Results

The Spartan Way

As a high school football coach I have a lot of first-hand experience seeing several different coaching styles and how they affect player performance. The last four years the way we do it at Superior High School has changed drastically. To really explain how big a change there has been in just the past four years look at the season records. The 2010 season saw the Superior Spartans go 0-9. The next season they were 3-6. In 2012 they went 4-6 with the final loss coming in the first round of the playoffs. 2013 saw them achieve a record of 7-3 also with the final loss coming in the first round of the playoffs. However, this past season was one of the best in school history with the team finishing 11-1 and falling only two games short of a state championship.

A quick turnaround like this might be able to be attributed to a lot of things. However, because this happened with a very similar group of kids improving in the program I strongly believe that the program culture had a strong impact on the way each team was able to progress. At Superior High school they have begun to focus more and more on the second and third level of the 3Dimensional coaching model. To make this a focus they have adopted a version of John Wooden's pyramid for success (see appendix). This is a pyramid of values and characteristics that are very similar to that of the 3Dimensional coaching model. Each week we pick a different word to stress depending on what we see as important for that week. This mainly takes place in the preseason and the first few weeks of the season to set the groundwork for the kind of program that is run and what we as coaches expect our players to be. These character lessons have nothing to do with football. We don't tie them into a game plan or scheme. This is just about trying to make these boys into better men.

This movement towards taking time away from football specifics and focusing on strong character qualities began in 2010. It really became a focal point of program philosophy in the years after and the results are quite obvious based on the success of the program. Again this alone can't be given as the sole reason for the higher levels of success but it most definitely is a reason that the program has become one of the best in the entire state of Wisconsin at any level.

Research Findings

From the research conducted it was not possible to find significant information due to the fact that my sample size was so small. My sample size was so small because I myself would not have been able to conduct a study by myself with enough participants. This does not mean that it was a failure however. I do believe that through the physical performance numbers I gathered it is possible to infer some sort of correlation.

All of the participants scored relatively high on both the psychological skills inventory and for performance statistics from the season. However, the participant that scored the highest on the psychological skills also was far and away the most successful when it comes to psychological skills. The lowest scoring participant on the psychological skills from the preseason also scored well physically but as you can see from the coach ratings had a steady improvement throughout the season. It is also important to note that four of the six participants' ratings from their position coaches went up throughout the season with one remaining constant and only one seeing an increase between game one and two but having it dip back to the previous level in game three.

Discussion

3Dimensional Facts

Although I was not able to show statistical significance there are still several things that support the 3Dimensional coaching model. These being that there are already other sports and coaches that have emphasized similar characteristics and seen improved performance. Finally, from the one high school I coach at and some of the psychological and performance skills that I evaluated there seem to be something that is having an effect to have such high performance numbers. There is a changing dynamic among the kids who are playing sports today that have a lot of different problems.

Psychological skills are already a huge thing in an individual sport like tennis. Although this is more likely to have an effect on the individual it translates to team success as well. A team full of athletes that are trained to have strong psychological skills could very well see higher performance. A team of athletes that are seeing higher individual performance will most likely also see a higher level of team performance.

Creating a team culture and emphasizing the characteristics besides just physical skill has also been successful at one of the most competitive stages. UCLA was the best basketball team in the nation for several years under the guidance and tutelage of one of the greatest coaches in the history of sport John Wooden.

Superior High School has taken a page from the great Coach Wooden's book and implemented his pyramid of success to try and change the culture in our football program. This has not only I believe made our players better at the game but it has made them better people in the classroom and in the community. Our mission at Superior is to emphasize the student in student-athlete. I believe you can also see how our program creates a better culture through the relatively high psychological scores of all the participants. They also all played at a very high level this season on one of the most successful teams in the history of the school.

Today's athletes are facing much different problems as the culture in the United States is changing as well. One thing that is remaining the same is the fact that a coach is a very

influential person in the athlete's life. Using the 3Dimensional model can not only create better athletes but it can potentially create better people.

At the end of the day showing a correlation between the psychological skills from the Athletic Coping Skills inventory that relate to 3Dimensional Coaching with actual physical performance was not done in this study. However, even if it doesn't directly relate to performance it can have an impact on the type of person that the athlete turns out to be.

Future Implications

There is still a possibility that performance can be correlated with high levels of psychological skills. To do this a similar study should be conducted however it would take more than just one person to conduct this study and several more participants. The best way to do this would probably to get several coaches and schools involved. This way the people conducting the study would be able to cover all the bases and have a very diverse sample group some several different geographic regions. This would be very time consuming and could potentially be costly and hard to accomplish however.

I still think that the way athletes are being coached is changing and most likely will turn from conventional coaching methods towards the 3Dimensional Coaching method. Like Dr. Jeff Duke said, "Sport is a great vehicle by which life skills can be taught."

References

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Appendix

Exhibit A: 3Dimensional Coaching Pyramid



Exhibit B: John Wooden's Pyramid of Success



Exhibit C: Superior High School Player Psychological Skills Numbers

| Name | Coping w/ Adversity | Coachability | Concentration | Confidence and Achievement Motivation | Goal Setting and Mental Preparation | Peaking Under Pressure | Freedom from Worry | Total |
|------|---------------------|--------------|---------------|---------------------------------------|-------------------------------------|------------------------|--------------------|-------|
| 2 | 10 | 9 | 9 | 12 | 8 | 7 | 11 | 66 |
| 43 | 8 | 7 | 8 | 6 | 4 | 8 | 3 | 44 |
| 23 | 8 | 8 | 8 | 10 | 8 | 8 | 8 | 58 |
| 25 | 5 | 5 | 9 | 6 | 5 | 7 | 4 | 41 |
| 26 | 8 | 8 | 7 | 8 | 4 | 5 | 10 | 50 |
| 10 | 8 | 8 | 8 | 10 | 8 | 8 | 8 | 58 |

Exhibit D: Superior High School Season Performance Statistics

| Name | Carries | Rush Yds | Rush TDs | Receptions | Rec. Yds | Rec. TDs | Return Yds | Return TDs | Tackles | Sacks | TFL | FF | FR | Interceptions | Pass Defensed |
|------|---------|----------|----------|------------|----------|----------|------------|------------|---------|-------|-----|-----|-----|---------------|---------------|
| 2 | 133 | 855 | 12 | 12 | 301 | 5 | N/A | N/A | 125 | 6 | 19 | 1 | 0 | 3 | 5 |
| 43 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 117 | 0 | 12 | 0 | 0 | 0 | 2 |
| 23 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 67 | 1 | 5 | 0 | 0 | 0 | 2 |
| 25 | 14 | 56 | 0 | 69 | 1234 | 17 | 237 | 3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 26 | 10 | 59 | 0 | 36 | 458 | 3 | N/A | N/A | 46 | 0 | 1 | 0 | 1 | 0 | 6 |
| 10 | 13 | 139 | 1 | 39 | 803 | 11 | N/A | N/A | 51 | 0 | 1 | 0 | 0 | 6 | 1 |