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Academic Clustering: A Longitudinal Analysis of a Division I Football Program

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As NCAA Division I coaches feel greater pressure to produce winning teams while ensuring that athletes remain eligible and progress toward degrees to avoid sanctions under the NCAAôs academic reform initiative, concerns regarding the clustering of athletes into limited numbers of academic majors has increased. Academic clustering occurs when 25% or more of the members of one team share a single academic major (Case, Greer, & Brown, 1987). Recent studies have extended the analysis of clustering to include the disparate impact on white and minority football players in a single athletic conference (Fountain & Finley, 2009), as well as consideration of female basketball players throughout Division I (Paule, 2010). To date, these studies have provided a snapshot of teams for a given season. This study extends the understanding of clustering by examining one football program over a period of ten years, which allowed for greater understanding of the movement of players into and out of majors, especially the movement into a clustered major midway through their academic experience. Media guides from one BCS football program were used to track the listed majors of 349 players, from 2000 through 2009. Results indicated that players migrated into a single clustered major over time and that a significant number of touted recruits and National Football League draftees selected the clustered major. Further, players who had listed general education (University Studies) in their first media guide appearances frequently selected the clustered major.

Introduction

Concern regarding student-athletes, football and male basketball players in particular, clustering into a limited number of majors is not new. In fact, clustering has been occurring and documented for decades (Renick, 1974). The first academic study of clustering (Case, Greer, & Brown, 1987) found that menôs basketball teams established cutoff values for clustering more frequently than womenôs did. A team was considered to be showing evidence of clustering if 25% or more of the players were enrolled in a single major.

NCAA and Academic Reform

Since the early days of NCAA athletics, the actual emphasis on academics among student-athletes has been a topic of considerable discussion (Grant, Leadley, & Zygmont, 2008). In many cases the questionable practices at universities across the country came to the forefront only when scandals were uncovered (Finley, Finley, & Fountain, 2008).

The adoption of academic reform initiatives by the NCAA, with the goal of increasing graduation rates of athletes, may have the unintended consequence of exacerbating academic clustering. The NCAA adopted the Academic Reform Package in April of 2004 to, according to then-NCAA President Myles Brand, ñéimprove the a graduation rates of student-athleteséò (NCAA, 2004, p. 1). The was created to measure the success of each athletic team in terms of retention of players and their progress toward a degree. A threshold score was set (925 points out of a possible 1000) and teams that fell below that mark were subject to punishments (NCAA, 2008b) including practice restrictions, loss of scholarships, postseason bans and restricted membership (NCAA, 2010). The APR was intended to act as a real-time measure of academic progress, awarding points for athletes who remain in good academic standing and remain enrolled at an institution.

Current technology has increased to the point that monitoring and reporting the academic progress of student-athletes for each term is standard op scores are now published annually by the NCAA. The NCAA has been fighting the academic reform battle on many fronts. Beyond the admissions minimum requirements, graduation reports, and academic progress reports with punitive consequences, the NCAA has also fought the battle from a public relations standpoint. The NCAA has created ad campaigns and press releases that almost always focus on all student-athletes and rarely separate revenue generating sports from non-revenue generating sports.

The NCAAôs academic reforms focus solely o number of players maintaining academic eligibilit suggest that the only important outcome of a college experience is merely to graduate and largely disregards the complete academic experience (Fountain & Finley, 2010). Currently, the NCAA places the burden for ensuring the quality of the educational experience on each member institution, which should include providing quality majors, addressing the academic aspirations of the student-athletes, and striving to provide to student-athletes the same opportunities as non-athletes, including truly being able to select from all the courses and majors offered in the universityôs catalog.

The current minimum eligibility requirements of the NCAA usually fall well short of the admission requirements set forth for the regular student body at many institutions (Butler, 1995). Therefore, a conundrum is often created when coaches recruit athletically talented prospects that meet the NCAA minimum eligibility requirements but do not meet the regular admissions requirements. This places pressure on the coaches, the academic advisors, and the academic services personal to ensure athletes can stay academically eligible, which too often results in finding a path of least resistance. In too many cases the notion of providing a quality educational experience becomes moot.

Given the recent and ongoing attempts by the NCAA to increase graduation rates and retention of student-athletes via the Graduation Success Rates (GSR) and APR, the question remains how prevalent academic clustering will become in the future and what impact it will have on student-athletes and the educational experience they will encounter. As athletic department revenues and coaching salaries continue to increase, the expectation to win at all cost

will surely increase the ends-justify-the-means mentality coaches and administrators use to justify their morally questionable activities as it pertains to their athletes and academics (Fountain & Finley 2009).

A number of academicians have raised concerns that the APR will lead to more academic fraud and clustering. Nathan Tublitz, co-chair of the Coalition on Intercollegiate Athletics, believes it will lead to a ñcatch us if you c student-athletes eligible to avoid loss of scholarships (Yost, 2008, p. D10). Similarly, Richard Southall, director of the *College Sport Research Institute*, believes that the AP this pressure and lead to more occurrences of clustering, sketchy majors and/or classes and utilization of design your own degree program Myles Brand commented in 2009 that ñclusterin my expectation is that those who are interested in music, who are music majors, cluster in certain majors too, and those who are interested in education tend to cluster in certain majors. But you have to make sure clustering hasnôt risen to (Hollencamp, 2009, para. 12).

Studies of Academic Clustering

Fountain and Finley (2009) suggested that a football coach, clearly not wanting to lose athletic scholarships due to a low APR, has three options for maintaining or increasing graduation rates. The coach can recruit players who truly fit the academic profile of the institution, they can provide more academic support services while increasing expectations for in-classroom performance, or they can recruit athletes of the greatest physical ability available and, if they are of marginal academic ability, find the path of least resistance on campus, including professors who are ñfriends of the eligibility and a reasonable graduation rate. Given that coaches know they are evaluated (and can best hope to keep their jobs) based on winning, it is not surprising that many voice opinions suggesting that on-field performance will continue to drive their recruitment practices (Eichelberger & Levinson, 2007).

Academic clustering is not limited to football or menô (Paule, 2010) found that clustering was fairly widespread among schools competing in NCAA Division I womenôs basketball. Of the 211 sch cutoff value for clustering players in a single major. Among them, the national championship winning and undefeated University of Connecticut team had nine of 14 players (64.3%) listed as majoring in Exploratory Studies, which was a major selected by only 4.7% of the overall undergraduate population at the school (Paule, 2010).

In examining the impact of clustering on players based on race, Fountain and Finley (2009) found that it was significantly more pronounced among minority football players who competed in the Atlantic Coast Conference (ACC). While clustering occurred at all 11 schools in the study (data for Duke University was not available), minority players were consistently clustered more densely into single academic majors, with five of the programs having 50% or more of the minorities listed in one major. Further, the evidence showed that secondary clusters sometimes existed; for example, one school had 50% of its minority players listed as Sport Management majors, with another 25% listed in Sociology. In general, across the schools, the white players were over-represented in business programs, whereas minorities were over-represented in general studies and behavior sciences. The study supported the position that

examinations of academic clustering should consider the race of the players when possible, similar to studies of graduation rates.

A subsequent study, which extended the methodology to most of the schools in the Big Six Conferences (The Big Ten, Atlantic Coast Conference, Southeastern Conference, Big East, Pac-10, and Big-12), found that for some football programs the density of clustering goes well beyond the 25% cutoff value traditionally used in clustering studies. Fountain and Finley (2010) found that eight of the 57 football programs studied had upperclassmen minority football players clustered at a rate of 50% or higher in a single major. One of those eight teams had 75% of upperclassmen players in a single major. Thes
higher) and (75% and higher) of minority football players. Two of these eight schools also had super clusters of white football players. Three of the eight schools that met the cutoff for super clusters had the football players enrolled in general studies majors.

One question that studies of academic clustering have not answered is whether student-athletes are simply picking majors that suit their interests. Critics of clustering studies claim that it should be anticipated that athletes would cluster into programs like sport management, exercise science, and physical education, for example (Elfman, 2009). Anecdotal evidence, often presented in the mainstream media, suggests this is not always the case. One former Texas A&M basketball player who was drafted by an NBA team, claimed in an interview with Bob Costas that he and other athletes were forced into a major and that the courses he took in high school were tougher (Cohen, 2007). Former Texas A&M football coach R.C. Slocum complained, after being fired, that his school's lack of a general studies prog
to other Big-12 schools (Suggs, 2003). Texas A&M now has a university studies major that is open to students with low GPAs and, perhaps not surprisingly, it is popular among athletes (Suggs, 2003).

Other campuses have seen mass migrations of football players into specific majors. For example, after stricter academic standards were approved for the sport management program at the University of Michigan in 2002, players largely vacated the program in favor of the general studies major (Heuser & Carty, 2008). These migrations of athletes are sometimes orchestrated with the objective of maintaining eligibility
kids are steered into these less rigorous majors, or majors with p.
1). In some cases the players later argue that their General Education degree is virtually worthless and even refuse to include it on job applications (Steeg, 2008).

In a study of football players in the Southeastern and Pac-10 Conferences, Otto (2010) found that clustering was widespread but also noted other findings that suggest student-athletes are not selecting majors that reflect their interests or career aspirations. From media guide information, Otto found that some players listed favorite courses and subjects that did not match their stated major. Further, some players listed career goals that also did not match their major, such as a student who had the career goal of being a civil engineer but was majoring in history (at an institution in which 62% of football players were history majors). These findings underscored the need for continued studies to determine whether the academic majors that house high percentages of athletes are meeting their interests and career goals and whether athletes are freely choosing their majors.

Purpose and Justification of the Study

The purpose of this study was to extend the knowledge about academic clustering through a longitudinal analysis to create a more robust look at the phenomena than previous studies (using a snapshot-in-time method) have provided. The following research questions were considered in the analysis of clustering for the football team at one individual institution: 1) Did clustering occur over time? If so, was it different for white and minority players? 2) What was the common academic progression for students who started in general education (University Studies)? 3) Were players more likely to migrate into an academic cluster if they received ranking from Scout.com during their senior year in high school? 4) Were players who were drafted into the National Football League likely to have been enrolled in a clustered major? 5) Were there academic programs that players migrated away from during their academic careers?

A longitudinal study of academic clustering is warranted for a variety of reasons. First, underclassmen often list from which they are expected to select or gene and declare a major after their sophomore year. Second, players are likely to enter college with the belief that they can pursue a major of their choice and be successful, only to change to a clustered, and presumably easier major later, as the rigors of sport participation become apparent and the need to maintain eligibility becomes of paramount concern (Knobler, 2007). In some cases it is possible and perhaps even likely that a player never took courses within the major that was listed during the freshman year. Further, it is important to determine whether a migration into a clustered major has a disparate impact on minority players, or those who came into the program with a greater athletic pedigree, as defined by recruiting ranking services for high school athletes. In addition, considering race as a variable is warranted for two primary reasons. First, the NCAA presents graduation rates by sport, by gender, and also by race. Second, previous research (Fountain & Finley, 2010) found that minority football players were more likely than white players to cluster into majors at schools in the BCS athletic conferences.

Method

Participants

This study focused on one football program that participated at the Division I level and was a member of a BCS conference. This program had been identified in an earlier study as having evidence of clustering (36% of upperclassmen players were listed in one major) and that there was a disparate impact of clustering on the minority players (62% of the upperclassmen minority players were listed in a single clustered major in 2006) (Fountain & Finley, 2009).

Procedure

Consistent with prior research (Case, Greer, & Brown, 1987; Fountain & Finley, 2009), a survey study was conducted via analysis of media guides from 2000 through 2009 to determine the published majors of athletes. The operational definition of clustering, with a cutoff value of 25% or more of the team enrolled in a specific major, was extended to examine the enrollment of the players over a longer period of time.

Official media guides were utilized and majors were generally published in the biographical information provided for each player. A database was created to allow for the

tracking of each player over time, so that changes in major would be evident. Replicating a previous method, (Fountain & Finley, 2009), photographs from the media guide were used to classify players into the dichotomous variable of white or minority, with researchers working independently and then comparing results to ensure reliability of assignment. In addition, recruiting rankings of players were recorded using the Scout.com database for the years in which data was accessible. Finally, whether a team in the National Football League (NFL) drafted each player was recorded.

Results

The data set contained a population of 349 football players who appeared at least one time in the full biographical section (with photograph) of a media guide from 2000 through 2009. Players typically made a first appearance in the biographical section either as redshirt freshmen or sophomores. The dichotomous variable for race had 158 (45.3%) players classified as white and 191 (54.7%) classified as minority. These percentages are relatively consistent with previous research (Fountain & Finley, 2009) and with published percentages from the NCAA (2008a) for a given year of all NCAA Division I football players.

The initial population contained 42 upperclassmen from the first three media guides (2000-2002); thus their entire academic history could not be ascertained and they were removed from the data. The latest media guide utilized in the study (2009) contained 64 players who were still at various stages in their academic progression and they were removed from consideration. Also, during the ten-year period of the study, the football program experienced a considerable number of early exits from the team. The researchers defined early exits as any player presented in the media guide with an academic classification who failed to appear in the subsequent media guides without ever reaching the designation of ñsenior.ò The st
early exits. The reason for being an early exit was beyond the scope of this study. However, as part of the NFL Draft analysis it was determined that of the 106 early exits only five players (4.7%) were drafted into the NFL. There were also 15 junior transfer students removed from the data.

After removing players with incomplete data, the data set contained 230 players who had an initial appearance in a media guide, complete with photo and a listed major. Subsequently, 185 players (from the 230) made a second media guide appearance (a 19.6% attrition rate). There were 155 players with a third media guide appearance. Because some players graduated or exhausted their eligibility after their third appearance, the number of players appearing for a fourth time dropped to 94 players.

Research Questions

1) Did clustering occur over time? If so, was it different for white and minority players?

The data supported that clustering occurred and that players tended to migrate into the clustered program over time (Table 1). Only three players listed the clustered program as their major in their first media guide appearance. One major clearly illustrated signs of clustering, as over half (53.2%) the football players with four years worth of media guide profiles migrated into the Apparel, Housing, and Resource Management (hereafter referred to as AHRM) major. Sociology was the second most commonly listed major, selected by 13.8% of the players. The

clustering into AHRM was particularly noteworthy for the minority players who made third and fourth appearances in the media guide, with over half the players listing this one specific major (Table 2). While this was also the major that white players clustered into, the density of players was lower (Table 3).

The players selected a wide variety of majors in their early academic years. However, as players progressed through their academic experience, they tended to concentrate into fewer academic majors by their third and fourth appearance in the media guides. Over the ten-year period, the football team as a whole listed 28 different majors during their first two years in the media guides. However, by their third and fourth years in the media guides, the list of majors was reduced to 19 and players were clearly clustering into AHRM. While this major attracted both white and minority players, it was clearly a significant major of choice for minority players as they reached their third and fourth media guide appearance (Table 2). It was also noteworthy how infrequently the players, both white and minority, had listed this major in their initial media guide appearance.

Examining the results by race revealed that minority players were only in 14 different majors by the time they reached their third and fourth years and the white players were in only 16 different majors. Slightly more than half of the players (51.7%) were in the general education area of University Studies when they made their first appearance in the media guide and another 17.0% of all players were initially pursuing a Business Management major. The minority players were far more likely than their white counterparts to have been listed in University Studies for their first and second media guide appearances (Tables 2 and 3).

The identification of the AHRM major as clustered was not surprising. Previous research (Fountain & Finley, 2009) of football programs in the Atlantic Coast Conference found that this major was consistently a clustered program for players and minority players in particular at this school. In every year from 2001 to 2009, this major had been listed as the most popular among minority football players at this institution (ranging from 32% to 70% of the upperclassmen players in any given year). Over those same years the AHRM program was also popular for white players, reaching the cutoff value to be considered clustered in four of the nine years. However, white players clustered into Finance, Physical Education, and Sociology in other years.

Table 1 - *Academic majors selected by players in each of their media guide appearances*

	Media Guide Appearance							
	First	%	Second	%	Third	%	Fourth	%
Accounting	3	1.3%	1	0.5%	0	0.0%	0	0.0%
Agriculture	1	0.4%	2	1.1%	0	0.0%	0	0.0%
Apparel, Housing, & Resource Management	3	1.3%	39	21.1%	65	41.9%	50	53.2%
Architecture	1	0.4%	1	0.5%	0	0.0%	0	0.0%
Biochemistry	1	0.4%	0	0.0%	0	0.0%	0	0.0%
Biology	7	3.0%	2	1.1%	1	0.6%	0	0.0%
Building Construction	1	0.4%	1	0.5%	0	0.0%	0	0.0%
Business Info Technology	5	2.2%	5	2.7%	2	1.3%	2	2.1%
Business - Management	39	17.0%	15	8.1%	6	3.9%	2	2.1%
Communication	7	3.0%	3	1.6%	2	1.3%	0	0.0%
Computer Science	2	0.9%	0	0.0%	0	0.0%	0	0.0%
Crop & Soil Environmental Science	1	0.4%	1	0.5%	0	0.0%	0	0.0%
Curriculum and Instruction	0	0.0%	0	0.0%	0	0.0%	1	1.1%
Economics	0	0.0%	0	0.0%	0	0.0%	1	1.1%
Engineering	8	3.5%	5	2.7%	4	2.6%	0	0.0%
Finance	1	0.4%	4	2.2%	5	3.2%	5	5.3%
History	2	0.9%	5	2.7%	4	2.6%	1	1.1%
Hospitality & Tourism	0	0.0%	2	1.1%	3	1.9%	1	1.1%
Human Development	0	0.0%	4	2.2%	8	5.2%	2	2.1%
Human Nutrition, Foods, & Exercise	9	3.9%	13	7.0%	12	7.7%	5	5.3%
Human Resources	1	0.4%	0	0.0%	0	0.0%	0	0.0%
Interdisciplinary Studies	2	0.9%	2	1.1%	2	1.3%	1	1.1%
Marketing	3	1.3%	2	1.1%	3	1.9%	2	2.1%
Math	1	0.4%	0	0.0%	0	0.0%	0	0.0%
Physical Education	4	1.7%	9	4.9%	10	6.5%	6	6.4%
Political Science	1	0.4%	0	0.0%	0	0.0%	0	0.0%
Psychology	0	0.0%	0	0.0%	1	0.6%	1	1.1%
Public and Urban Affairs	1	0.4%	0	0.0%	0	0.0%	0	0.0%
Secondary Education	0	0.0%	1	0.5%	0	0.0%	0	0.0%
Sociology	5	2.2%	16	8.6%	25	16.1%	13	13.8%
Studio Art	1	0.4%	1	0.5%	1	0.6%	1	1.1%
Undecided	1	0.4%	0	0.0%	0	0.0%	0	0.0%
University Studies	119	51.7%	51	27.6%	1	0.6%	0	0.0%
Total	230		185		155		94	

Notes: Data in the table does not include players who started before 2000, any player who transferred into the football program as an Upperclassman, or any players in the 2009 media guide who did not reach senior standing.

Table 2 - *Academic majors selected by minority players in each of their media guide appearances*

	Media Guide Appearance							
	First	%	Second	%	Third	%	Fourth	%
Accounting	1	0.8%	0	0.0%	0	0.0%	0	0.0%
Agriculture	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Apparel, Housing, & Resource Management	1	0.8%	28	26.2%	48	51.6%	37	62.7%
Architecture	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Biochemistry	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Biology	5	3.9%	1	0.9%	0	0.0%	0	0.0%
Building Construction	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Business Info Technology	2	1.6%	1	0.9%	1	1.1%	1	1.7%
Business - Management	18	14.0%	8	7.5%	4	4.3%	1	1.7%
Communication	5	3.9%	2	1.9%	1	1.1%	0	0.0%
Computer Science	1	0.8%	0	0.0%	0	0.0%	0	0.0%
Crop & Soil Environmental Science	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Curriculum and Instruction	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Economics	0	0.0%	0	0.0%	0	0.0%	1	1.7%
Engineering	1	0.8%	0	0.0%	0	0.0%	0	0.0%
Finance	0	0.0%	0	0.0%	0	0.0%	0	0.0%
History	1	0.8%	1	0.9%	1	1.1%	1	1.7%
Hospitality & Tourism	0	0.0%	2	1.9%	2	2.2%	0	0.0%
Human Development	0	0.0%	3	2.8%	6	6.5%	2	3.4%
Human Nutrition, Foods, & Exercise	2	1.6%	5	4.7%	5	5.4%	2	3.4%
Human Resources	1	0.8%	0	0.0%	0	0.0%	0	0.0%
Interdisciplinary Studies	1	0.8%	0	0.0%	0	0.0%	0	0.0%
Marketing	2	1.6%	2	1.9%	2	2.2%	1	1.7%
Math	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Physical Education	2	1.6%	4	3.7%	5	5.4%	2	3.4%
Political Science	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Psychology	0	0.0%	0	0.0%	1	1.1%	1	1.7%
Public and Urban Affairs	1	0.8%	0	0.0%	0	0.0%	0	0.0%
Secondary Education	0	0.0%	1	0.9%	0	0.0%	0	0.0%
Sociology	4	3.1%	10	9.3%	15	16.1%	9	15.3%
Studio Art	1	0.8%	1	0.9%	1	1.1%	1	1.7%
Undecided	0	0.0%	0	0.0%	0	0.0%	0	0.0%
University Studies	80	62.0%	38	35.5%	1	1.1%	0	0.0%
Total	129		107		93		59	

Notes: Data in the table does not include players who started before 2000, any player who transferred into the football program as an Upperclassman, or any players in the 2009 media guide who did not reach senior standing.

Table 3 - *Academic majors selected by white players in each of their media guide appearances*

	Media Guide Appearance							
	First	%	Second	%	Third	%	Fourth	%
Accounting	2	2.0%	1	1.3%	0	0.0%	0	0.0%
Agriculture	1	1.0%	2	2.6%	0	0.0%	0	0.0%
Apparel, Housing, & Resource Management	2	2.0%	11	14.1%	17	27.4%	13	37.1%
Architecture	1	1.0%	1	1.3%	0	0.0%	0	0.0%
Biochemistry	1	1.0%	0	0.0%	0	0.0%	0	0.0%
Biology	2	2.0%	1	1.3%	1	1.6%	0	0.0%
Building Construction	1	1.0%	1	1.3%	0	0.0%	0	0.0%
Business Info Technology	3	3.0%	4	5.1%	1	1.6%	1	2.9%
Business - Management	21	20.8%	7	9.0%	2	3.2%	1	2.9%
Communication	2	2.0%	1	1.3%	1	1.6%	0	0.0%
Computer Science	1	1.0%	0	0.0%	0	0.0%	0	0.0%
Crop & Soil Environmental Science	1	1.0%	1	1.3%	0	0.0%	0	0.0%
Curriculum and Instruction	0	0.0%	0	0.0%	0	0.0%	1	2.9%
Economics	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Engineering	7	6.9%	5	6.4%	4	6.5%	0	0.0%
Finance	1	1.0%	4	5.1%	5	8.1%	5	14.3%
History	1	1.0%	4	5.1%	3	4.8%	0	0.0%
Hospitality & Tourism	0	0.0%	0	0.0%	1	1.6%	1	2.9%
Human Development	0	0.0%	1	1.3%	2	3.2%	0	0.0%
Human Nutrition, Foods, & Exercise	7	6.9%	8	10.3%	7	11.3%	3	8.6%
Human Resources	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Interdisciplinary Studies	1	1.0%	2	2.6%	2	3.2%	1	2.9%
Marketing	1	1.0%	0	0.0%	1	1.6%	1	2.9%
Math	1	1.0%	0	0.0%	0	0.0%	0	0.0%
Physical Education	2	2.0%	5	6.4%	5	8.1%	4	11.4%
Political Science	1	1.0%	0	0.0%	0	0.0%	0	0.0%
Psychology	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Public and Urban Affairs	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Secondary Education	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sociology	1	1.0%	6	7.7%	10	16.1%	4	11.4%
Studio Art	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Undecided	1	1.0%	0	0.0%	0	0.0%	0	0.0%
University Studies	39	38.6%	13	16.7%	0	0.0%	0	0.0%
Total	101		78		62		35	

Notes: Data in the table does not include players who started before 2000, any player who transferred into the football program as an Upperclassman, or any players in the 2009 media guide who did not reach senior standing.

2) What was the common academic progression for students who started in general education (University Studies)?

Of the 230 players for whom complete data was available, 120 (52.2%) listed University Studies in their first appearance in the media guide (Figure 1). Of these, 66.6% were minorities and 33.3% were white players. Forty-four of the 120 players (36.7%) left the program at some point prior to reaching senior standing. Of the 76 players who remained in the program through their senior year, 55.3% migrated into the AHRM major. The track from University Studies into AHRM was prevalent for the minority players in particular, with 60.0% of the players who remained in the football program listing AHRM as their final major. This was also a typical academic path for white players as well, as 46.2% who listed University Studies initially and remained with the football program later selected AHRM as their major. In sum, for players who began in University Studies, it was likely they would either leave the football program or would eventually be an AHRM major.

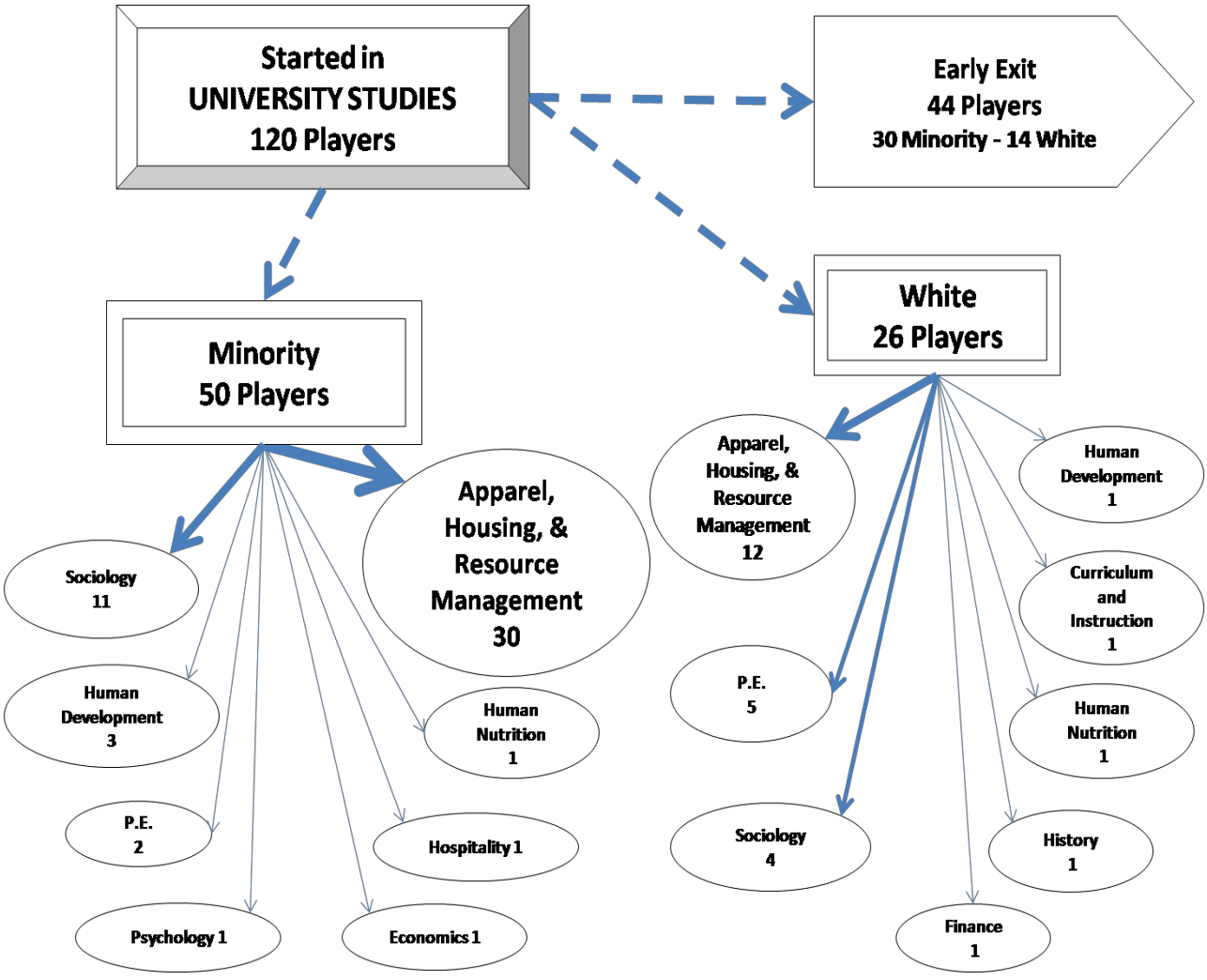

Figure 1. Academic movement for players who listed University Studies in their first media guide appearance.

3) Were players more likely to migrate into an academic cluster if they r *from Scout.com during their senior year in high school?*

There were 135 players who first appeared in media guides during years for which Scout.com rankings of individual players could be accessed (from 2003 to 2009). Of these, 85 players (62.9%) had appeared in the Scout.com ranking database (Figure 2). Forty percent of these ranked players left the program prior to their senior year (only two of these early exits were drafted by teams in the NFL). Over half the players who received a star ranking from Scout.com and remained in the football program until they had senior standing listed AHRM as their final major. Only ten of the ranked players who stayed in the program until achieving senior standing were white. Of the 41 minority players who stayed in the football program, 37 divided among two paths through their academic experience; 30 listed University Studies, with the vast majority of them later appearing in the AHRM major. Seven players listed Business Management initially, but then most migrated into AHRM or Human Development. In total, for players who arrived as coveted recruits with ñstar rankin AHRM as their major (Figure 2).

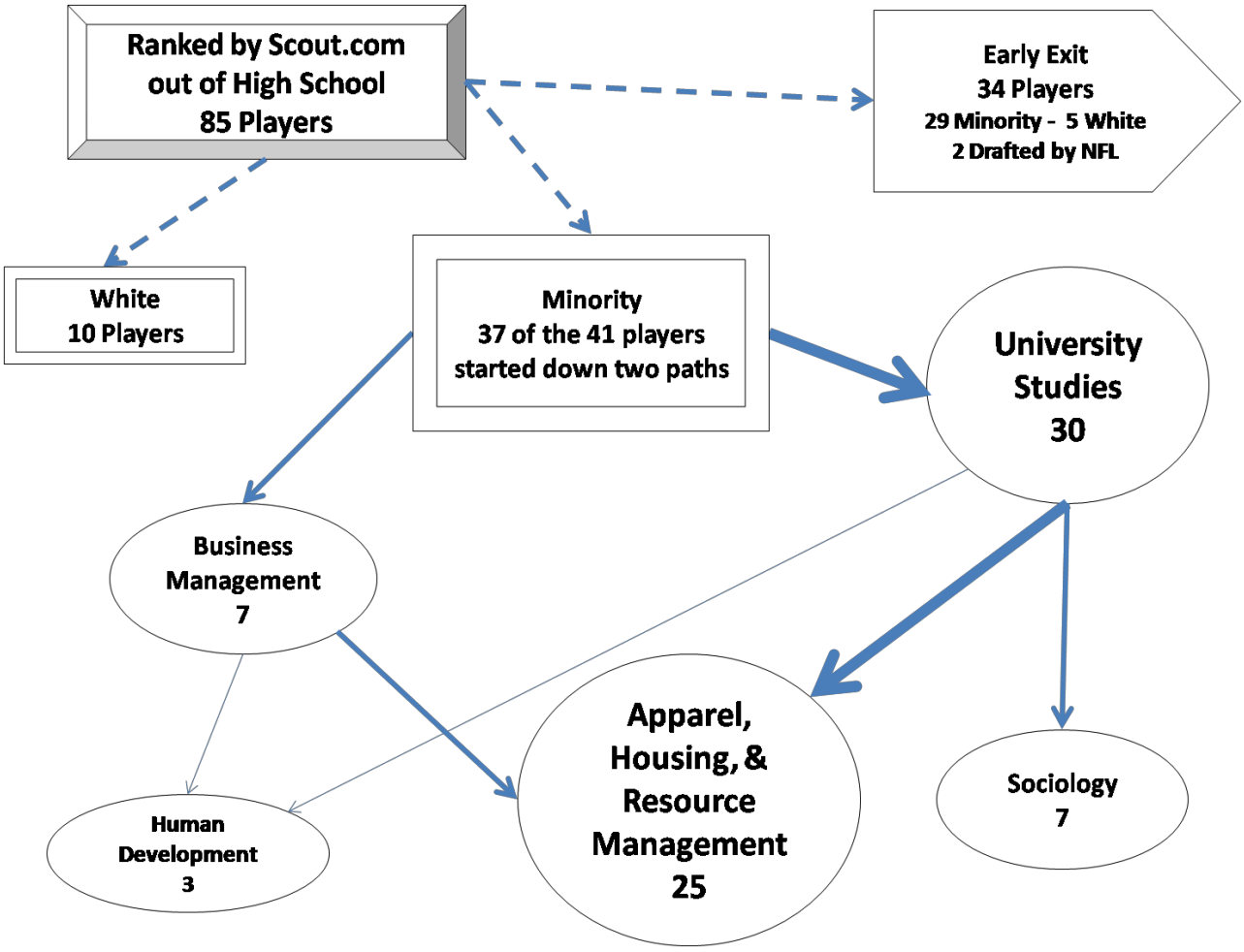

Figure 2. Academic movement of minority players who were ranked by Scout.com.

4) Were players who were drafted into the National Football League likely to have been enrolled in a clustered major?

Of the 230 players with complete information, 37 were drafted by teams in the NFL. Of these players, only five had left school prior to reaching senior standing according to the media guides (Figure 3). There were 25 drafted minority players who had appeared in the media guide until listed as a senior. Of these, 20 (80.0%) had taken one of two academic paths; sixteen of the 20 had started in University Studies and then primarily migrated into AHRM (with a few migrating into Sociology and one into Human Development). Four players had started in Business Management. One remained there while the others moved into AHRM. Of the 37 total players who were drafted into the NFL, 18 (48.6%) had listed AHRM as their major in their final media guide appearance.

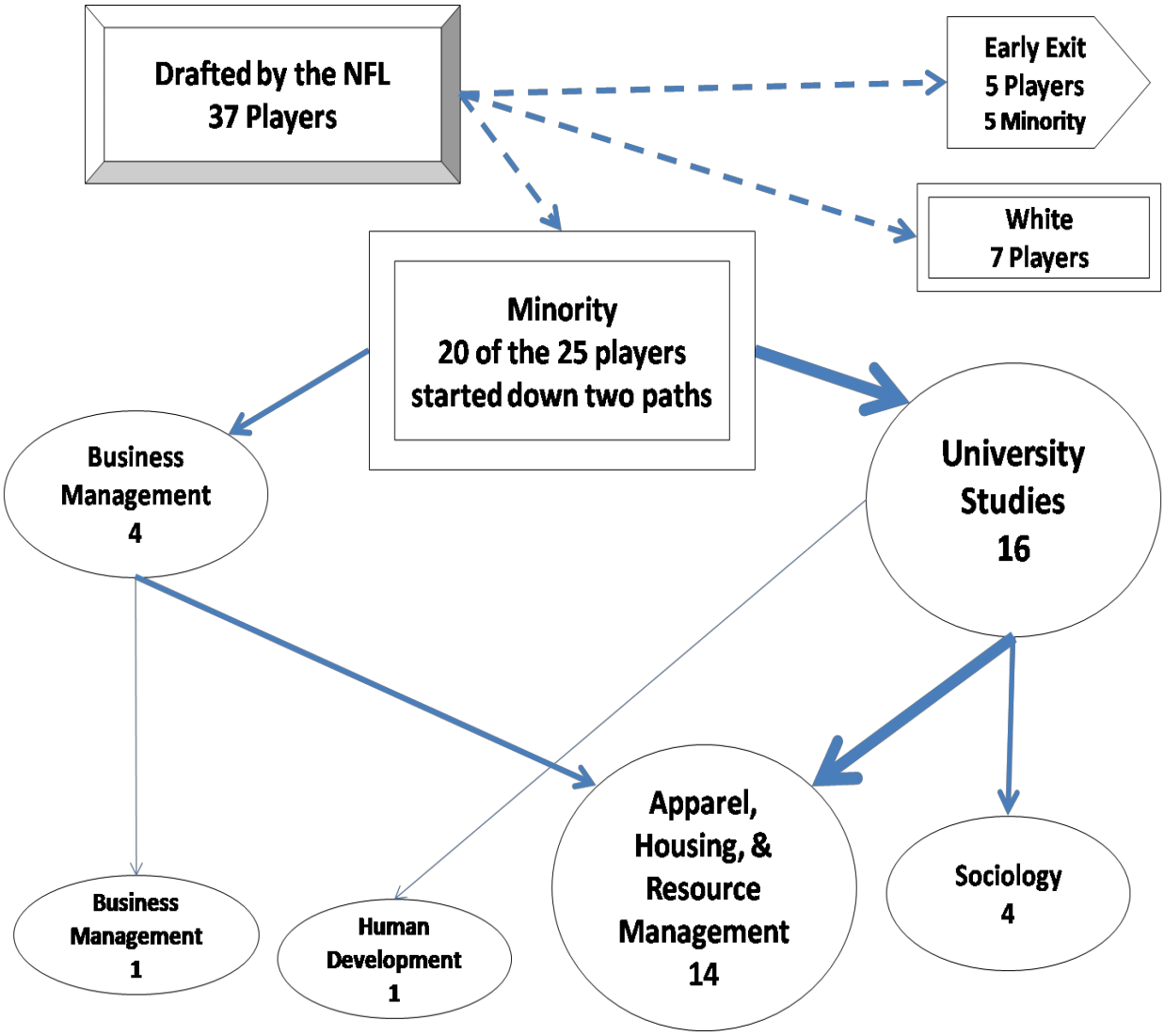

Figure 3. Academic movement of minority players who were drafted by an NFL team.

5) Were there academic programs that players migrated away from during their academic careers?

Aside from the designation as a ñUniversit players to list in their first media guide appearance was Business Management, with 39 of 230 players (17.0%). This major was listed by 18 minorities and 21 white players. Fifteen of these players were early exits from the program. Of the remaining players, there were 12 minorities, eight of whom migrated into AHRM. Only two remained in Business Management through their final media guide appearance. There were also 12 white players who remained with the football program until being listed as seniors. Similarly, two of them remained in Business Management, while the other 10 dispersed into five other majors (Figure 4). This result suggested that there was a major that was attractive to football players but, for a variety of reasons, they seldom pursued this degree through their upper-class years on campus.

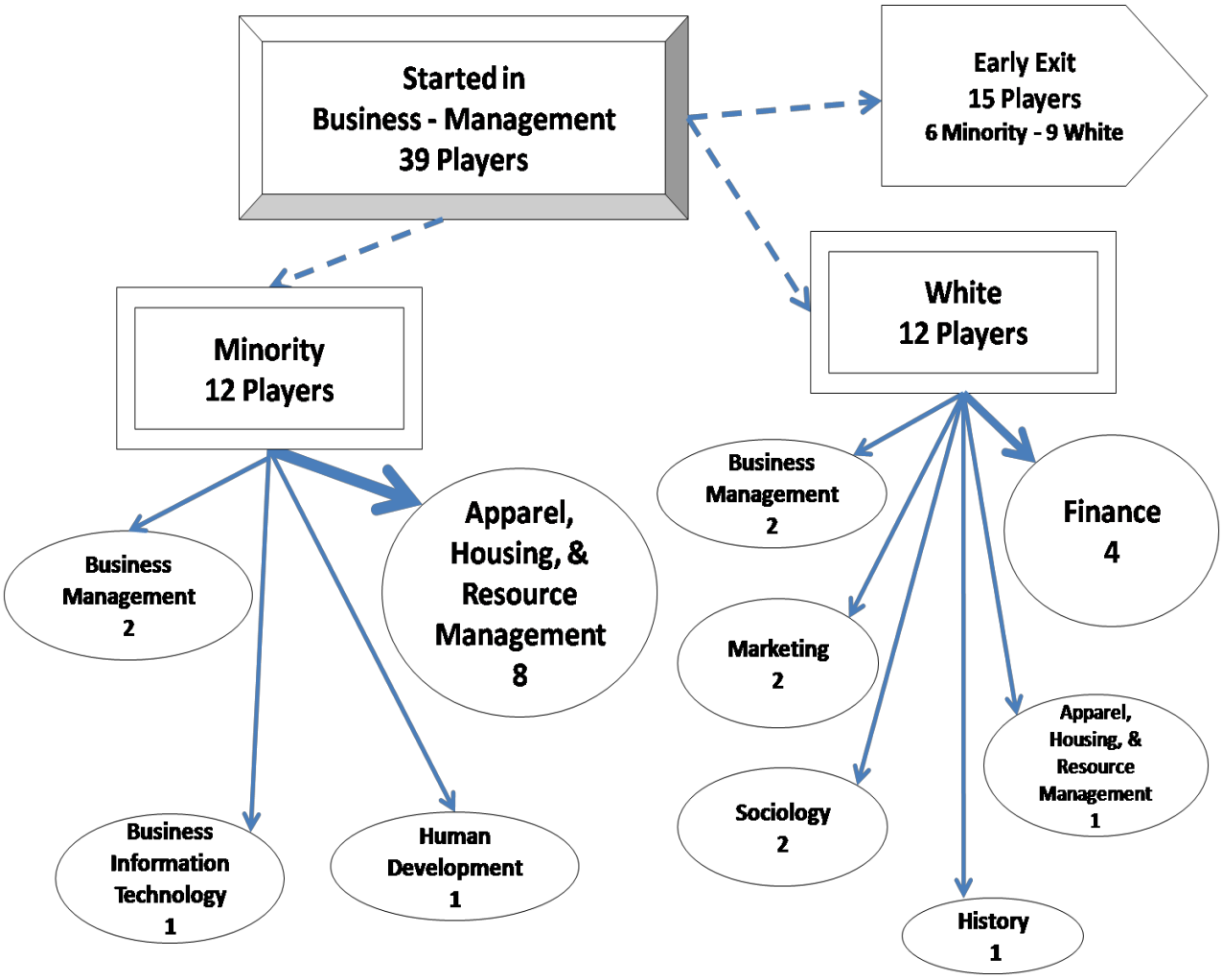

Figure 4. Academic movement for players who listed Business Management in their first media guide appearance.

Discussion

The results of this study supported previous research in illustrating that clustering of football players, especially minority players, into a limited number of academic programs is prevalent. However, this study went further in demonstrating that clustering can be a systemic process that occurs over many years. Unlike the previous studies that utilized upperclassmen and their reported major in the later stages of their academic progression, the results clearly showed the migration of players into a clustered major either straight from general education (University Studies) or after identifying other majors earlier in their academic careers.

Players in this study noticeably migrated out of Business Management, which had been a popular choice early in the academic experience for players at this institution. While many players were initially interested in Business Management, they seldom stayed in that program through their appearances in the media guides. This suggested that, at least in the case of this university, players were not always able to pursue the major they first chose. It was also alarming to note that not a single player over all the years of this study ever migrated into Business Management after declaring a different major or being listed in University Studies initially. Conversely, while almost no players showed an initial interest, as underclassmen, in Apparel, Housing, and Resource Management, they ended up in that major in droves as upperclassmen. While it is certainly possible that the AHRM major is selected because it sparks an interest for players once they discover it, or has classes offered at times that are manageable for players, it is also possible that the program offers a path of least resistance in the effort to maintain eligibility. Questions about the academic rigor of this program were raised as more football players began to enroll in it nearly a decade ago (Suggs, 2003). According to Suggs (2003), more players began to enroll in this major following a word-of-mouth suggestion from one player who graduated in 2001. Further, according to a professor in the program, the popularity with players stemmed in part from its admission standards, which required students to only have a 2.0 grade point average following two years of enrollment at the university, which was lower than many other majors on the campus (Suggs, 2003).

Particularly difficult to ignore was that the university had a staggering number of its most talented players in the clustered major. The AHRM major was clearly the major of choice for many players who arrived as coveted high school recruits and for those who were drafted into the National Football League. The results bolstered the position that football players failed to spread out among the wealth of academic offerings at the institution and funneled into only a small number of academic programs. The high levels of clustering that continue to be reported each year can only exacerbate the perception that BCS college football is nothing more than an unpaid minor league for the NFL and that programs will seek out the path of least resistance to maintain the eligibility of the star players. Further, it is a shot to the credibility of the NCAA, which touts great strides in academic reform, when college football programs continue to produce low graduation rates, particularly for minority players (NCAA, 2008a) in spite of the preponderance of players enrolling into only one or two academic majors. The ongoing attempts by the NCAA to increase academic accountability are most likely going to contribute to the clustering problem in the future, as some academics have warned (Capriccioso, 2006).

The impact of academic clustering on minority players continues to raise concern and deserves more academic and media attention. Minority players at this particular institution were twice as likely as their white counterparts to list University Studies in their first media guide appearance. This would not be terribly concerning if they then dispersed into a wide range of

majors. However, that was not the case. The minorities who began in University Studies were highly likely either to leave the program early or migrate into the clustered AHRM major.

The need for greater transparency in academic progress of student-athletes and whether they are truly receiving a meaningful academic experience is warranted. College athletics, particularly in the revenue sports, are highly competitive. These competitive behaviors drive decision-making in athletic departments and academic integrity often is one of the first casualties. If the NCAA truly seeks meaningful academic reform it should explore a truly dynamic academic reporting system that tracks how many student-athletes are in a specific major, how often they have a specific instructor, whether there are non-athletes enrolled in the courses, the average grades student-athletes earned in comparison to class averages, and the graduation rates for student-athletes from the various majors in which they enroll. Further, the NCAA should create a survey of academic interest that freshman student-athletes could complete to help track whether they are pursuing true areas of interest over time. The NCAA has created a reform package based on quantity (numbers of graduates) and must understand that this emphasis will most likely have an impact on quality. To ensure that student-athletes have a meaningful educational experience, the NCAA must also begin to consider the negative impact of clustering.

Based on the current findings, further research should focus on determining the impetus for athletesô movement into clustered majors programs by the athlete, by others at the university and by the community at large. Also, the surprisingly high attrition rate illustrated in this study suggests that future studies could investigate these concealed casualties of modern-day, business-oriented athletic departments.

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