

Financial Statement Racing

Marie Kelly
Stephen F. Austin State University

Nikki Shoemaker
Stephen F. Austin State University

This paper describes an active learning activity called Financial Statement Racing. This game has been used in several introductory financial accounting courses to help students understand the normal balances and financial statement classifications of multiple financial statement accounts. The activity encourages students to work together in a team to place racecars on the appropriate financial statement racetrack in the correct debit or credit lane. These teams compete against other teams in the class to try to win the race to the end of the financial statement racetrack.

INTRODUCTION

Accounting faculty teaching introductory financial accounting courses face a challenge getting students to learn the normal balances and financial statement classifications of various financial statement accounts. However, it is vital to the student's success in the course that they be able to learn this information and come up with some general rules that will allow them to classify new accounts as they are introduced to them. This paper describes a Financial Statement Racing activity that helps students in these areas.

Information gathered from a pretest/posttest suggests that this activity effectively helps students learn the normal balances and financial statement classifications of each account. Instructors also noticed that the students demonstrated an increased excitement over accounting during the game and developed rules that helped them determine the normal balance and financial statement classification of unfamiliar accounts.

The remainder of the paper is organized as follows. First, the Financial Statement Racing activity is described. Second, learning objectives and implementation guidance for the activity are discussed. Third, evidence of efficacy related to the Financial Statement Racing activity is considered.

FINANCIAL STATEMENT RACING

The purpose of Financial Statement Racing is to help students learn the normal balance of multiple financial statement accounts and their financial statement classifications. Students often become confused regarding the normal balance of an account (debit or credit) and which financial statement the account would appear on. The structure of the game splits the class into two teams, each with a racetrack mounted on the board in front of the class. The lanes of the racetrack consist of Income Statement-debit, Income

Statement-credit, Balance Sheet-debit, and Balance Sheet-credit representing the two main financial statements. When played, two students from each team run to their racetrack, and pick five racecars from their bucket. Each car has the name of an account on it. Students have 30 seconds to place the cars on the proper track.

To increase student involvement and competition, students are allowed to ask their partner and the rest of their seated teammates for advice and help. After the 30 second time limit is called, any accounts (cars) that were originally put on the incorrect lane are automatically given to the opposing team. The opposition has ten additional seconds to put these “stolen” cars on their correct financial statement track. If incorrect, the cars are returned to the original teams’ bucket to be picked during a future round of the game.

For each correct placement of a racecar on the racetrack, the student’s entire team writes that account on a hard copy of the worksheet at their desks. The first team to place enough accounts on the proper financial statement track to get to the “finish line” in any of the four lanes wins Financial Statement Racing and homework bonus points.

LEARNING OBJECTIVES AND IMPLEMENTATION GUIDANCE

Learning Objectives

The learning objectives for the Financial Statement Racing Game are threefold. First, the activity reinforces students’ understanding of accounts as balance sheet or income statement accounts by requiring students to place the accounts on either the balance sheet or income statement “racetrack.” Second, the activity strengthens students’ comprehension of the normal balance (i.e., debit or credit) of each account. This occurs when students are asked to place each account onto the debit or credit side of the “racetrack.”

Finally, the activity increases students’ awareness of the interrelationships among balance sheet and income statement accounts. At the time the activity is used, students have not covered all of the accounts that they are asked to classify. Through active discussion during the game, the instructor can highlight the similarities between various income statement and balance sheet accounts to increase students’ ability to determine the normal balance of unfamiliar accounts and classify them as income statement or balance sheet accounts. For example, the instructor can highlight that “Rent Revenue” and “Restaurant Revenue” are similar because of the term “revenue”. Therefore, both have normal credit balances and are income statement accounts. This discussion also allows the instructor to discuss the exceptions to the rule. For example, the instructor can discuss how “Rent Revenue” and “Unearned Revenue” are not similar because of the term “unearned.”

Implementation Guidance

Courses

This activity was designed for an introductory financial accounting course. It has been used in medium- to large-size classes of up to approximately 75 students. These courses include students with a wide variety of business majors, including accounting, management, marketing, and general business.

This activity was used in class to reinforce the classification of accounts as balance sheet or income statement accounts and the normal balance of each account. The activity is typically used after the instructor has covered the financial reporting process and the cash and receivables portion of the balance sheet. To encourage full participation, the students in the team that win the game are typically given a minimal amount of bonus points. In addition to using this game in an introductory financial accounting course, the activity could also be used during the first few weeks of an intermediate accounting course to remind students about the normal balances and financial statement classification of various accounts.

Materials

The materials needed to create the racetrack and racecars costs approximately \$132. It takes approximately ten hours to put the racetracks and racecars together and make them ready for use. Table 1 provides a list of the materials needed.

**TABLE 1
LIST OF MATERIALS**

- 4 Corkboards
- Racetrack Road – Scholastic bulletin board borders
- Racing design duct tape
- 2 metal buckets, numbered #1 and #2
- Laminated cardboard cars with account names
- Double stick Velcro pieces
- 2 Balance Sheet/Income Statement labels
- 4 Debit/Credit Labels

Figures 1 – 4 illustrate an example of the finished racetrack. The activity requires two racetracks and two buckets.

**FIGURE 1
SAMPLE FINANCIAL STATEMENT RACETRACK AND BUCKETS**



FIGURE 2
DETAILED PICTURE OF THE FRONT HALF OF THE FINANCIAL STATEMENT
RACETRACK AND RACECARS



FIGURE 3
DETAILED PICTURE OF THE SECOND HALF OF THE FINANCIAL STATEMENT
RACETRACK AND RACECARS



FIGURE 4
DETAILED PICTURE OF THE BUCKETS USED TO HOLD THE UNUSED RACECARS



In-Class Implementation

The activity takes approximately 45 minutes to 1 hour of in-class time to complete. It is helpful to have a stopwatch to use to keep track of the time of each round. Since there are two teams and two racetracks, it is also helpful to have another instructor or assistant in the room. This allows each instructor to be responsible for one team and one racetrack. Once time is called, each instructor can check their team's racecars for correct placement on the racetrack, decreasing the time needed to complete the activity. After checking for correct placement on the racetrack, instructors can additionally help students increase retention by discussing the logic behind why each placement was correct. For example, the instructor may say, "Great job with the Dividend Revenue account! Remember our keyword here is Revenue and all revenues are credits on the Income Statement."

Evidence of Efficacy

The activity was used in six different introductory financial accounting courses taught by two different accounting instructors. We measured the efficacy of the Financial Statement Racing activity using a pretest/posttest approach where we tested students' ability to determine the normal balance of fifty-six accounts and classify them properly as income statement or balance sheet accounts. The pretest was given to students the class period before the activity. The recall posttest was given immediately following the activity to test recall of the information. A retention posttest was given approximately one month after the activity to test retention of the information. All pretests and posttests were identical, consisting of the same instructions and accounts. IRB approval was obtained from the university to use this pretest/posttest data for research purposes.

A total of 176 students completed both the pretest and recall posttest. The pretest results indicated that, on average, students got 26 out of 56 accounts (46.4%) correctly classified as income statement or balance sheet accounts with the appropriate normal balance. On the recall pretest, student scores increased

significantly by 19 points (34%, $p < 0.000$), suggesting that the activity significantly improved student recall of the correct normal balance and financial statement classification of each account.

A total of 97 students completed both the pretest and the retention posttest. From the pretest to retention posttest, student scores increased significantly by seven points (12.5%, $p < 0.000$). These findings suggest that the activity also increases student retention of the correct normal balance and financial statement classification of each account, although retention of the material does not increase as much as recall.

To provide an additional test of the efficacy of the activity, we also used a control group to assess whether the retention of the material was due to activity itself or due to the additional instruction that was received over the month between the pretest and the retention posttest. The control group was taught by the same instructor as four of the six other introductory financial accounting classes and covered the same material as the other courses in the same order. However, the activity was not used in the control group. A pretest was given in the control group at approximately the same time as the pretest was given in the other classes. Similarly, a retention posttest was given to both the control group and other classes approximately one month later. Results indicate that there were no significant differences in pretest scores between the control group and the other classes. However, on the retention posttest, students who participated in the activity scored six points higher (10.7%) than those in the control group. This finding suggests that the activity significantly increased student retention of the material covered by the activity ($p = 0.037$). Overall, the results of the pretest/posttest demonstrate the effectiveness of the activity on student learning.

The instructors of each course also observed the efficacy of the activity firsthand. As the game progressed, students became bolder as each team began shouting to their representative teammates at the front of the room what they perceived to be the correct answer. Additionally, instructors noticed that students became faster and more accurate in making their account classifications.

By working in pairs and with teams, students did not seem to experience anxiety over incorrect answers. However, participants did learn from these erroneous answers, as observed when they pulled the same or similar account later in the rounds and subsequently found the accurate financial statement lane. In addition to these observations, instructors also noticed that students showed an increased excitement about accounting over the course of the game.