**Scorekeeping and Statistics for Slow Pitch Softball Teams**

Conscientious managers of softball teams keep scorebooks and compile statistics for the purpose of predicting offensive capabilities of individual players and scoring potential for their teams. However, it is often the case that scorekeeping and statistics are not employed in a manner that will maximize the value of such endeavors. What are the mistakes that are frequently made?

Mistake #1. Managers erroneously believe that individual and team batting averages are correlative of the capacity to score runs. It has been proven that there is a very low correlation between batting average and run scoring capability. Why is batting average a statistic of such limited value? There are at least three reasons. First, batting average treats a single the same as a home run, when clearly the run scoring potential of singles and home runs are different. Second, batting average ignores the value of walks. Batting average treats a walk as if nothing happened, when clearly something of value to the offense has occurred. Third, batting average treats a batter who has reached bases via what has classically been called an “error” as if the batter made an out, which he did not.

Remedy for Mistake #1. Ignore batting averages; they are useless.

Examples:

Batter ‘A’ in four trips gets three walks and one safe on error using footspeed after hitting a hard ground ball that is briefly juggled. Batter ‘B’ hit a single and popped out three times. Batting average of ‘A’ is .000, ‘B’ is .250. Yet ‘B’ made three outs and ‘A’ made none. ‘A’ contributed far more to run production than did B but is inferior according to batting average.

Mistake #2. Managers, or the scorekeepers they employ, differentiate between what has classically been classified as a hit or what has been called an error. What is the problem with classifying an at-bat and result as an “error?” First, reasonable and knowledgeable people often do not agree on whether the result of the play should be classified as a hit or error. Second, classifying a play as an error treats the play as if an out had been recorded when one had not. Third, all other score keeping notations concern what actually occurred, but scoring an error reflects what the scorekeeper things should have occurred. It is not the scoring of an event, but a reflection of a subjective opinion. Finally, a classical error can only occur after a defensive player has gotten to a struck ball and mishandled it. A misjudged fly ball is not error, but one that has been properly judged but dropped is error. What sense does that make?

Ultimately, the problem with using the “error” as a judgement is that it does not differentiate between a player who made an out and one who did not. Some players are safe on “errors” with a much higher degree of frequency than other players. Players who are frequently safe on “errors” may have such success because they hit hard or top spinning ground balls, or hit line drives that knuckle, or run quickly, or don’t give up when they hit a likely out. The fact is that some people are safe on “errors” much more frequently than others. It is a repeatable skill that managers should take into account, but which remain undiscovered by managers when scorekeepers record a batter getting on base as an error.

Remedy for mistake #2. If a player comes to bat, gets on base, and did not force anyone else out, count it as if it is a hit. If you don’t like calling it hit, just called it “on base” whether it was a hit, a walk, or a classical error.

Mistake #3. Failing to recognized that the single most valuable skill for a batter, and the skill that leads to the team scoring the greatest number of runs is ***not making an out.*** When a batter gets a hit, a base on balls, or is safe on what might be called an error, no out is recorded. The scoring potential for a team with players who don’t make outs is infinite. No other skill is more important. Any scoring method that fails to take that into account is flawed.

Remedy for mistake #3. See remedy for mistake #2.

So, what do we know so far? We know that avoiding outs is of paramount importance and the manner in which we reflect that truth is to treat as equal hits, bases on balls, and safe on what might have previously been classified as an error. If we go no further than this, we are a step ahead of many traditional managers.

**Slugging:**

But we have yet to consider the fact that doubles are more likely to score runs than singles, and home runs are better than triples.

The statistic that takes into account extra base hits versus singles is called slugging percentage. It is a simple mathematical formula that divides the total number of bases by the number of at bats. Analysis has shown that while on base percentage is better than batting average at predicting run scoring capability, a more accurate correlation can be had by adding slugging to the mix.

However, there is a problem with the slugging percentage formula. A batter who hits four singles in four plate appearance has a slugging percentage of 1.000. Another batter who hits one home run and makes three outs in four plate appearances also slugs 1.000. Two very different hitting outcomes producing an equivalent statistic calls that statistic into question. The remedy is a statistic called “isolated slugging” which is calculated by subtracting batting average from slugging percentage. You will see as you continue reading a formula which accomplishes that and other purposes.

On base plus slugging (OPS) has become much more popular and effective in the prediction of run scoring capability than on-base percentage (OBP), batting average, or slugging by itself.

If, as a manager, you have eliminated errors from your scorebook and added slugging to the mix, you are doing quite well. But you can do better.

**What’s wrong with OPS?** I thought we were doing well.

We are doing well but we can do better. There is a mathematical problem with adding on-base percentage (OBP) to slugging. The denominator for OBP is 1.000 but for slugging is 4.000. (If you remember math from school, you cannot add fractions with different denominators.) The other problem is that OBP is three to four times more important than slugging when trying to predict run scoring capability but OPS treats them equally.

The solution that produces appropriate weighing of the value of on-base percentage (OBP) vis-à-vis slugging is as follows:

(OBP) + ¼ (Slug – OBP) = run production (RPV\*)

\*RPV is the term I have coined. Call it whatever you like, as long as you understand it.

Or one might simply say, “Add to the batters on-base percentage one-fourth of the difference between their on base percentage (OBP) and their slugging to produce their run producing value (RPV)”

Examples:

What is RPV of Batter ‘X’ who gets on base at a rate of .600 and slugs 1.000?

.600 plus ¼ of (1.000 - .600)

.600 plus ¼ of .400

.600 plus .100 = .700 RPV

What is the RPV of batter ‘Y’ who gets on base at a rate of .700 and slugs 1.200?

.700 plus ¼ of (1.200 - .700)

.700 plus ¼ of .500

.700 plus .125 = .825 RPV

The RPV is as far as I can go without more information that is currently unavailable for softball teams. But if you score events as I suggest and keep statistics this way (RPV for example) you will construct productive line-ups based on a clear picture of the run producing capability of each of the players on your team.