

**Does a Head Coach Change Impact NCAA Academic Progress Rate?: A Study of FBS Coaching Changes from 2003-2011**

*James Johnson, Ball State University*  
*Lawrence Judge, Ball State University*  
*Donghun Lee, Ball State University*  
*Lindsey Blom, Ball State University*  
*Megan Ridley, Ball State University*

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(including questions)**

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For many NCAA Division I student-athletes, the increased academic and athletic demands, in combination with the heightened level of independence, place this demographic group at risk of underperforming or leaving higher education altogether (Johnson, Wessel, & Pierce, in press). These concerns are especially salient for football student-athletes who participate at the Football Bowl Subdivision (FBS) level due to the commercialization and academic degradation often associated with elite collegiate athletics (Sperber, 2001; Weiner, 2009). Specifically, the metric used to evaluate the academic eligibility and retention of student-athletes (i.e., Academic Progress Rate [APR]) has revealed that FBS football programs possess some of the lowest scores of all NCAA sports (Hosick, 2011). At the forefront of this issue, often regarded as the person most responsible for both athletic and academic team performance, are head coaches.

To adequately assess how important FBS head coaches might be to the academic performance of their student-athletes, the researchers framed the current research within Complex Adaptive Systems theory (CAS; Eidlson, 1997) which describes the importance of each component within a system relative to all the other components. One of the key components of CAS theory notes the strongest relationships within an organizational system are those which are manifested between individuals in the system, particularly between leaders and followers. If a change in head coach does impact the academic culture, CAS theory suggests the circumstances surrounding a coaching change might determine the impact due to the complex interconnectedness of the system as a whole. For example, the type of coaching change (i.e., positive or negative; Fee, Hadlock, & Pierce, 2006), team winning percentage (Johnson, Wessel, & Pierce, 2012), and the location from which the new coach is hired (i.e., internally or externally; Roach & Dixon, 2006) are circumstances likely to impact the system as well.

CAS theory suggests these variations in a coaching change would have differing impacts on the entire complex system in which coaches and student-athletes operate. Changing leadership in such a system could alter the attitude and behavior of current student-athletes or new coaches, thus impacting the academic metrics used to assess the performance of student-athletes. This connection has never been explored. Therefore, the current research attempted to determine if a change in leadership at the FBS level would disrupt the system enough to impact the academic outcome of student-athletes within that system by using APR as the dependent variable.

Methodologically, this study was preceded by a pilot study that found lower APR scores were the result of a coaching change at a single FBS university (Johnson, 2012). However, the results of the pilot study, although significant, were limited by the ability to generalize findings across all FBS institutions. Additionally, the pilot study did not examine any potential intervening variables that accompany a coaching change. For these reasons, the purpose of the current study was to expand on the pilot study by investigating all FBS football head coaching changes (N = 160) and the corresponding APR scores during the academic years of 2003-04 to 2010-11 (eight years) amidst a variety of potential intervening variables (e.g., type of change, type of hire, winning percentage) to determine if a head coaching change impacts APR. The academic year of 2003-04 was selected as the starting point of this study because APR data was first collected during this academic year. The 2010-11 academic years are the most recent with available APR data.

The following three research questions were formulated as the basis for this study:

RQ 1: Does a FBS football head coaching change impact APR scores?

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RQ 2: Does a FBS football team's athletic success relate to APR scores?

RQ 3: What factors predict APR scores for a FBS football team in the year of a coaching change?

Statistically, descriptive analysis using frequency totals, measures of central tendency, and Pearson correlations was first conducted to organize the data and identify patterns. After descriptive analysis, question one was tested using paired and independent t-tests. Question two was evaluated using two one-way analyses of variance (ANOVAs) to compare the top, middle, and bottom groups based on single year and average winning percentage. The final hypothesis was tested by ordinary least squares multiple regression analysis to determine what variables predicted APR scores in the year of a coaching change.

Procedurally, all FBS football coaching changes (N = 160) were determined by reviewing the NCAA Division I Head Coach APR Portfolio (NCAA, 2012). This online portfolio contains the APR scores for head coaches at NCAA Division I institutions, as well as the years a coach was employed by an institution. If more than one coaching change occurred during the eight-year period under investigation, each coaching change was designated as its own unique occurrence. Football APR data from the academic years of 2003-04 to 2010-11 was extracted from the Head Coach APR Portfolio taking into account the years where a coaching change occurred. Information about conference affiliation, internal/external hires, month of change, and winning percentages were found on institutional websites. Information to determine positive or negative coaching changes was extracted using institutional websites and online media sources documenting the coaching change.

Results indicated that APR scores are significantly lower during years of a head coaching change, significantly higher when a coach is promoted internally, highest for the most athletically successful teams, and significantly predicted by average APR score and year of coaching change. These key findings provide support that a head coach is a primary influence on the academic behaviors of student-athletes, and variables within the complex structure of FBS collegiate football work in conjunction with one another to provide a combined impact on APR scores.

Pragmatically, administrators, interim coaches, and support personnel can use this information to aid student-athletes during a time of coaching transition, or make informed human resource decisions. For example, during a coaching change more academic support services could be made available for students to counteract the impact of the coaching change. Additionally, managers within college athletic community might consider the impact of such a coaching change in relationship to their existing APR situation, and choose to consider internal candidates during the interview process. From a broader perspective, this research can be used as an initial analysis from which to jumpstart similar APR research in other Division I sports (e.g., basketball).