

Critical Stats For High School Volleyball

Kyle Mashima - June 2022

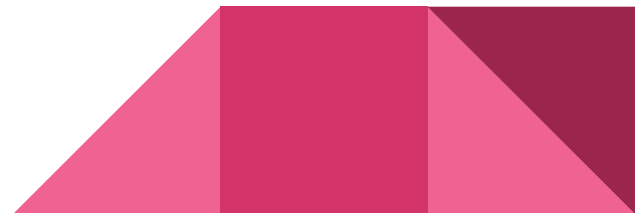
Goals for today

- Focus on the simplest stats that will help you this season
- Look in chronological order, starting with tryouts
- Provide methodology
- Suggest tools



Tryouts

- What stats matter at tryouts?
 - My experience is more like - what stats are NEVER TAKEN at Tryouts
 - **Serve Receive Stats**
 - In club and high school, I have not been around an organization that took serve receive stats, which is the most critical stat you need to understand your level of play
 - This leads to two questions:
 - Why can't I just watch and see who's good?
 - What is it the most critical stat?



Tryouts: Why can't I just watch and see who's good?

- Michael Lewis said in his book: “Moneyball”
 - **“... Some coaches believed they could judge a player's performance simply by watching it. In this they were deeply mistaken...”**
 - *Your eyes lie!*
 - In baseball, the difference between a .250 batter and .300 batter is millions of dollars
 - Can you tell the difference between a 1.50 passer and a 1.75 passer just by watching?



Why can't I just watch and see who's good? (cont.)

- The problem that Lewis points out is that you can't watch enough hits to ascertain a batting average because you need a lot of data points
 - The same is true for serve receive in volleyball - just watching = guessing
 - It takes 40 or more receives to have a real stat
 - Remember Athleticism does not equal Good Passing
 - Think - Michael Jordan and hitting a baseball



Tryouts: What is it the most critical stat?

- I've spent a lot of years coming up with the easiest way to determine the level of play of a team. I've reviewed this with Terry and the others from the AOC.
- We have incorporated it into the [Art of Coaching Simplified Stats Wizard](#)
 - Click the link above to try the free site

- Your team's Serve Receive Error % will tell you your team's level of play
- Why?




Tryouts: What is it the most critical stat? (cont.)

- If you can't control the Serve Receive, it won't matter how well you hit
- I think you've played against great warm up teams bouncing spike after spike
 - Then you play and all of this disappears
 - Why? Because a bad pass, leads to a bad set, leads to a bad hit
 - Without excellent first ball contact, it's hard to side out
 - If you don't side out, you don't get to serve and run points
 - And serving is the easiest skill to teach



Tryouts: What is it the most critical stat? (cont.)

- Level of Play: [Art of Coaching Simplified Stats Wizard](#)
 - Serve Receive Error% vs Level of Play
 - Beginners: > 50%
 - Low Intermediate: 30-50%
 - High Intermediate: 15-30%
 - Advanced: 8-15%
 - Elite: <8%
- 

How To Stat Serve Receive

- How to rate the serve receive pass - use a 0-3 point scale
 - 3 – Perfect Pass – can run middle quick
 - 2 – Can set outside hitters
 - 1 – Free ball return
 - 0 – no return



Calculating the Rating - Weighted Average


- Pass Rating =
 - $(\#0 \text{ passes} \times 0 + \#1 \text{ passes} \times 1 + \#2 \text{ passes} \times 2 + \#3 \text{ passes} \times 3) / \text{total number of passes}$
- Difficult to do this calculation without a calculator or spreadsheet
- Easy to do with a stat app
- Easy to do manually with a 10 column chart - next slide



How To Stat Serve Receive: Capture & Calculate

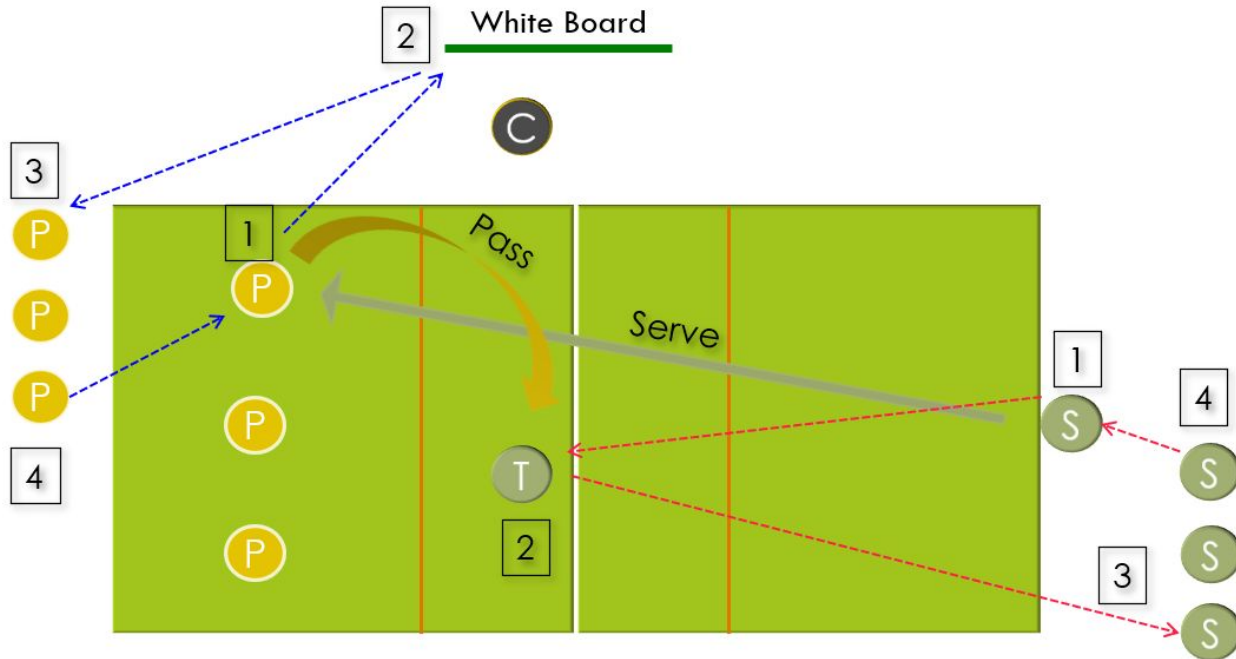
- On a whiteboard, make 14 columns like this:

Player Receive	1	2	3	4	5	6	7	8	9	10	Total	Ave	Error %
Sally	1	2	3	2	2	1	0	3	2	2	18	1.80	10%
Megan	2	2	2	1	0	3	3	3	2	0	18	1.80	20%

- Each player writes the pass rating into the column.
 - After ten receives, add them up, move the decimal place one to the right - this is the rating
 - Count the number of zeros x 10 for the Error %
- 

How To Stat Serve Receive: Drill


- After serve, Coach signals passing rating with fingers
- Passer writes their scores on white board



How To Stat Serve Receive - Process

- I prefer servers serving hard to put game level pressure on receivers
- If I have a ball machine, I will launch balls at 37mph and float (high intermediate to advanced level team)
- To help the process, I use a radar display system shown on the next page

Speed of Serve

- An effective floater is 37-40mph. Above 40, serves tend to go off the court.
 - If you have a high intermediate or advanced level team, this should be your goal
- 

How To Stat Serve Receive - Radar System

- Player serves over 3 radar speed displays on tripods
 - Completely self service for players (no yelling out speed with radar gun)



How To Stat Serve Receive - Radar System

- We only score passes against serves going 37 mph or higher



How To Stat Serve Receive - Consideration

- Taking stats in the open increases the level of focus and competition
- When players argue about the pass rating with you, they are engaged
- There will be disappointing scores so it's important to stay positive and encourage your players
- If you have inexperienced players who are good athletes, taking receive stats regularly during the season will keep players encouraged as they will see incremental improvements in their scores.
 - If they improve by .10 each week, by mid season, they could be contributors to the team




Radar Equipment List

- [Radar](#) \$79.99
- [Tripod](#) 2 for \$35.53
- [5lb Ankle Weights](#) 2 for \$29.99



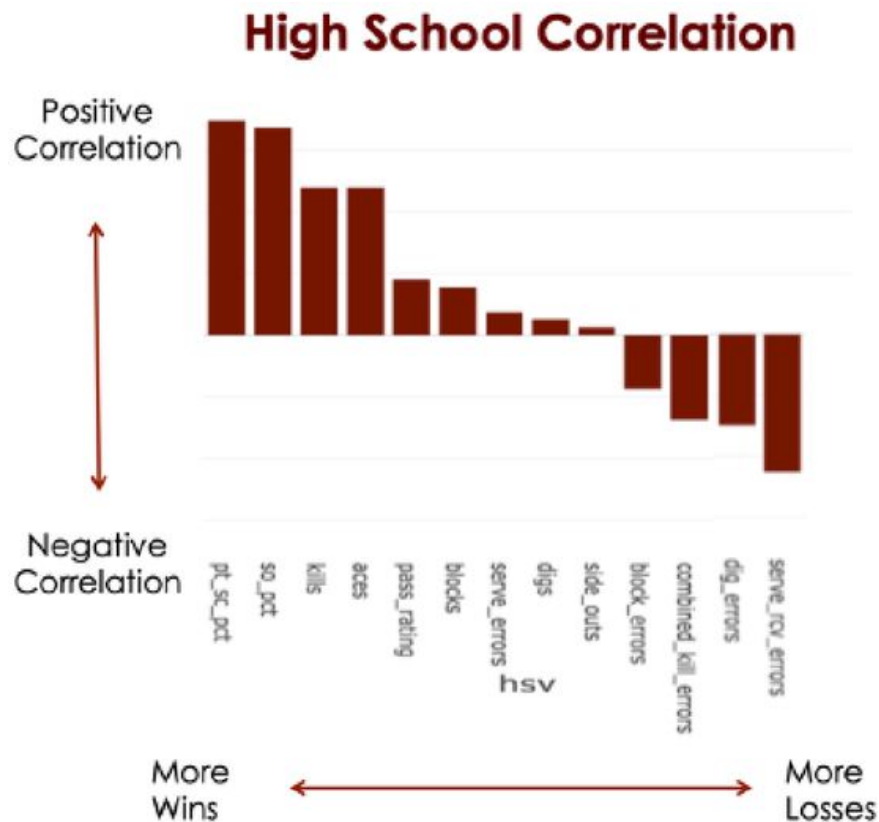
Benchmarks

Establishing Benchmarks

- Many stat conversations start with “what’s a good passing stat?”
 - The answer is “it depends”
 - Stats are relative to your competition. Serve receiving at 2.00 might be great in one league and not enough in another.
 - Here are some national benchmarks by group
 - **High School Varsity**
 - **High School Junior Varsity**
 - **Middle School**
 - **Club 17/18**
 - **Club 15/16**
 - **Club 13/14**
 - **Club 11/12**
- 

Prioritizing Stats

- We've analyzed 1 million sets and did win/loss correlations from 12U to college
- Order of importance
 - Point Scoring
 - Side Out
 - **Kills**
 - **Aces**
 - **Receive Errors**
 - Dig Errors
 - Attack Errors
- You can find the [full analysis here](#)



Benchmarks for My Team 2021

- Once I take stats in [SoloStats](#) and backup to [WebReports](#), I can automatically get my team's position on the benchmarks.
- Examples on next page
 - Grouping are by gender and age or level in school
 - Charts are national averages and indicate rates of win based on skill
 - You may need to be higher or lower than these averages to be competitive in your specific league
- Skill categories
 - Aces, Kills, Receive Errors, Attack Errors, Dig Errors, Side Out %, Point Score %

Team Performance Benchmarks

Team: **Academy 16 HP**

Gender: **Female**

Level: **club16**

Aces/Game: **3.2**

Kills/Game: **10.6**

Kill Errors/Game: **4.3**

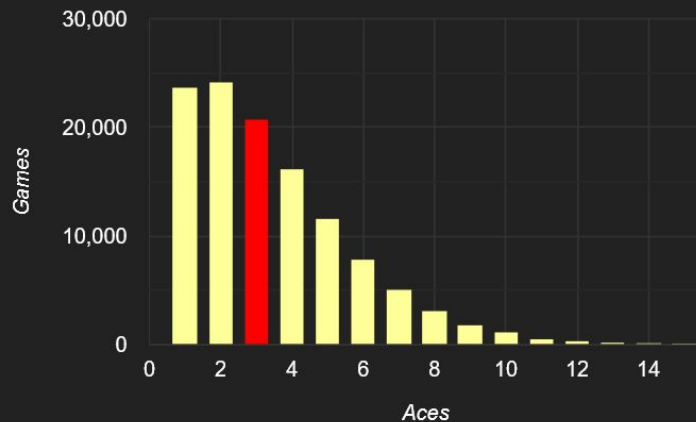
Dig Errors/Game: **4.9**

Serve Receive Errors/Game: **2**

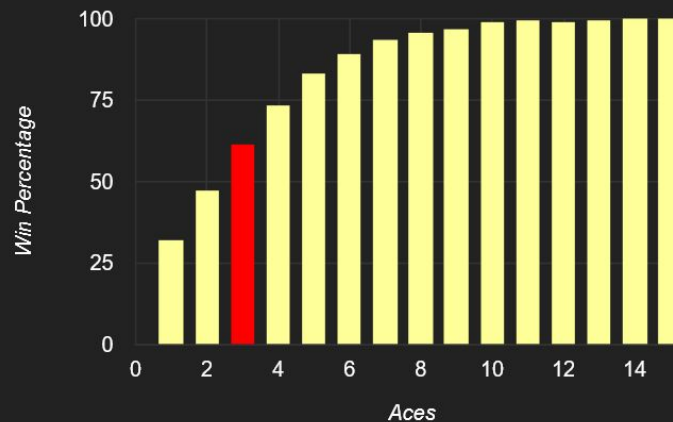
Side Out Percent: **61.3%**

Point Score Percent: **51.7%**

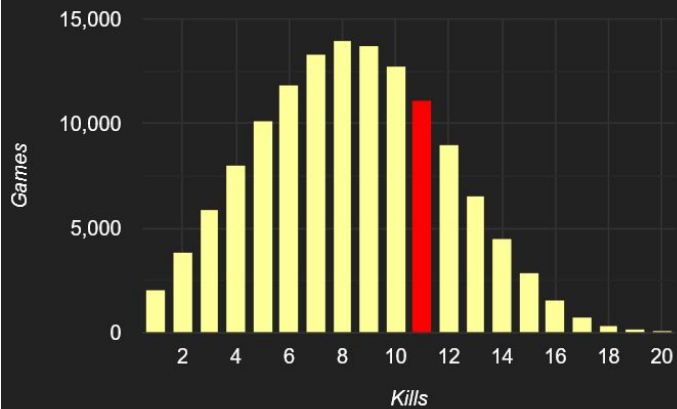
Distribution of Aces for all CLUB16 FEMALE games



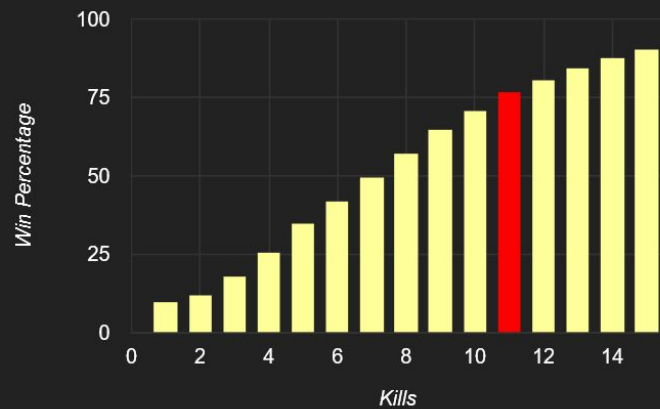
Aces to Win Percentage for all CLUB16 FEMALE games



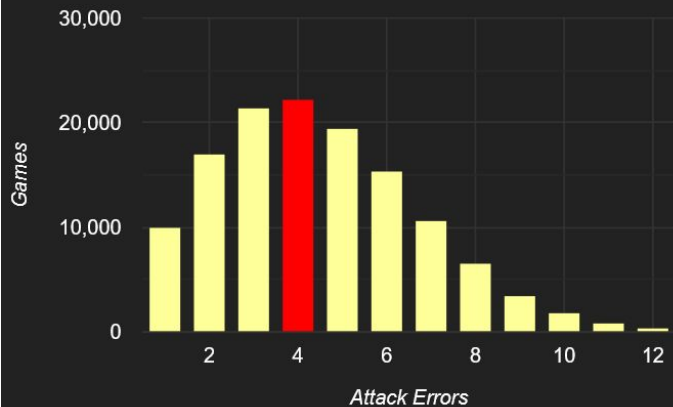
Distribution of Kills for all CLUB16 FEMALE games



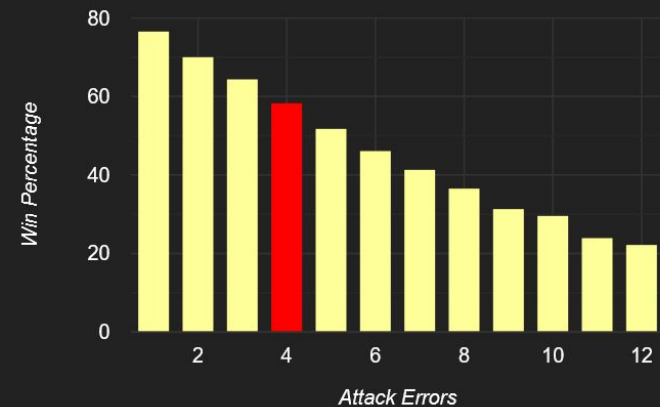
Kills to Win Percentage for all CLUB16 FEMALE games



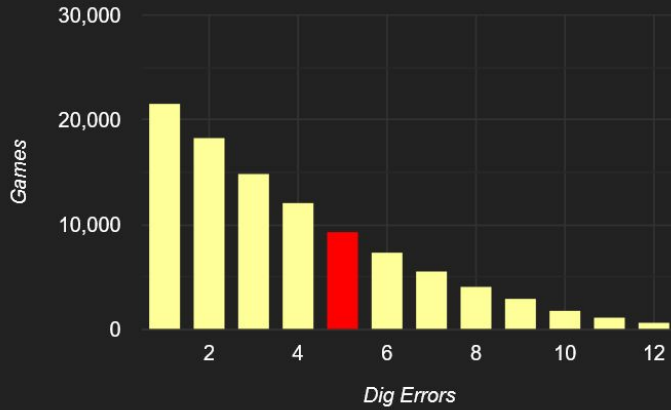
Distribution of Attack Errors for all CLUB16 FEMALE games



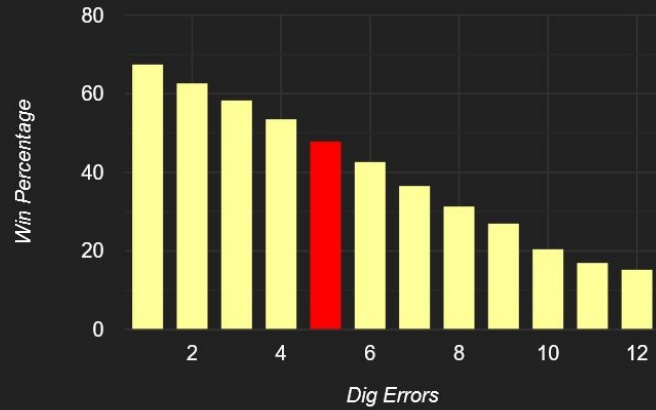
Attack Errors to Win Percentage for all CLUB16 FEMALE games



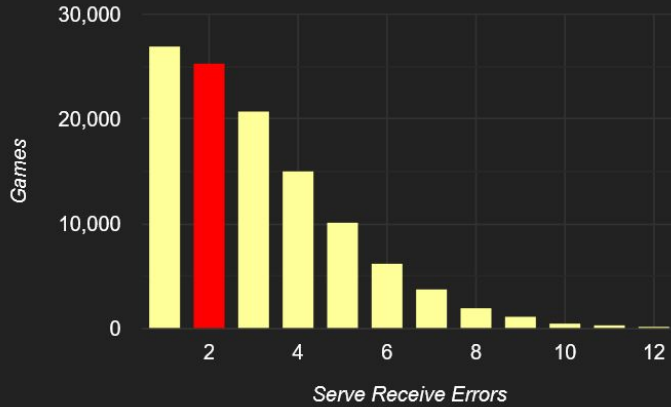
Distribution of Dig Errors for all CLUB16 FEMALE games



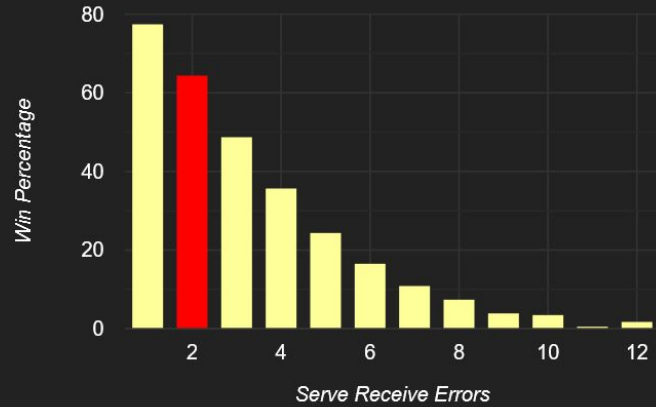
Dig Errors to Win Percentage for all CLUB16 FEMALE games



Distribution of Serve Receive Errors for all CLUB16 FEMALE games



Serve Receive Errors to Win Percentage for all CLUB16 FEMALE games





Additional Stat Seminars

Additional Stat Seminars

- On this web page: <https://www.solostatslive.com/using-stats.html>
 - How to Use Stats to Improve Your Team
 - Simplified Stats
 - Critical Stats and How to Track Them
 - AVCA Seminar - Win More Matches (how to use stats to make your practices more efficient and effective)
 - Why It's Important to Stat

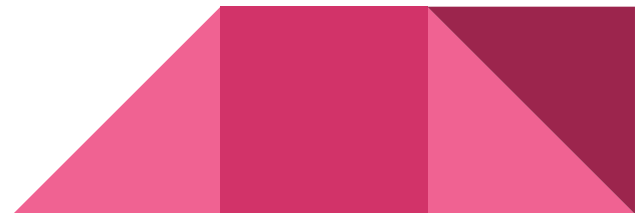
- [Performance Benchmark Analysis - The Stats That Matter](#)



Capturing Stats

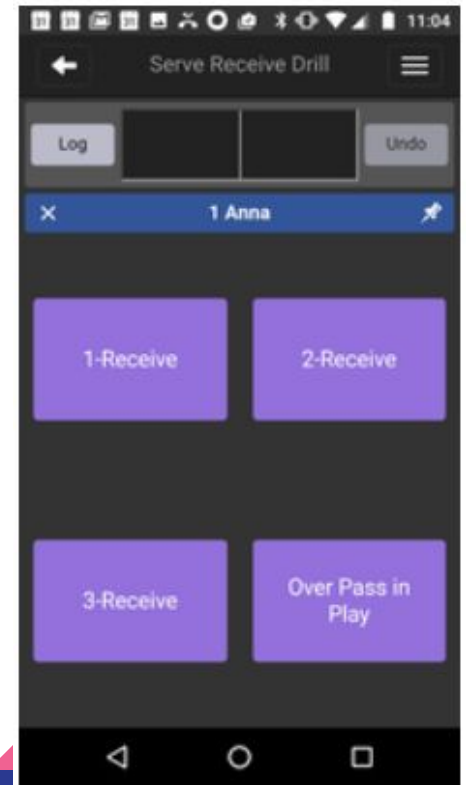
Ways To Take Stats

- On Paper
 - While it's certainly better than not taking stats, I don't like paper because it creates a bunch of "post processing" work. I'm busy enough without creating more work
- Stat App - like SoloStats
 - Apps take a bit to learn but when you've mastered it, the analytics are free. You get reports that do the calculations for you so that we can seek insights
- Stat Service - like Hudl Assist
 - Services like Hudl are great as they remove the work of taking stats and breakdown your video
 - However, they are expensive and NOT available during a match



Practice Stats: SoloStats Touch

- Free from stats taking
- Ideal for practices
- Use for Serve Receive stats
- Choose the stats, players and layout you want



Match Stats: SoloStats 123

- Easy to learn and get started
- Keeps full match stats
- Press Player and then Action to enter a stat
- App automatically tracks scores and rotations
- Real-time match stats are in the app



Match Stats: SoloStats Live

- More advanced stat app
- Fast stat input with thumbs and heads up stat capture
- Automatic scores and rotations as well substitution count



SoloStats Stat Apps Are Free

- Download SoloStats from the Apple Store or Google Play for tablet or phone
- Fully functional for unlimited team stats
- We charge for backup & aggregate reports at [WebReports](#)
 - More than 20 different reports
 - Graph
 - Match to match or tournament to tournament stats by skill
 - Compare individuals performance to team averages
 - Review effectiveness of each setter based on attacker performance
 - Export to Excel, MaxPreps



Real Time Reporting

WebReports Cloud Server

Player#	Name	Games Played	Points Played	Serve/Receive						
				Pass Attpct	3-pass	Tot Pass Err %	Net Accel	Pass Rating	3-pass %	Tot Pass Err %
1	Alisha Glass	32	1282	6	0	2	2	0.83	0.0%	33.3%
2	Kylee Banwarth	31	1080	158	66	14	11	2.15	41.8%	8.9%
3	Courtney Thompson	13	21	0	0	0	0	-	-	-
5	Rachel Adams	28	674	2	0	1	1	1.00	0.0%	50.0%
6	Carl Lloyd	14	103	0	0	0	0	-	-	-
10	Jordan Larson	32	1394	165	59	8	6	2.13	35.8%	4.8%
12	Kelly Murphy	31	1085	0	0	0	0	-	-	-
13	Christa Dietzen	11	208	0	0	0	0	-	-	-
15	Kim Hill	32	938	142	34	13	11	1.89	23.0%	9.2%
16	Foluke Akinradewo	29	756	1	1	0	0	3.00	100.0%	0.0%
17	N Hagglund	1	34	8	1	0	0	2.00	12.5%	0.0%
23	Kelsey Robinson	29	456	78	32	2	2	2.23	41.0%	2.6%
25	Karen Lowe	23	298	0	0	0	0	-	-	-
	(team)	32	0	3	0	3	3	0.00	0.0%	100.0%
				563	193	43	36	2.06	34.3%	7.6%

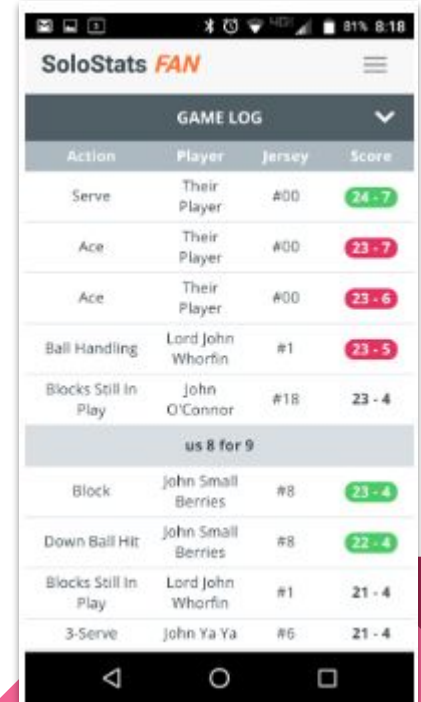


SoloStats
123/Live

Coach App
Real-Time Stats

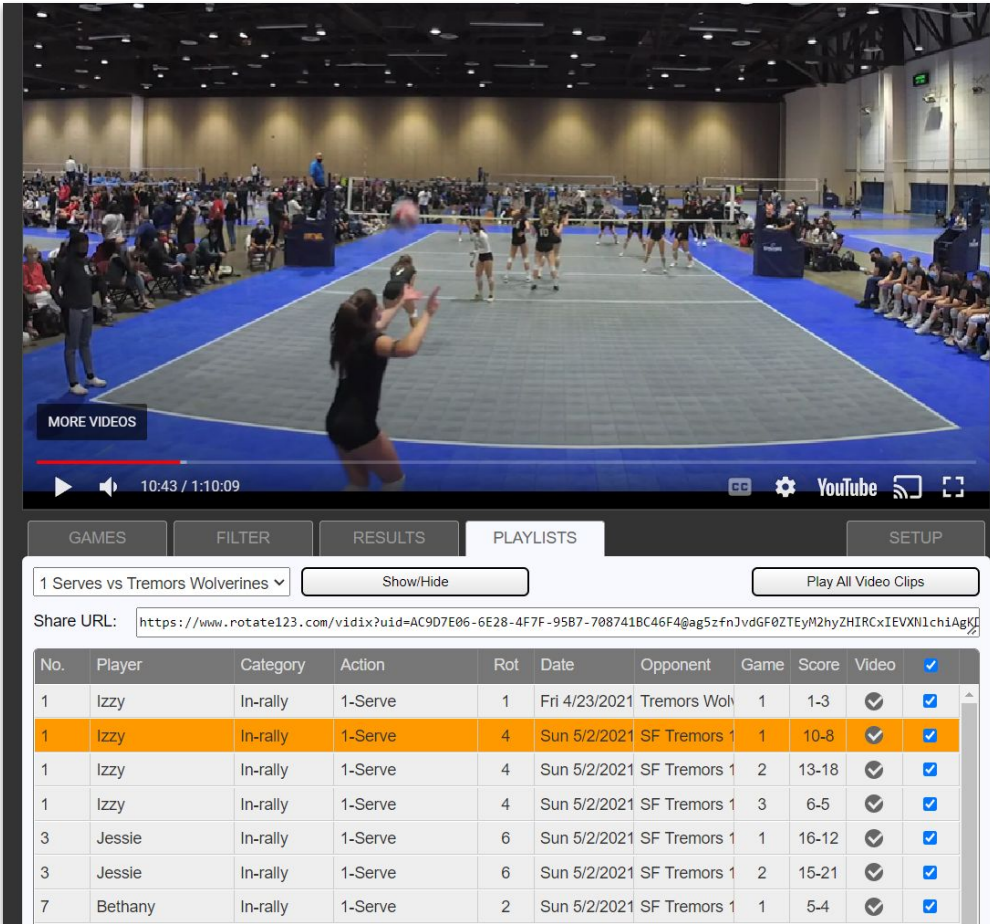
Match Gm 1 Gm 2		
Us		Them
23		25
••	Timeouts	••
POINT TREE		
10	Kills	15
6	Opp Hit Err	3
4	Aces	4
0	Opp Serve Err	2
2	Blocks	0
1	Opp Faults	1
0	Adjustments	0
1.64	Pass	1.70
41.7%	SO%	45.8%
54.2%	PS%	58.3%

SoloStats Fan Real-Time Play-by-Play



SoloStats Video

- Easily sync stats to video
- Get video breakdowns by player and any action
- Create playlists and send to players
- Players can create highlights for colleges

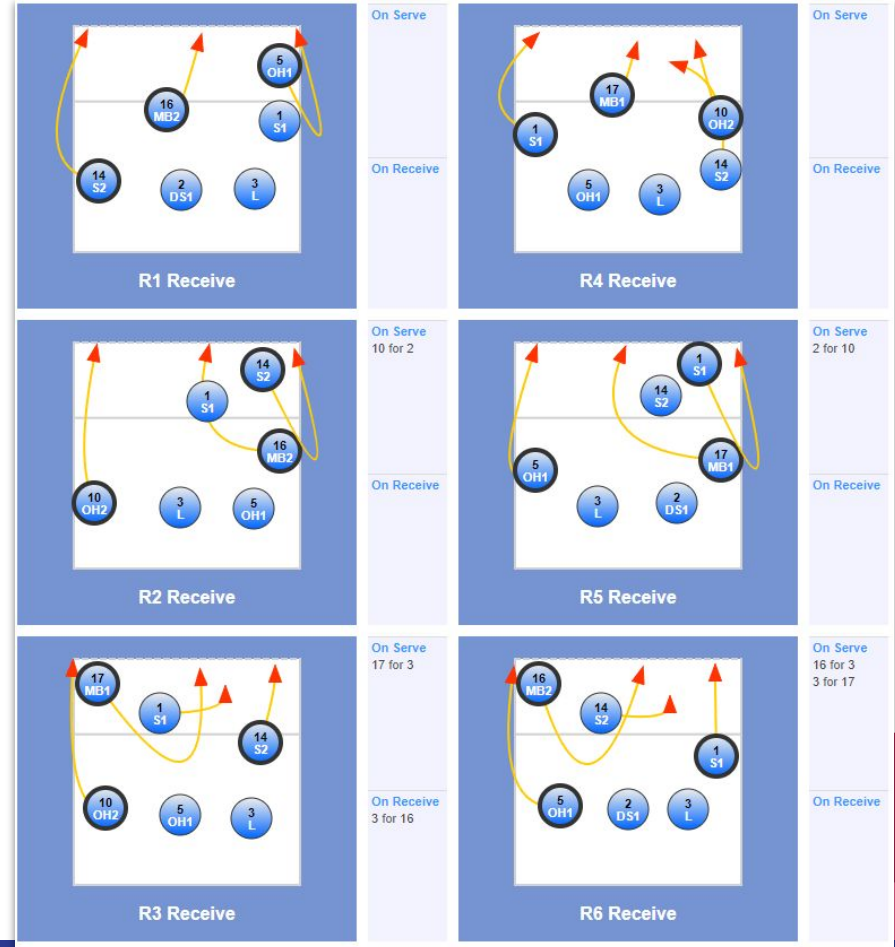


The screenshot displays a video player interface for a volleyball match. The video shows a player in a black jersey serving the ball. Below the video, there are navigation tabs: GAMES, FILTER, RESULTS, PLAYLISTS, and SETUP. The 'PLAYLISTS' tab is active, showing a dropdown menu with '1 Serves vs Tremors Wolverines' and a 'Show/Hide' button. A 'Play All Video Clips' button is also present. The 'Share URL' is displayed as <https://www.rotate123.com/vidix?uid=AC9D7E06-6E28-4F7F-95B7-708741BC46F4@ag5zfnJvdGf02TEyM2hyZHIRCxIEVXN1chiAgKf>. Below the URL is a table of stats.

No.	Player	Category	Action	Rot	Date	Opponent	Game	Score	Video	✓
1	Izzy	In-rally	1-Serve	1	Fri 4/23/2021	Tremors Wok	1	1-3	✓	✓
1	Izzy	In-rally	1-Serve	4	Sun 5/2/2021	SF Tremors 1	1	10-8	✓	✓
1	Izzy	In-rally	1-Serve	4	Sun 5/2/2021	SF Tremors 1	2	13-18	✓	✓
1	Izzy	In-rally	1-Serve	4	Sun 5/2/2021	SF Tremors 1	3	6-5	✓	✓
3	Jessie	In-rally	1-Serve	6	Sun 5/2/2021	SF Tremors 1	1	16-12	✓	✓
3	Jessie	In-rally	1-Serve	6	Sun 5/2/2021	SF Tremors 1	2	15-21	✓	✓
7	Bethany	In-rally	1-Serve	2	Sun 5/2/2021	SF Tremors 1	1	5-4	✓	✓

Rotate123

- Optimize your rotations
- Easily try different player options
- Use different formations
- Do “what-if” analysis quickly
- Match Ups allow you to compare your rotations to your opponent’s and find the best way to set up against them





Questions?

Contact - Kyle@rotate123.com