

**COMPARISON OF TWO TYPES OF SLIDES TO
DETERMINE THE FASTEST METHOD
FOR BASE STEALING**

BY

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COMPARISON OF TWO TYPES OF SLIDES
TO DETERMINE THE FASTEST
METHOD FOR BASE
STEALING

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To the Graduate Council:

I am submitting herewith a Research Paper written by Terry Everette Vinyard entitled "The Comparison of Two Types of Slides to Determine the Fastest Method for Base Stealing." I recommend that it be accepted in partial fulfillment of the requirement for the degree of Master of Arts in Education, with a major in Health and Physical Education.

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Graduate Council:

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Chapter I

The Problem and Definitions of Terms

Introduction

The need for quality research in baseball is great. There are innumerable topic possibilities in the area of base running alone. Coaches not only neglect to conduct research in the areas of base running, but also often neglect the teaching of proper base running techniques, taking for granted that the players are already highly skilled in that area.

The writer of this paper is concerned about neglected base running techniques, especially in sliding. In order for the attempted steal to be successfully executed, a good slide is usually essential.

Statement of the Problem

Which type of slide, "The Pop-Up Slide" or "Head First Slide," is the faster method for base stealing?

Hypotheses

Based on the writer's experience and observation as a baseball player and coach, and based on review of related literature on base stealing and sliding, a belief has been established that the pop-up slide is a quicker means of getting to the base than the head first slide. Therefore, the following hypotheses concerning performance of the slide on an attempted steal are given:

H 1: Players will achieve better times using the pop-up slide.

H 2: Players will not achieve better times using the head first slide.

Purpose of the Study

Baseball today is one of the most competitive amateur and professional sports in the United States. It draws more attendance than any other sport.

The purpose of this study is to give the baseball coach some idea of which two types of slides is better in determining the faster method for stealing a base.

The first slide is the pop-up slide in which the feet reach the base first. The second slide is the head first slide in which the hands reach the base first.

The researcher of this study has experimented with these two slides to see which method is the faster in stealing a base.

Except for opinions based on empirical observations, little is known regarding the fastest method of stealing a base. This researcher has determined a study to find out which slide is the fastest in stealing a base.

Definition of Terms

Pop-up Slide: While running in a straight line at top speed, runner should fall back on his buttocks, tucking one foot under his body with his knee bent at approximately a right angle; the advanced foot should be kept in the air so that the spikes won't catch in the dirt, and the leg should

be practically straight. The body weight should be back on the buttocks-not on the knee. He should hit the bag with his front foot, at the same time pushing up with the leg that is tucked under him. Momentum, plus the added push, will enable him to spring up.

Head First Slide: While running in a straight line at top speed, slide is made on the front of the body by springing off the feet, throwing the body forward, extending the arms, and reaching for the base. Sometimes referred to as "belly" slide.

Chapter II

Review of the Literature

Except for opinions based on experimental observations, little is known regarding the fastest method in stealing a base.

The researcher of this report could not find any literature or research that directly related to this study. The literature that was researched had some significant differences in opinions.

DiClemente, in the book Baseball, stated "there are some players who prefer to slide head first into a base merely because they feel they get to the base quicker."¹

Although there were no studies that dealt specifically with the best method in base stealing, there were some studies that dealt with the advantages and disadvantages of each. In a study by Noel, he agrees the pop-up slide is the fastest. It enables the player to reach the base quickly, it is easily taught, it enables the player to get himself in the proper position for advancing to the next base, and it is versatile.²

In the book, The Complete Baseball Handbook, by Alston and Weiskopf, sliding is described as controlled falling. The runner simply drops to the ground according to the slide desired, and the momentum of his run does the rest.³ The bent leg slide or pop-up slide is generally considered the

¹Frank F. DiClemente, Baseball, Minnesota, Creative Educational Society Inc., Massachusetts, Phillips Academy, 1960.

²Bob Noel, "Teaching the Pop-Up Slide," Athletic Journal, Vol. 57, 1-10, P. 52, Feb., 1971.

³Walter Alston and Don Weiskopf, The Complete Baseball Handbook, Boston, Allyn and Bacon, Inc., 1972.

safest slide in baseball. The slide is the way the base runner can get to the bag the quickest possible way without being tagged out by the fielder.

Ken Dugan, well known baseball coach at David Lipscomb College in Nashville, Tennessee gave four reasons for sliding into a base:

- 1) to avoid being tagged
- 2) to stop the momentum
- 3) avoid a collision
- 4) break up a double play⁴

As can be seen, sliding is very important to players and baseball teams today. Johnson and Weiskopf in the book, How to Play Baseball, stated in reference to the art of sliding that "A player is just as good as the time he devotes to practice."⁵

In his book, Coaching Baseball, Ledbetter talked about some basic sliding rules:

- 1) once the decision to slide is made, go through with it
- 2) make the slide with speed
- 3) learn to fall in a relaxed manner
- 4) clinch the hands loosely when sliding, to avoid broken fingers.⁶

⁴Ken Dugan, How to Coach and Organize Winning Baseball, New York, Parker Publishing Co., Inc., 1971.

⁵Johnson Spinks and Don Weiskopf, How to Play Baseball, St. Louis, Mo., The Sporting News, 1973.

⁶Virgil Ledbetter, Coaching Baseball, Iowa, Wm. C. Brown Company Publishers, 1964.

Chapter III

Methods and Procedures

Subjects

The subjects of this experiment were 15 baseball players of the Austin Peay State University baseball team and Fort Campbell American Legion team. The subjects' ages ranged from 18 to 24 years of age. There were nine members from Austin Peay State University and six from Fort Campbell American Legion. All of the players were on a competitive team and have been participating in organized baseball for at least five years.

Facilities and Equipment

Sliding was done at the Austin Peay State University baseball field in Clarksville, Tennessee. Two baseball bags were used at first and second. Timing was done with stop watches calibrated to a tenth of a second.

Research Method

To attempt to determine which method of sliding is the fastest in base stealing, the writer undertook the following research.

Before testing got underway, each player was given 15 minutes to stretch and run to get loose. Each player was also given one practice slide for each method. All the players involved had previous practice in both practice and game situations in executing the two slides used. The equipment used in the research consisted of two baseball bags and two stop watches.

All the subjects started the test at first base, where a distance of 13 feet was marked from first base toward second base to begin the timing. Each

player placed his front foot on the line by taking his normal position off first as though he was getting ready to steal second base. Two timers, with stop watches, stood at second base so they could record the time of each player when contact was made with the bag. The timers started the stop watches when the subject made his first movement toward second; the watches were stopped when contact was made with the bag, either by the player's foot or fingers.

The pop-up slide was used first, followed by the head first slide. Each player was given two trials at each method with a five minute rest period between each trial. Between the two methods used, 15 minutes was allowed for recovery.

Each player wore baseball pants, a shirt and all were wearing baseball cleats.

Evaluation

The method of evaluation was a comparison of the player's time in the pop-up slide to the player's time in the head first slide. After discussing the matter of how times should be compared with several college baseball coaches and professional baseball scouts, it was decided that a difference of one-tenth of a second was considered significant.

Chapter IV

Analysis of Results

From this study of comparing the two methods of sliding, the pop-up slide was the faster. Nine subjects had lower times using the pop-up slide, compared to three subjects using the head first slide. Two subjects had the same times for both methods.

Only six subjects met the proposed one-tenth of a second as being significant. It is recognized that the difference in time between the two methods is an extremely small one; however, it is the fraction of a second that many times makes the difference in being safe or being out on the attempted steal.

As in all teaching, consideration must be given to individual differences and the technique of base stealing utilized rather than the one which has proven most effective for others.

In comparing both sets of trials (Table 1) the players had a mean score of 3.78 for the pop-up slide and a mean score of 3.84 for the head first slide. The .06 difference between the two methods was less than the one-tenth of a second needed to be considered significant.

INDIVIDUAL RESULTS OF TIME TRIALS

Subject	Age	Time Trial (+)	Time Trial (-)	Difference
		Pop-up Slide	Head First Slide	
1	24	3.85	3.88	+.03
2	19	3.84	3.95	+.11
3	18	3.73	3.60	-.13
4	20	3.58	3.58	.00
5	20	3.80	3.80	.00
6	21	3.75	3.74	-.01
7	21	3.72	4.01	+.29
8	18	3.65	3.90	+.25
9	22	4.10	4.25	+.15
10	18	3.75	3.81	+.06
11	18	3.85	3.80	-.05
12	18	3.78	3.85	+.07
13	18	3.75	3.85	+.10
14	18	3.87	3.87	.00
15	18	3.70	3.80	+.10
Mean		3.78	3.84	Sum of D +.97

Chapter V

Summary and Conclusions

The purpose of this study was to determine the fastest method of stealing a base. The results indicated that the pop-up slide was faster than the head first slide.

It is important to remember that certain variables are being dealt with, such as conditions of the field, players' size and body weight and players having a fear of the possibility of a injury. Also on certain days, an individual's speed can vary.

Major league players often talk about the art of base stealing as being a "lost art," and players need more emphasis on how to steal and execute a good slide. Studies on base stealing could stir more interest in this important phase of base running and perhaps cause coaches to put more emphasis on it.

The writer suggests some areas to be studied:

- The technique for getting the best jump or take-off toward second base.
- The best mechanical running technique to go from first base to second base.

It would be a great value to have a study of this type undertaken with young boys between the ages of 14-16 who would not bring to it already developed proficiency in one or the other method. It might be possible in this manner to appraise even more accurately whether one method possesses definite superiority over the other.

The researcher of this paper recommends that further investigation be done in this area to confirm or refute these conclusions. Also, further investigation will expand the scientific base which can be used to improve the sport of competitive baseball.

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