Development of College Baseball Players Enhanced Through Advances in Technology

By Max Tanzer

ITHACA, N.Y. – It was the fall of 2019 and freshman Ryan Lobus was getting ready to embark on a new journey in his life as the catcher for the Chattanooga State Community College baseball team. Little did he know, his baseball career was going to take a significant turn.

Soon after his first practices, it was apparent that Lobus was going to struggle to find playing time. In response, the coaching staff asked him if he wanted to try pitching. Instead of being hesitant about such a drastic change, he accepted the challenge with an open mind.

"I always had a pretty decent arm, so I always kind of knew I was going to be a pitcher," said Lobus.

In pursuit of perfecting the craft of pitching, Lobus used Rapsodo, a lauded device around the baseball community that measures the physics of the sport with a reputation of enhancing player development. It provided him with data about how the ball left his hand and was moving as it approached home plate; exactly what he needed.

With the aid of the technology, Lobus and his coaching staff noticed that the direction of the spin on his fastball combined with the angle he was releasing the ball at generated inefficient pitch movement as the ball had "cut" (sidespin) instead of the backspin he was striving for.

In response to this, Lobus changed his grip to match his arm slot by angling his middle and pointer finger more outwards and away from the top of the horseshoe. This ensured that the ball had more vertical rotation and a straighter path to the plate. As a result, his spin rate jumped to 2400 revolutions per minute, an improvement of 300 rotations. This also boosted his velocity to 91 miles per hour and gave his fastball more carry through the strike zone as gravity has less impact on a pitch that has more rotations.

Lobus's fastball grip before the change. (Submitted Photo/Ryan Lobus)

Lobus's fastball grip after the change. (Submitted Photo/Ryan Lobus)

After completely changing positions, this breakthrough has unlocked unlimited potential for Lobus in the matter of ten months. In late January, it was even announced that Lobus made

. Without Rapsodo, it is likely that Lobus would never have been able to make these adjustments.

"You can't see spin rate or spin direction. Not even the best coach in the world can. Having a tool that can relay back that information to you after every pitch is huge for development," said Lobus.

Lobus is not the only collegiate athlete to benefit from this technology. According to Dave Valesente, head coach of the Ithaca College baseball team, most schools use it across the country, including his program.

When working with hitters, the Bombers use Rapsodo and Blast Data motion sensors to measure data like launch angles, rotational acceleration, and bat speed. Valesente often uses this information when coaching his players.

"It's for us to look at trends. We're not trying to overload the players with data or confuse them. We can use it as a teaching tool to make some tweaks, improve their ability and make them more aware of things they're doing," said Valesente.

He explained that coaches previously were limited in the past to what they saw and heard in real time. However, with the advances in camera quality and data measuring technology, coaches can now implement certain drills and tweaks to see if they positively impact the metrics on screen.

This equipment has gained so much traction that several college programs have hired hitting and pitching coordinators who specialize in using the technology and communicating its information to players.

Recent college graduates Richard Cosgrove and Bryce Wheary have filled this role spending the last two years traveling around the country working for various college teams.

The two spent last summer working with the Pierre Trappers, a collegiate-summer team in in South Dakota. Their program emphasized development through technologies like Rapsodo, Blast Data and K-Baseball Data.
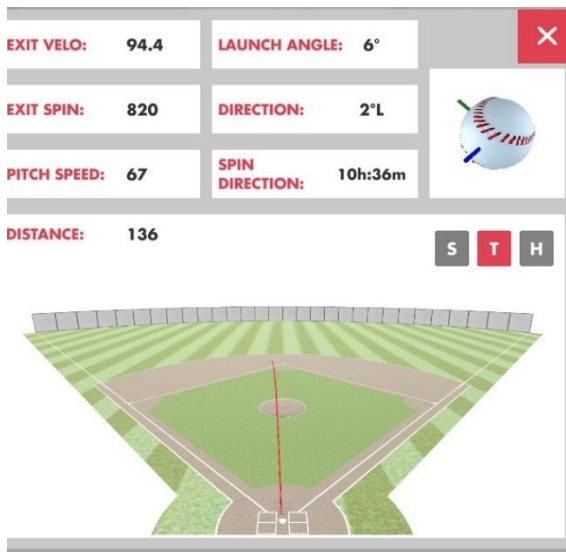

A look at data provided by Rapsodo for a hitter. (Twitter/ @data_driven_duo)
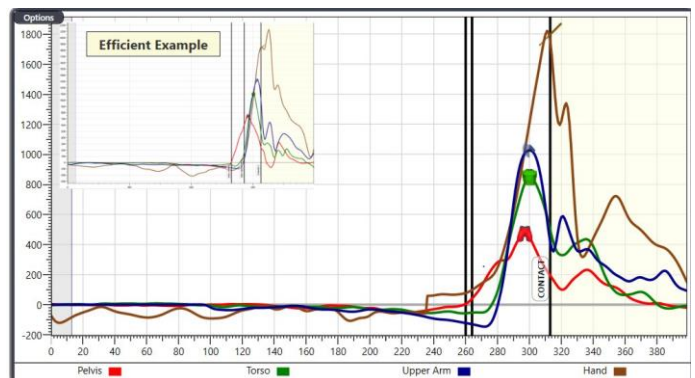
A look at data provided by the K-Vest about how the body is moving. (Twitter/@data_driven_duo)

Wheary, who was hired by the New York Mets as a [Player Development Associate](#) earlier this week, explained that each piece of equipment provided them with different information that they could combine for greater insight. The K-Baseball vest measured how the body was moving, the Blast software provided data about the movement of the player's bat, and the Rapsodo recorded the analytics of the ball after contact. Cosgrove and Wheary find the correlation between all this information and give the respective player instruction accordingly.

According to their [post-season report](#), several players made massive strides in many categories including exit velocity and bat speed.
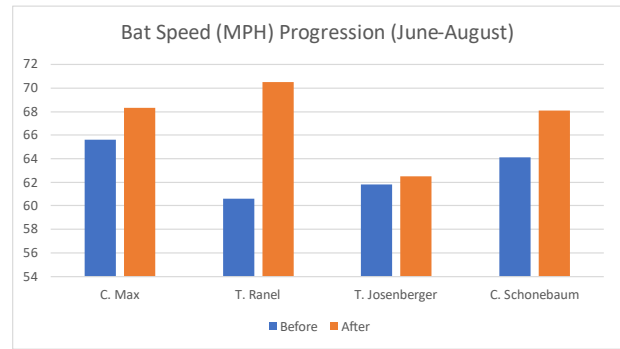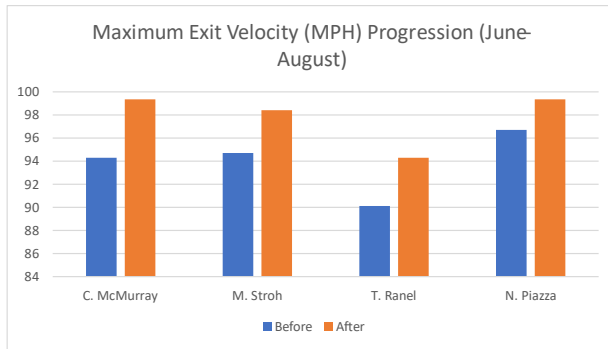
As the calendar turns to February, the pupils of Valesente, Cosgrove, Wheary and other data-science instructors across the country are anticipating the start to their seasons. Many of these players have spent hours in their facilities tweaking different aspects of their game. Now, they will be able to test the effects of these technologies on the field for the first time hoping for encouraging results just like Lobus.