



---

Theses and Dissertations

---

2018-08-01

## Summer Bridge for Student Athletes: A Comparison of Effects on Special Admit and General Admit Student Achievement

Laura Swee Ong  
Brigham Young University

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>



Part of the [Education Commons](#)

---

### BYU ScholarsArchive Citation

Ong, Laura Swee, "Summer Bridge for Student Athletes: A Comparison of Effects on Special Admit and General Admit Student Achievement" (2018). *Theses and Dissertations*. 7565.

<https://scholarsarchive.byu.edu/etd/7565>

This Thesis is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

Summer Bridge for Student Athletes: A Comparison of Effects on  
Special Admit and General Admit Student Achievement

Laura Swee Ling Ong

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Master of Science

Gordon Stanley Gibb, Chair  
Christian Sabey  
Ryan Kellems

Department of Counseling Psychology and Special Education  
Brigham Young University

Copyright © 2018 Laura Swee Ling Ong

All Rights Reserved

## ABSTRACT

### Summer Bridge for Student Athletes: A Comparison of Effects on Special Admit and General Admit Student Achievement

Laura Swee Ling Ong

Department of Counseling Psychology and Special Education, BYU  
Master of Science

This study was an investigation of academic outcomes for student athletes who did or did not participate in an athlete-specific freshman Summer Bridge program in a private Division I university in the western United States. Analysis of data across five years yielded results regarding fall, winter, and cumulative GPA; and progress toward degree for special admit and general admit student athletes. Data indicate significant differences between groups in terms of GPA and progress toward degree for the first year. However, there were no significant main interaction between time and group as measured by differential slopes over time according to group membership in terms of semester GPA. The discussion includes application for practice and further research.

Keywords: special admit athletes, Summer Bridge, GPA, progress toward degree

## ACKNOWLEDGMENTS

I would like to express my deepest gratitude to my thesis chair, Dr. Gordon Gibb, without whom this research would not have been possible. I have valued his expert guidance, unwavering support, and enduring patience throughout the past year. I would also like to thank my committee members, Dr. Christian Sabey and Dr. Ryan Kellems, who provided valuable insights and useful recommendations. Assistance provided by the faculty and staff of Counseling Psychology and Special Education was greatly appreciated. Thanks also to the staff of Student Athlete Life and Learning Center who made accessibility to the data for this research possible. Last but not least, I am immensely thankful for my family, in particular my children, and friends who have been my strongest supporters.

## TABLE OF CONTENTS

ABSTRACT.....	ii
TABLE OF CONTENTS.....	iv
LIST OF TABLES.....	v
LIST OF FIGURES.....	vi
Introduction and Literature Review.....	1
Efficacy of Summer Bridge.....	5
Challenges of Student Athletes.....	6
NCAA Academic Policies.....	8
Current Requirements.....	11
Statement of Problem.....	12
Purpose of Study.....	12
Research Questions.....	13
Method.....	13
Setting and Participants.....	13
Independent Variables.....	14
Data Collection.....	15
Data Analysis.....	17
Results.....	18
Discussion.....	22
Limitations.....	24
Implications for Future Research.....	24
Implications for Practitioners.....	24
Conclusion.....	25
References.....	26
APPENDIX: Extended Literature Review.....	34
References.....	49

## LIST OF TABLES

Table 1 <i>Timeline of NCAA Legislations</i> .....	8
Table 2 <i>Demographics of Special Admit Participants</i> .....	16

## LIST OF FIGURES

<i>Figure 1.</i> Mean fall GPA by group .....	18
<i>Figure 2.</i> Mean winter GPA by group .....	19
<i>Figure 3.</i> Mean cumulative GPA by group .....	19
<i>Figure 4.</i> Mean PTD credits earned by group at end of first year .....	20
<i>Figure 5.</i> Mean GPA for general admits and special admits without Summer Bridge. ....	21
<i>Figure 6.</i> Mean GPA for general admits and special admits with Summer Bridge .....	21
<i>Figure 7.</i> Mean semester GPA by group .....	22

## Introduction and Literature Review

Numerous studies have been conducted on the challenges of and the need for support for first-year college students. These college freshmen undergo stresses associated with or common to change and adjustment to the demands of college life (Lu, 1994). Dyson and Renk (2006) emphasized that stress and depression are outcomes of adjusting to university life. When students experience difficulty coping with stress during transition, feelings of despondency and discouragement may lead to an onset of psychological symptoms such as depression. Students who experience a high level of stress are also found to possess a poorer perception of health and self-esteem (Hudd et al., 2000).

In their review of adjustments to college, Baker and Syrik (1984) categorized these adjustments into four broad categories: academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment. Utilizing a 52-item self rating scale on freshmen classes over a course of three years, they concluded that adjustment to college correlated positively with student retention. Aside from engendering greater student retention, adjustment to college is also a strong predictor of academic performance and overall GPA (Credé & Niehorster, 2012). With a plethora of change and adjustments expected of freshmen, these students may benefit from services that would enhance their college experience. Among the services most commonly offered in institutions of higher learning are first-year or freshman seminars.

Freshman seminars comprise courses that aim at transitioning and orienting students into campus life and engaging students in academic courses with faculty (Barefoot & Fiddler, 1996). Historical records traced the inception of these seminars to Boston University in 1888 (Fitts & Swift, 1928). These non-credit courses, though not entirely for the purpose of orientation, were



aimed at introducing students to a professional atmosphere. They also became the vehicle for the first orientation courses for which students earned credits at Reed College, Portland, Oregon in 1911. Research has established that freshman seminars which have been woven into the academic support systems of institutes of higher learning have had positive impact on retention rates (Permzadian & Credé, 2016; Strayhorn, 2009).

One style of freshman experience that is becoming incrementally popular is a transition program known as Summer Bridge. The concept of Summer Bridge may be linked to the federal Upward Bound Program (Kallison & Stader, 2012). The Upward Bound Program was created with the enactment of the Economic Opportunity Act of 1964 (U.S. Department of Education, 2014). The program was a cooperative venture between high schools and colleges that provided coursework on college campuses as a way for high school students to receive tutoring and to be introduced to the college environment (Office of Economic Opportunity, 1966). This program, along with two subsequently created programs, forms the Federal TRIO Programs which have been providing post-secondary educational opportunities for low-income high school students since 1968 (U.S. Department of Education, 2014). Similarly, Summer Bridge has long been relied upon to increase the success rate of academically underprepared college students (Moore & Carpenter, 1985). Though the contents of Summer Bridge vary from one program to another, some key components include university induction, academic courses, learning strategies courses, and mentoring of students. An analysis of various existing Summer Bridge programs reveals their structure and content.

Delaware State University offers two separate Summer Bridge programs – Jumpstart Program and Project Success. While the former is geared towards students with cumulative high school GPA of 2.7 or above combined with an SAT score of 800, the latter is offered to

provisionally admitted students who do not meet the university's admission standards.

Participation in the Jumpstart Program is by invitation only, while provisionally admitted students must complete the requirements of Project Success. Both programs are 5-week courses on English, Introduction to Algebra or College Algebra, and Learning Strategies. Students can earn up to a total of nine credits while benefiting from mentoring and academic advisement, career and leadership development workshops, and social and cultural experiences (Delaware State University, n.d.).

Since 1973, the University of California Berkeley has offered a 6-week residential Summer Bridge made up of four components: academics, advisement and counseling, academic resources, and residential life. Students enroll in a mandatory Personal Wellness Seminar and two academic courses of their own choice. Over 20 academic courses are offered, ranging from college writing and reading and composition to social science, mathematics, science, and computer science courses. Advisors and counselors assist students in areas such as academic and social adjustment as well as course and major selections. Students also gain accessibility to a wide network of peer academic support groups (Berkeley Student Learning Center, 2017).

Other universities focus on offering Summer Bridge to first-generation and low-income students. One such is the University of Redlands in California. Since 2004, the university has organized two-week residential Summer Bridge programs during which students receive helpful information before beginning classes in the fall. Students participate by invitation only and are introduced to other incoming students, exposed to campus facilities and resources, and provided an overview of proven academic strategies (University of Redlands, 2017).

At Brigham Young University in Utah, Summer Bridge is offered only to student athletes (SALLC learning specialist, personal communication, October 13, 2016). Student athletes who

do not meet the admission requirements of the university are admitted as special admits and are expected to attend Summer Bridge. However, so choose not to attend. Other student athletes, though not required to attend, are strongly encouraged to participate.

In summary, while some institutions of higher learning choose to offer classes specific to different majors of study, others focus on basic reading, writing, and math. Still others opt to teach a combination of academic classes in addition to learning skills, social skills, test-taking skills, adaptation skills, and non-cognitive skills such as persistence and stress management. However, the key objectives remain the same, which are to assist students to adjust to the college environment, to help them navigate the complexities of college resources, and to gear them towards college-level classes. Though some Summer Bridge programs benefit all students, many are directed at supporting academically underprepared high school students and adapting them to the rigors of higher education.

Under preparedness, which can be measured through admissions test scores and high school GPA, has been shown to be a vital predictor of the educational outcome of college students (Astin, 1971; Permzadian & Credé, 2016). In his study involving over 36,000 students, Astin (1971) found that high school academic performance is the best indicator of college academic performance. Students' college grades were determined to correlate with their high school grades. Furthermore, a positive correlation was shown to exist between college grades and a combination high school grades and aptitude test scores.

At the University of California, Berkeley, researchers who conducted a study on almost 80,000 students over a course of four years concluded that high school GPA not only predicted the academic outcome of freshmen, but also their academic performance beyond freshman year

(Geiser & Santelices, 2007). High school GPA was shown to be a predictor of long-term college academic achievement.

### **Efficacy of Summer Bridge**

There exists extensive research on the effectiveness of Summer Bridge in improving student retention, GPA, and other skills necessary for the successful attainment of a college degree. While many studies focused on underprepared, underrepresented, minority, and low-income students, others have been conducted on participants of all demographics. Differing results have been noted on the efficacy of Summer Bridge. One such research by Strayhorn (2011) revealed that economically disadvantaged minority students who participated in Summer Bridge demonstrated improved academic skills and academic self-efficacy leading to higher first semester GPA. The author sought to measure the effect of Summer Bridge in four areas: academic self-efficacy, sense of belonging, and academic and social skills. Paired-samples t-tests conducted to measure pretest and posttest scores which were collected during summer and at the beginning and end of fall semester showed improvements in all four areas.

In a study of underrepresented and low-income students at the University of California, Los Angeles (UCLA), Summer Bridge with a strong academic component not only facilitated the acclimation of students to university life, but also improved their academic performance (Ackermann, 1990). Attitudinal and academic data were collected from the participation of 265 students during a 6-week program of either intensive math or English composition and general education. Although this study lacked a control group, the academic, social, and personal developments of underrepresented and low-income students were positively impacted by Summer Bridge.

Other researchers have substantiated that Summer Bridge has positively impacted the retention rates of first year students, suggesting that there is a significant positive correlation between participating in Summer Bridge and student persistence (Ackermann, 1990; Cabrera, Miner, & Milem, 2013; Garcia, 1991). Ackermann (1990) found between 93 to 97% of Summer Bridge participants at UCLA persisted into their second year, while the persistence rate of the entire campus was 83 to 90%. Underrepresented students who participated in Summer Bridge were more inclined to persevere into their second year than their nonparticipating counterparts.

Stewart (2006) revealed some noteworthy findings regarding the effects of Summer Bridge on both academic achievement and retention. While there were no significant variances between the GPA and retention of Summer Bridge participants and nonparticipants, some major differences were noted among minority groups. Minorities who participated in Summer Bridge were more likely to return for their sophomore year and also more likely to graduate than minorities who did not participate in Summer Bridge.

### **Challenges of Student Athletes**

Included in the population of underprepared college students are academically at-risk athletes. For the past several decades college sports as governed by the National Collegiate Athletic Association (NCAA) have soared in popularity, leading to the generation of millions of dollars in revenue. For the year 2017, NCAA reported its revenue distribution for Division 1 sports to be over \$560 million (NCAA, 2017a). With sports commanding such popularity, there is an undeniable level of competitiveness, especially within Division 1. Universities endeavor to recruit top athletes and are willing to extend scholarships even to student athletes who are academically underprepared. Colleges and universities with competitive athletic programs enroll students with low standardized test scores if coupled with high GPAs (Winters & Gurney, 2012).

Though these students fail to meet the admissions requirements of their respective institutions, they may be admitted if they meet the initial eligibility standards of NCAA. These athletes are enrolled as special admit students and many are academically at-risk.

Student athletes in general encounter unique challenges unlike those of their non-athlete counterparts. Student athletes face the task of balancing sports and academics, deal with distresses from physical injuries and exhaustion, and may face isolation with limited social relationships outside their athletic community. Their athletic status also places them in positions of prominence, and thus the topography of their behavior, both within and without the field, is often magnified. Such stresses can result in harmful behaviors or substance abuse (Walter & Smith, 1989). These psychosocial, non-cognitive, and academic concerns, though associated with general admit student athletes are no less prevalent among special admit students.

Petrie and Russell (1995) determined that psychosocial and non-cognitive factors affect the academic performance of student athletes. Their investigation of life stress and competitive trait anxiety showed that these factors were inversely related to the academic achievements of nonminority athletes. Similarly, a study into the effects of psychosocial factors and study skills of college students made apparent the role of academic self- efficacy and achievement motivation in the academic outcome of students (Robbins et al., 2004). Academic performance and retention among student athletes remain major concerns of institutions of higher learning. These problems can be further exacerbated by the added challenges borne by special admit student athletes who are academically at-risk. Data from 2007-2011 presented through a qualitative study at Rowan University showed that out of 199 specially admitted student athletes, only 117 graduated within six years with another 11 still pursuing a degree (Hendricks & Johnson, 2016).

## NCAA Academic Policies

Graduation rates and the academic integrity of student athletes have been at the forefront of argument since the 1920s. The Carnegie Foundation (1929) issued a call for reform after questioning the professionalism and commercialism of collegiate sports, highlighting incidences of “conflicts between athletic ambitions and academic standards” and the admittance of academically underprepared student athletes (Savage, Bentley, McGovern, & Smiley, 1929, p. 118). Though some parties were unconvinced of the fairness of the report, most were generally receptive of its findings. The report augmented efforts towards greater regulation of collegial sports (Falla, 1981).

The NCAA has since instituted numerous policies to regulate college sports (NCAA, 2017b; Table 1).

Table 1

### *Timeline of NCAA Legislations*

Year	Legislation
1948	Sanity Code
1952	12-point code
1965	1.6 rule
1973	2.0 rule
1986	Proposition 48
1996	Proposition 16
2004	Academic Performance Program

In 1948, NCAA approved “The Principles for the Conduct of Intercollegiate Athletics,” also known as the Sanity Code (Falla, 1981). Two of its key principles were to hold athletes to the same academic standards as their non-athlete peers and to restrict financial aid based on

athletic abilities. In the midst of mounting opposition from colleges, the Sanity Code drew positive reactions from the public who viewed it as an impetus towards the preservation of amateurism of college sports. Colleges raised concerns over the financial aid and recruiting aspects of the code, as well as the severity of penalty under the code, which was expulsion from NCAA.

The Sanity Code was repealed in 1951 and replaced by a 12-point code in 1952 (Falla, 1981). Of the 12 principles of the code, principles 5, 6, and 12 were attempts at improving the academic standards of athletes:

5. Insist upon normal academic progress toward a degree for purposes of eligibility;
6. Deny eligibility to any athlete not admitted under the institution's published entrance requirements;
12. Give close attention to the curriculum of the athlete to assure that he is not diverted from his educational objective.

In 1959, NCAA defined normal academic progress as 12 academic credits per term. Then in 1965, it endorsed the 1.6 GPA rule for financial aid eligibility. However, this rule came under heavy criticism and was abolished in 1973, to be replaced by the 2.0 rule which allowed any athlete with a high school diploma and a 2.0 GPA to participate in college sports (Falla, 1981). In that same year, the association was divided into Divisions I, II, and III, opening college sports to an immense pool of athletes with varied academic qualifications.

Though at this point no standardized collection of academic performance and graduation rates had been mandated by the federal government or NCAA, professional football players with college degrees from the 1930s through the 1950s ranged from 54.2 to 59.8% (Riess, 1991).

However, the graduation rate of football players was a mere 31.5% in 1982 (Riess, 1991), and



only 41% of professional football players in 1985 graduated with college degrees (Bogan, 1986). An NCAA study showed that overall graduation rate for the 1984-1985 cohort was 48.2% (Benson, 1993). This was also the period during which academic scandals were highlighted in the media. One such report by Axthelm, Foote, Coppola, & Kirsch (1980) underscored trespasses of half the Pacific-10 conference that were caught “altering academic transcripts and granting false course credits to athletes” (p. 54). In light of the numerous academic scandals that made the headlines, NCAA enforced Proposition 48 for Division I institutions in 1986 (Smith, 2010). The policy required student athletes to achieve a minimum high school GPA of 2.0 in eleven core curriculum subjects plus a minimum SAT score of 700 or ACT score of 15 in order to compete as college freshmen (Brown, 2014). Though this academic reform was met with great opposition particularly from various presidents of traditionally black colleges and universities who argued that such enrollment requirements would exclude African American students with inadequate academic preparation, others opined that raising the academic expectations of these students would be for their betterment (Smith, 2010).

In 1990, both the U.S. Congress and NCAA adopted legislation requiring all schools to report their annual graduation rates. NCAA observed that graduation rates increased after Proposition 48 went into effect in 1986. While the overall graduation rate of the cohorts prior to Proposition 48 was 48.2%, the graduation rate of the 1986 cohort improved to 56.5% (Benson, 1993). Under Proposition 48, partial qualifiers, meaning student athletes who did not meet one of the eligibility requirements, could receive financial aid but could not practice or play during their freshman year, while nonqualifiers could be admitted but could not participate in athletics unless they showed satisfactory academic improvement.

In 1989, NCAA approved the highly contentious Proposition 42, which made financial aid unavailable to partial qualifiers. After much debate, it was decided in the subsequent year that student athletes who were able to meet continuing eligibility after their first year of college would be eligible for three years of athletic participation (Singleton, 2013).

The 2003-04 NCAA Guide for the College-Bound Student-Athlete (as cited in Waller, 2003) revealed that Proposition 16 replaced Proposition 48. Proposition 16, implemented in 1996, increased the number of required high school core courses from eleven to thirteen and applied a sliding scale for GPAs and standardized test scores. The number of core courses further increased in 2003 to fourteen with no minimum score on standardized tests. Subsequently, the number of core courses was set at sixteen while the required 2.0 GPA was raised to 2.3 (NCAA, 2017c). However, students who earned a minimum of 2.0 GPA and met the other academic requirements would still be eligible for financial aid and be admitted as academic redshirts. These students could practice but could not compete during their freshman year (NCAA, 2017d). These conditions remain in effect, together with a number of other policies.

### **Current Requirements**

Among the other policies that have been put in place is the progress toward degree requirement for Division I student athletes. This standard requires that student athletes work towards earning their degree, and it includes minimum GPA required for graduation, term-by-term and annual credit hours requirements, and a continuing eligibility requirement (NCAA, 2017e). This rule specifies that students need to complete 40% of their degree by the start of their third academic year, and 60 and 80% respectively by the beginning of their fourth and fifth years (Brown, 2014).

Yet another NCAA strategy for academic reform is the academic progress program (APP) which places the responsibility on institutions to submit data for academic progress rate (APR), academic performance census (APC), and graduation success rate (GSR) (NCAA, 2017f). The APR is a composite team measurement based on individual team members. Teams that fail to meet a threshold of 930 points are subject to sanctions. Consequently, the implementation of the APR has engendered more academic facilities and support for student athletes (Comeaux, 2013). The APC is a compilation of academic performance variables which include GPAs and credit hours (NCAA, 2011). Division I athletes must earn at least six credit hours each term and meet the institution's required GPA to remain eligible (NCAA, 2017g). The GSR is a "six-year proportion of those student athletes who graduated versus those who entered an institution on institutional financial aid." (NCAA, 2011, p. 13) It takes into account students who transfer in and out of an institution. GSR is reported by NCAA to have risen from 74% in 2002 to 86% in 2016 (NCAA, 2017h).

### **Statement of Problem**

The problem is that there is a plethora of research on the academic challenges of student athletes and a number of studies on Summer Bridge programs, but no research has been published on the efficacy of Summer Bridge programs with regards to the GPA and progress toward degree of special admit and general admit athletes.

### **Purpose of Study**

The purpose of this study is to investigate the effects of the athlete Summer Bridge program on the academic progress of special admit student athletes at a private Division 1 university. There has been no research on the benefits and effectiveness of its Summer Bridge program for its special admit student athletes. As such, personnel from Student Athlete Life and

Learning Center (SALLC) together with researchers from Counseling Psychology and Special Education seek to determine whether the present Summer Bridge program is promoting improved grade point average (GPA) and progress toward degree for these students.

### **Research Questions**

This study was guided by five questions.

1. Is there a significant main effect for differences among the groups in terms of semester GPA?
2. Is there a significant main effect for differences among the groups in terms of cumulative GPA?
3. Is there a significant main effect for differences among the groups in terms of progress toward degree?
4. Is there a significant main effect for time within subjects across five academic years in terms of semester GPA?
5. Is there a significant interaction between time and group as estimated by differential slopes over time according to group membership in terms of semester GPA?

### **Method**

#### **Setting and Participants**

The setting for the study was a private Division I university with 33,300 students sponsoring 19 NCAA men's and women's teams. Summer Bridge courses were held twice a week in SALLC lecture rooms at the university. Participants met together for instruction during the first hour of class and then separated into two groups for more one-on-one attention during the last half hour of class.

The research population was a census of student-athletes in football and Olympic sports enrolled during the 2012 through 2018 school years. The participants were special admit athletes who participated in Summer Bridge, special admit athletes who did not participate in Summer Bridge, general admit athletes who participated in Summer Bridge, and general admit athletes who did not participate in Summer Bridge. Using the census for Summer Bridge participants and nonparticipants helped control for selection bias by including all possible participants. After selecting out participants who did not complete both fall and winter semesters after their Summer Bridge year, a total of 415 participants were included in this study.

Special admit athletes were defined as athletes who met the minimum eligibility requirements of NCAA but failed to meet the admission requirements of the university. While the enrollment of special admit athletes included transfers from other institutions of higher learning, only special admit athletes without any college experience were included in this study. General admit athletes were athletes who met both the NCAA and university admission requirements. General admit athletes who transferred from other institutions of higher learning were likewise excluded from this study.

### **Independent Variables**

Time and Summer Bridge at the university served as independent variables for this study. The purpose of Summer Bridge is to help new student athletes acclimate to the rigorous academic demands of the university and learn to balance their course load with athletic schedules. While all special admit athletes who began enrolment in the fall semester were highly encouraged to participate in Summer Bridge, some chose not to. General admit athletes could choose whether or not to participate.

Summer Bridge was divided into two groups: Summer Bridge for football and Summer Bridge for Olympic sports. Each group was overseen by highly qualified and experienced SALLC learning specialists who worked with the students on a daily basis over a period of seven to eight weeks. During this period, students were screened and tested by the University Accessibility Center to determine if they qualified for accommodations in the fall (SALLC learning specialist, personal communication, October 13, 2016). Besides acclimating student athletes to the academic demands of the university and arming them with a battery of academic skills necessary for success, Summer Bridge also enabled students to foster positive relationships with faculty and advisors as they learned to employ campus resources. Students were required to enroll in three classes: Freshman Writing, Student Development, and a humanities or religion class, for which they could earn credits (SALLC learning specialist, personal communication, October 4, 2017). During mandated study hall time, students either met with learning specialists on a one-to-one basis or with student mentors or tutors in small groups.

### **Data Collection**

SALLC staff were full partners in the study and agreed to provide quantitative student data coded to protect participant confidentiality. Under the direction and supervision of SALLC learning specialists, data were extracted from Student Athlete Data System and de-identified. Data were provided on a spreadsheet that listed gender, ethnicity, sport, year in school, semester, participation or nonparticipation in Summer Bridge, high school GPA, ACT/SAT scores, semester and cumulative GPA, and progress toward degree. The demographics of special admit participants are presented in Table 2.

Table 2

*Demographics of Special Admit Participants*

Demographics	Number of Athletes
Sports	
Football	13
Softball	5
Baseball	4
Volleyball (men)	3
Basketball (men)	2
Basketball (women)	2
Tennis (men)	2
Golf (women)	2
Track and field (men)	2
Track and field (women)	1
Swimming and diving (men)	1
Swimming and diving (women)	1
Cross country (women)	1
Volleyball (women)	1
Gymnastics	1
Soccer	1
Gender	
Male	27
Female	15
Ethnicity	
White	18
Pacific Islander	10
Black	8
Asian	4
Latino	2

The dependent variables (measures) were GPA and progress toward degree. Grade point average is calculated on a 4.00 scale and indicates a student's average grade. Semester GPA is calculated by dividing the total number of credits earned by the number of credit hours attempted during the semester. Cumulative GPA is derived from dividing total credits earned for all semesters by the total number of credit hours attempted.

Progress toward degree requirement for first-year student athletes is 18 semester hours of credit prior to the second year of enrolment at which time, student athletes must achieve 90% of the GPA required for graduation, which is 2.0 at the study institution.

Organized Summer Bridge was a recent endeavor at the study school, so the research used existing data from the 2012-13 through 2017-18 programs for the football and Olympic sports cohorts to add statistical power.

### **Data Analysis**

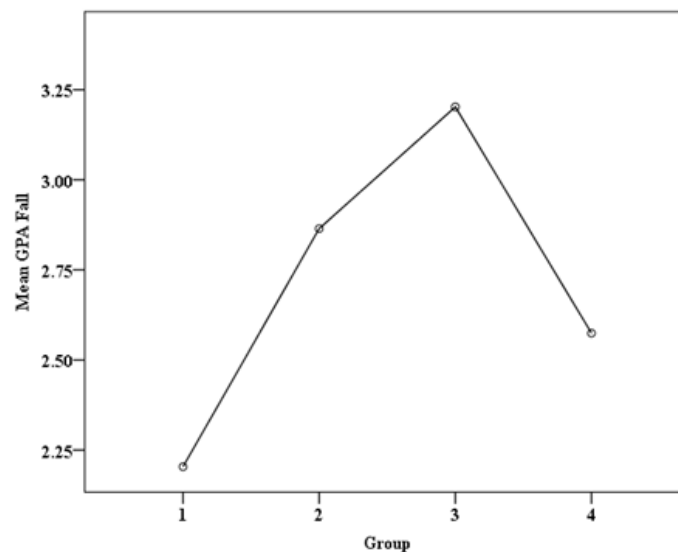
Quantitative data for the research questions 1, 4, and 5 were analyzed using repeated measures ANOVA, also known as a mixed-design analysis of variance model. The repeated measures ANOVA allows for the comparison of the means of two or more sets of scores, whereby significant differences indicate that they did not occur by chance. This model was used to analyze the four groups of students across time for the five years of Summer Bridge. To further expound, the two independent variables of this study are Summer Bridge program and time: the first involves comparing different groups of students and the second takes into account the performance of each group over two semesters. Considering that this was causal-comparative research seeking to determine whether the performance of four groups of students differed in relation to the two independent variables, the repeated measures ANOVA was appropriate (Cronk, 2016). Quantitative data for semester GPA, time within subject, and interaction between



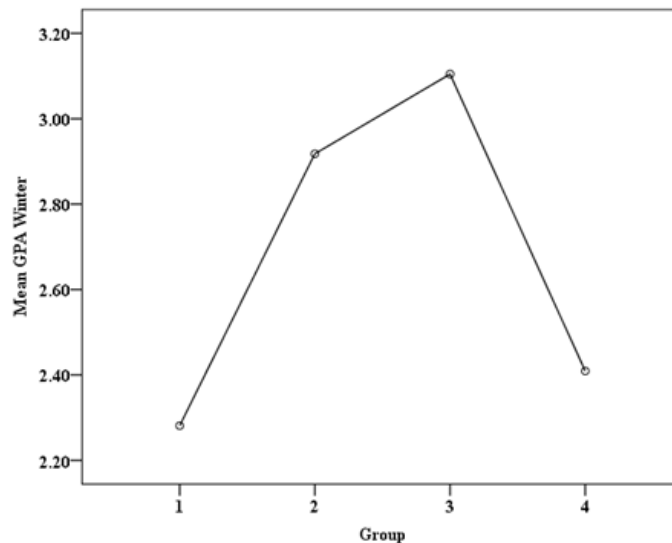
time and group were analyzed using repeated measures ANOVA combined for the five years of Summer Bridge. Questions 2 and 3 on cumulative GPA and progress toward degree were analyzed using one-way ANOVA. Graphed data were analyzed to determine trends and comparison tests were administered to establish any statistically significant increases in group means and highlight any significant variance from means.

### Results

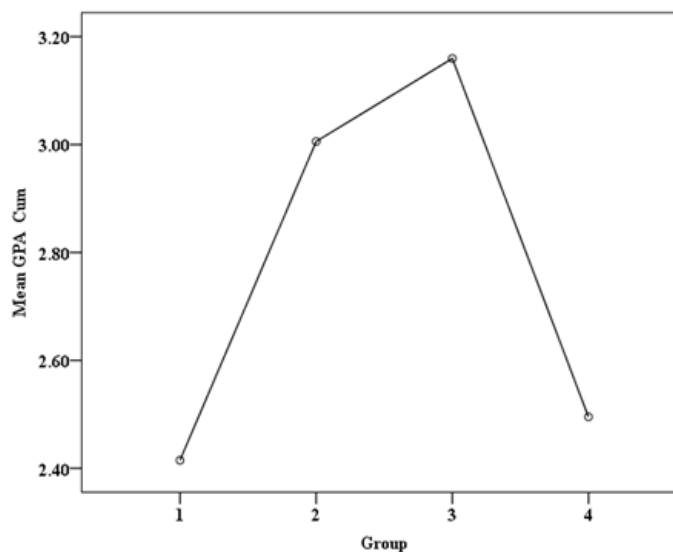
Data were analyzed for each study question. Results of ANOVA indicate that there was a significant main effect ( $p < .01$ ) for differences between general admit and special admit students in terms of mean GPA for fall (Figure 1) and winter (Figure 2) semesters and for mean cumulative GPA (Figure 3) at the end of the first year after Summer Bridge.



*Figure 1.* Mean fall GPA by group. 1 = special admit with Summer Bridge, 2 = general admit with Summer Bridge, 3 = general admit without Summer Bridge, 4 = special admit without Summer Bridge.



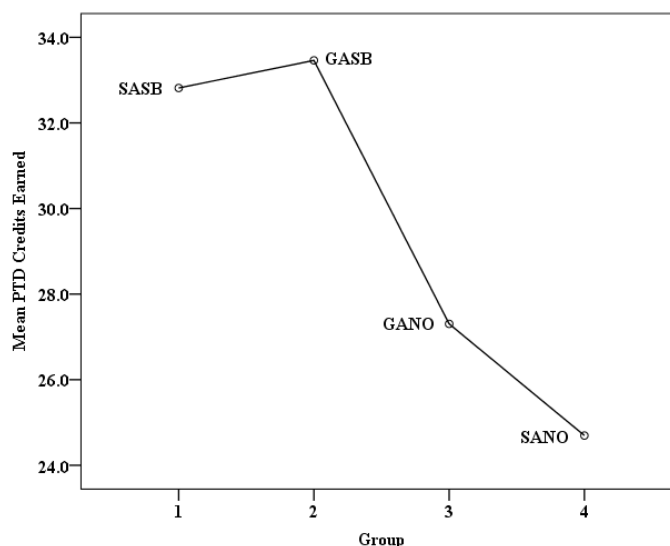
*Figure 2.* Mean winter GPA by group. 1 = special admit with Summer Bridge, 2 = general admit with Summer Bridge, 3 = general admit without Summer Bridge, 4 = special admit without Summer Bridge.



*Figure 3.* Mean cumulative GPA by group. 1 = special admit with Summer Bridge, 2 = general admit with Summer Bridge, 3 = general admit without Summer Bridge, 4 = special admit without Summer Bridge.

Data show a significant main effect for differences in terms of PTD, as measured by the number of credits earned at the end of the first year (Figure 4). Average PTD of students who participated in Summer Bridge was significantly higher than students who did not participate in

Summer Bridge. Special admit Summer Bridge participants earned an average of 32.81 credits at the end of the first year, while special admit nonparticipants earned 24.69 credits. General admit Summer Bridge participants earned an average of 33.46 credit hours, while nonparticipants averaged 27.30 credits.



*Figure 4.* Mean PTD credits earned by group at end of first year. 1 = special admit with Summer Bridge, 2 = general admit with Summer Bridge, 3 = general admit without Summer Bridge, 4 = special admit without Summer Bridge.

Data were analyzed to determine the effect of time within subjects in terms of semester GPA. Results show that there was no significant effect for time within subjects in terms of semester GPA for any group except general admits who did not participate in Summer Bridge ( $p < .01$ ). There was a decline in average GPA for general admits and special admits without Summer Bridge (Figure 5). However, there was an improvement in average GPA for general admits and special admits with Summer Bridge (Figure 6).

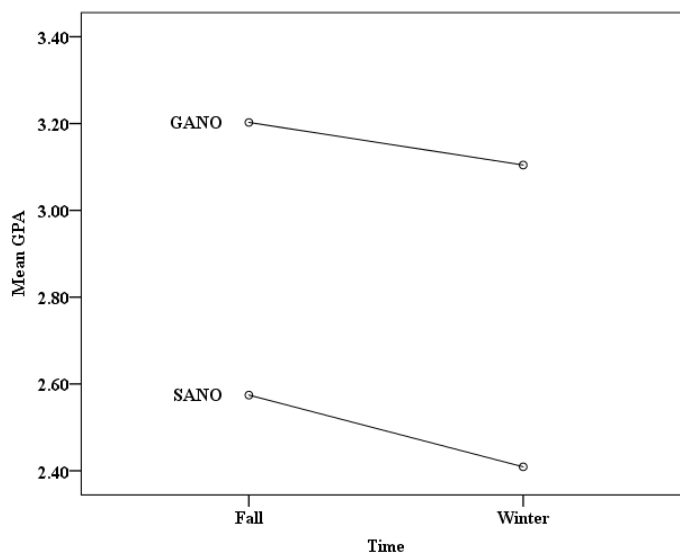


Figure 5. Mean GPA for general admits and special admits without Summer Bridge. RANO = general admit without Summer Bridge, SANO = special admit without Summer Bridge.

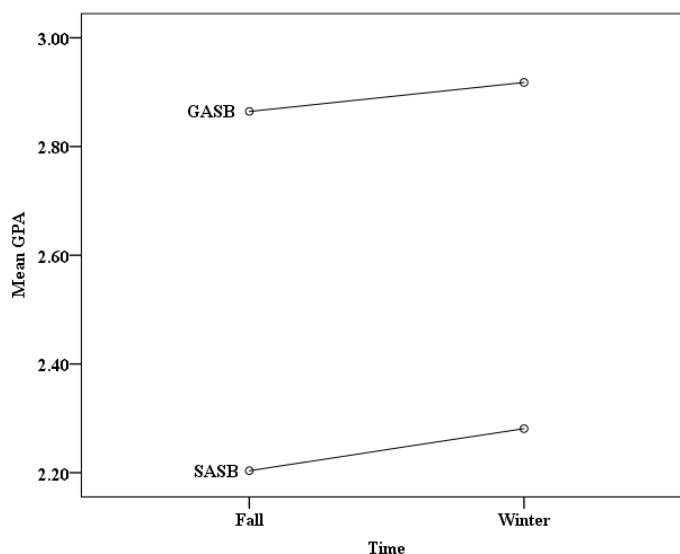
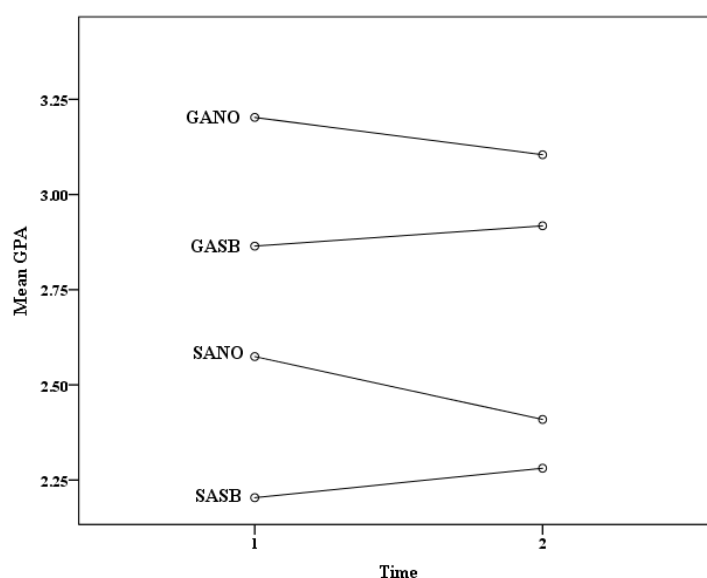


Figure 6. Mean GPA for general admits and special admits with Summer Bridge. RASB = general admit with Summer Bridge, SASB = special admit with Summer Bridge.

Results indicate that there was no significant main interaction between time and group as measured by differential slopes over time according to group membership in terms of semester GPA. Nonparticipant groups of special and general admit students showed a noticeable decline

in semester GPA across time. However, there were noteworthy improvements in semester GPA of general admit and special admit Summer Bridge participants across time (Figure 7).

Results also show a difference in first semester GPA of special admit athletes who participated and special admit athletes who did not participate in Summer Bridge. However, results from ANOVA indicate that differences in high school GPAs and ACT scores of these participants were not statistically significant. Results from ANOVA also show no statistical significance in terms of gender, sport, or ethnicity of special admit athletes.



*Figure 7.* Mean semester GPA by group. SASB = special admit with Summer Bridge, RASB = general admit with Summer Bridge, RANO = general admit without Summer Bridge, SANO = special admit without Summer Bridge.

## Discussion

The purpose of the study university's Summer Bridge is to help new student athletes acclimate to the rigorous academic demands of the university and learn to balance their course load with athletic schedules. The study used five years of data to answer the study questions. The significant differences between general admit and special admit athletes for fall, winter, and cumulative mean GPAs reflect expected variation based on the students' academic preparation

and skills upon entering the University. Participation in Summer Bridge did not yield statistically significant changes in GPA.

The significant difference in mean PTD between those who participated in Summer Bridge and those who did not is evidence of the head start experienced by participants. There are no similar studies on student athletes for comparison. However, a comparison with other Summer Bridge research show that this finding supports the conclusion reached by Fitts (1989) that Summer Bridge participants earned a greater number of credits than nonparticipants and is contrary to findings by Walpole et al. (2008) that Summer Bridge participants earned fewer credits than nonparticipants.

The study demonstrates no significant main effect for time in terms of semester GPA for three groups of athletes, including the groups that participated in Summer Bridge. This finding is inconsistent with results reported by Strayhorn (2011), Ackermann (1990), and Allen and Bir (2012) that Summer Bridge participants demonstrated improved academic performance and earned higher first semester GPAs than nonparticipants. The inconsistency may be attributable to the limited number of qualifying participants in Summer Bridge groups. In order to support any conclusion that changes in academic performance were the result of Summer Bridge, athletes who participated in Summer Bridge but did not enroll in both fall and winter semesters or have had prior college experience were excluded from this study. The exclusion of these athletes reduced the number of qualifying participants and may have influenced statistical outcomes.

Although these trends are not statistically significant, an examination of differential slopes over time for groups that participated in Summer Bridge shows an improvement in semester GPA between fall and winter semesters. On the contrary, there was a noticeable decline in semester GPA between fall and winter semesters for nonparticipating groups. Discounting all

other variables, these outcomes suggest that participation in Summer Bridge may increase students' first year semester GPAs, while nonparticipation in Summer Bridge may engender a decline in first year semester GPA.

### **Limitations**

This study was limited by data from a single university and may not be generalizable to other similar institutions. Also, this study did not track the retention or progress of student athletes beyond the first year. As this study examined only first year results, there is no way of determining whether the slopes as reported in the results section will continue their trends past the first year. Such a conclusion could be derived from tracking the academic performance of participants over the course of their matriculation at the university. These considerations should be weighed when interpreting results.

### **Implications for Future Research**

Further research should address retention beyond the first year of student athletes who do and do not participate in Summer Bridge. Longitudinal research by cohort should examine eventual degree completion during and after athletic competition. Future research could also study athlete-specific programs at other universities to compare findings with those of this study. Studies on the individual components of Summer Bridge may also be beneficial in determining the effectiveness of each component of the program. However, researchers should consider whether student athlete outcomes would be commensurate with the efforts required for such studies.

### **Implications for Practitioners**

Universities should consider offering Summer Bridge programs to help new and incoming athletes adjust to the demands of the university academics and provide a head start on

progress toward degree requirements. In addition, participation or nonparticipation in Summer Bridge may affect participants' academic performance throughout the first year. Summer Bridge that yields course credit along with familiarizing new athletes with the university and its programs can be beneficial and lead to adequate progress toward degree.

### **Conclusion**

Using five years of data, this study of the effects of participation in an athlete-specific Summer Bridge program shows benefits to participants over nonparticipants in progress toward degree in the first year. Although improvements in first year GPA of participants were also noted, these improvements were not statistically significant. The study contributes to existing literature that reports programs and outcomes for general student populations, but do not address student athletes specifically. Keeping in mind the unique demands on athletes, the results of this study indicate ways to further support the needs of these students. However, this type of support demands proportioning major financial and human resources to students based on their athletic prowess. Thus echoing the sentiments of Fried (2007), universities should consider the resources they can ethically expend in providing supports and services for their student athletes.



## References

- Ackermann, S. P. (1990). *The benefits of Summer Bridge programs for underrepresented and low-income students*. Paper presented at the annual meeting of the American Education Research Association, Boston, MA. (ERIC Document Reproduction Service No. ED318385). Retrieved October 19, 2016, from EBSCOHost ERIC database.
- Allen, D. F., & Bir, B. (2012). Academic confidence and Summer Bridge learning communities: Path analytic linkages to student persistence. *Journal of College Student Retention, 13*(4), 519-548.
- Astin, A. (1971). *Predicting academic performance in college*. New York, NY: The Free Press.
- Axthelm, P., Foote, D. M., Coppola, V., & Kirsch, J. (1980, September 22). The shame of college sports. *Newsweek*, pp. 54-59.
- Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology, 31*(2), 179-189. doi:10.1037/0022-0167.31.2.179
- Barefoot, B. O., & Fidler, P. P. (1996). *The 1994 national survey of freshman seminar programs: Continuing innovations in the collegiate curriculum. The freshman year experience (Monograph No. 20)*. Columbia, SC: University of South Carolina, National Resource Center for the Freshman Year Experience and Students in Transition. (ERIC Document Reproduction Service No. ED393386). Retrieved July 3, 2017, from EBSCOHost ERIC database.
- Benson, M. T. (1993). *A comparison of college graduation rates of freshman student-athletes before and after Proposition 48* (NCAA Research Report 92-01). Overland Park, KS: National Collegiate Athletic Association.

- Berkeley Student Learning Center. (2017). *Summer Bridge*. Retrieved from <http://slc.berkeley.edu/summer-bridge>
- Bogan, C. (1986, January 27). 41% in NFL graduate from college: Rate in Pacific 10 Conference only 38%, report shows. *Los Angeles Times*. Retrieved from [http://articles.latimes.com/1986-01-27/sports/sp-719\\_1\\_graduation-rate](http://articles.latimes.com/1986-01-27/sports/sp-719_1_graduation-rate)
- Brown, G. (2014). *NCAA graduation rates: A quarter-century of tracking academic success*. Retrieved from <http://www.ncaa.org/about/resources/research/ncaa-graduation-rates-quarter-century-tracking-academic-success>
- Cabrera, N. L., Miner, D. D., & Milem, J. F. (2013). Can a Summer Bridge program impact first-year persistence and performance? A case study of the New Start Summer Program. *Research in Higher Education*, 54(5), 481-498. doi:10.1007/s11162-013-9286-7
- Comeaux, E. (2013). Rethinking academic reform and encouraging organizational innovations: Implications for stakeholder management in college sports. *Innovative Higher Education*, 38(4), 281-293. doi:10.1007/s10755-012-9240-1
- Credé, M., & Niehorster, S. (2012). Adjustment to college as measured by the student adaptation to college questionnaire: A quantitative review of its structure and relationships with correlates and consequences. *Educational Psychology Review*, 24(1), 133–165. doi:10.1007/s10648-011-9184-5
- Cronk, B.C. (2006). *How to use SPSS statistics: A step-by-step guide to analysis and interpretation (7<sup>th</sup> ed.)*. Florence, KY: Taylor & Frances.
- Delaware State University. (n.d.). *Jumpstart program*. Retrieved from <https://www.desu.edu/academics/university-college/summer-bridge-programs/jumpstart-program>

- Dyson, R., & Renk, K. (2006). Freshmen adaptation to university life: Depressive symptoms, stress, and coping. *Journal of Clinical Psychology, 62*(10), 1231-1244.  
doi:10.1002/jclp.20295
- Falla, J. (1981). *NCAA: The voice of college sports*. Mission, KS: National Collegiate Athletic Association.
- Fitts, C. T., & Swift, F. H. (1928). The construction of orientation courses for college freshmen. *University of California Publications in Education, 1897-1929, 2*(3), 145-250. Retrieved from  
<https://babel.hathitrust.org/cgi/pt?id=mdp.39015074164065;view=image;page=root;size=100;seq=16;num=154>
- Fitts, J. D. (1989). *A comparison of locus of control and achievement among remedial Summer Bridge and nonbridge students in community colleges in New Jersey*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED315102). Retrieved September 21, 2017, from EBSCOHost ERIC database.
- Fried, B. H. (2007). Punting our future: College athletics and admissions. *Change: The Magazine of Higher Learning, 39*(3), 8-15.
- Garcia, P. (1991). Summer Bridge: Improving retention rates for underprepared students. *Journal of the Freshman Year Experience, 3*(2), 91-105. (ERIC Document Reproduction Service No. EJ433111). Retrieved February 27, 2017, from EBSCOHost ERIC database.

- Geiser, S., & Santelices, M. V. (2007). Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes. *Center for Studies in Higher Education*. (ERIC Document Reproduction Service No. ED502858). Retrieved September 28, 2017, from EBSCOHost ERIC database.
- Hendricks, S. P., & Johnson, A. T. (2016). The athletic-student dilemma. *Journal of Applied Sport Management*, 8(4), 1-20.
- Hudd, S. S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozura, N. (2000). Stress at college: Effects on health habits, health status and self-esteem. *College Student Journal*, 34(2), 217-228.
- Kallison, J. M., Jr., & Stader, D. L. (2012). Effectiveness of Summer Bridge programs in enhancing college readiness. *Community College Journal of Research and Practice*, 36(5), 340-357. doi: 10.1080/10668920802708595
- Lu, L. (1994). University transition: Major and minor stressors, personality characteristics, and mental health. *Psychology Medicine*, 24(1), 81-87.
- Moore, W., & Carpenter, L. C. (1985). *Academically underprepared students. Increasing student retention*. L. Noel, R. Levitz, & D. Saluri (Eds.). San Francisco, CA: Jossey-Bass.
- NCAA. (2011). *NCAA division I academic performance program data collection guide*. Retrieved from [http://fs.ncaa.org/Docs/Misc\\_Committees\\_DB/CAP/Committee%20Guides%20and%20Documents/Data\\_Collection\\_Guide.pdf](http://fs.ncaa.org/Docs/Misc_Committees_DB/CAP/Committee%20Guides%20and%20Documents/Data_Collection_Guide.pdf)

- NCAA. (2017a). *2017 Division I revenue distribution plan*. Retrieved from [http://www.ncaa.org/sites/default/files/2017NCAA\\_DivisionI\\_RevenueDistributionPlan\\_20170426.pdf](http://www.ncaa.org/sites/default/files/2017NCAA_DivisionI_RevenueDistributionPlan_20170426.pdf)
- NCAA. (2017b). *NCAA graduation rates: A quarter century of tracking academic success*. Retrieved from <http://www.ncaa.org/about/resources/research/ncaa-graduation-rates-quarter-century-tracking-academic-success>
- NCAA. (2017c). *Educational resources*. Retrieved from <http://www.ncaa.org/student-athletes/future/educational-resources>
- NCAA. (2017d). *Play division I sports*. Retrieved from <http://www.ncaa.org/student-athletes/play-division-i-sports>
- NCAA. (2017e). *Division I progress toward degree requirements*. Retrieved from <http://www.ncaa.org/about/division-i-progress-toward-degree-requirements>
- NCAA. (2017f). *Division I manual 2016-2017* (p.143). Indianapolis, IN: National Collegiate Athletic Association.
- NCAA. (2017g). *Staying on track to graduate*. Retrieved from <http://www.ncaa.org/student-athletes/current/staying-track-graduate>
- NCAA. (2017h). *Graduation rates*. Retrieved from <http://www.ncaa.org/about/resources/research/division-i-academic-progress-rate-apr>
- Office of Economic Opportunity. (October, 1966). *Upward Bound: A program to help youth from low-income families achieve a college education. Policy guidelines and application instructions*. Washington, DC: Office of Economic Opportunity.
- Permzadian, V., & Credé, M. (2016). Do first-year seminars improve college grades and retention? A quantitative review of their overall effectiveness and examination of

- moderators of effectiveness. *Review of Educational Research*, 86(1), 277-316.  
doi:10.3102/0034654315584955
- Petrie, T. A., & Russell, R. K. (1995). Academic and psychosocial antecedents of academic performance for minority and nonminority college football players. *Journal of Counseling and Development*, 73(6), 615-620.
- Riess, S. A. (1991). A social profile of the professional football player. In P. D. Staudohar & J. A. Magum (Eds.), *The business of professional sports* (pp. 222-246). Urbana, IL: University of Illinois Press.
- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130(2), 261-288. doi:10.1037/0033-2909.130.2.261
- Savage, H. J., Bentley, H. W., McGovern, J. T., & Smiley, D. F. (1929). *American College Athletics*. New York, NY: The Carnegie Foundation for the Advancement of Teaching.
- Singleton, J. A. (2013). *A history of the national collegiate association's academic reform movement and analysis of the academic progress rate in division I-A institutions*. (Unpublished doctoral dissertation, George Mason University, Virginia). Retrieved from [http://eboot.gmu.edu/bitstream/handle/1920/8760/Singleton\\_gmu\\_0883E\\_10469.pdf?sequence=1&isAllowed=y](http://eboot.gmu.edu/bitstream/handle/1920/8760/Singleton_gmu_0883E_10469.pdf?sequence=1&isAllowed=y)
- Smith, R. A. (2010). *Pay for play: A history of big-time college athletic reform*. Chicago, IL: University of Illinois Press.
- Stewart, J. A. (2006). *The effects of a pre-freshman college summer program on the academic achievement and retention of at-risk students* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3208076)

- Strayhorn, T. L. (2009). An examination of the impact of first-year seminars on correlates of college student retention. *Journal of the First-Year Experience & Students in Transition*, 21(1), 9-27.
- Strayhorn, T. L. (2011). Bridging the pipeline: Increasing underrepresented students' preparation for college through a Summer Bridge program. *American Behavioral Scientist*, 55(2), 142-159. doi: 10.1177/0002764210381871
- University of Redlands. (2017). *Summer Bridge*. Retrieved from <https://www.redlands.edu/student-life/campus-diversity-and-inclusion/programs/first-generation-student-programs/summer-bridge/>
- U.S. Department of Education. (2014, October 17). *Federal TRIO programs 50<sup>th</sup> Anniversary Fact Sheet*. Retrieved from: <https://www2.ed.gov/about/offices/list/ope/trio/trio50anniv-factsheet.pdf>
- Waller, J. M. (2003). A necessary evil: Proposition 16 and its impact on academics and athletics in the NCAA. *DePaul Journal of Sports Law & Contemporary Problems*, 1(2), 189-206.
- Walpole, M., Simmerman, H., Mack, C., Mills, J. T., Scales, M., & Albano, D. (2008). Bridge to success: Insight into Summer Bridge program students' college transition. *Journal of First-Year Experience & Students in Transition*, 20(1), 11-30. (ERIC Document Reproduction Service No. EJ798201). Retrieved October 1, 2017, from EBSCOHost ERIC database.
- Walter, T. L., & Smith, D. E. P. (1989). Starting a freshman seminar program. In M. L. Upcraft, J. N. Gardner, and Associates. *The freshman year experience* (pp. 327-339). San Francisco, CA: Jossey-Bass.

Winters, C. A., & Gurney, G. S. (2012). Academic preparation of specially-admitted student athletes: A question of basic skills. *College & University*, 88(2), 3-9. (ERIC Document Reproduction Service No. EJ995761). Retrieved October 3, 2016, from EBSCOHost ERIC database.



## APPENDIX

### Extended Literature Review

Numerous studies have been conducted on the challenges of and the need for support for first-year college students. These college freshmen undergo stresses associated with or common to change and adjustment to the demands of college life (Lu, 1994). Dyson and Renk (2006) emphasized that stress and depression are outcomes of adjusting to university life. When students experience difficulty coping with stress during transition, feelings of despondency and discouragement may lead to an onset of psychological symptoms such as depression. Students who experience a high level of stress are also found to possess a poorer perception of health and self-esteem (Hudd et al., 2000).

In their review of adjustments to college, Baker and Syrik (1984) categorized these adjustments into four broad categories: academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment. Utilizing a 52-item self rating scale on freshmen classes over a course of three years, they concluded that adjustment to college correlated positively with student retention. Aside from engendering greater student retention, adjustment to college is also a strong predictor of academic performance and overall GPA (Credé & Niehorster, 2012). With a plethora of change and adjustments expected of freshmen, these students may benefit from services that would enhance their college experience. Among the services most commonly offered in institutions of higher learning are first-year or freshman seminars.

Freshman seminars comprise courses that aim at transitioning and orienting students into campus life and engaging students in academic courses with faculty (Barefoot & Fiddler, 1996). Historical records traced the inception of these seminars to Boston University in 1888 (Fitts &

Swift, 1928). These non-credit courses, though not entirely for the purpose of orientation, were aimed at introducing students to a professional atmosphere. They also became the vehicle for the first orientation courses for which students earned credits at Reed College, Portland, Oregon in 1911. Research has established that freshman seminars which have been woven into the academic support systems of institutes of higher learning have had positive impact on retention rates (Permezadian & Credé, 2016; Strayhorn, 2009).

Another study revealed that participants who successfully completed freshman seminars recorded higher persistence, retention, and graduation rates than nonparticipants (Shanley & Witten, 1990). Using a cognition scale to investigate the impact of freshman seminars on the lifelong learning orientations of students, Padgett, Keup, and Pascarella (2013) determined that participation in freshman seminars “significantly increases the likelihood of a first college year characterized by the integration of ideas, information, and experiences as well as academic challenge and effort” (p. 144).

One style of freshman experience that is becoming incrementally popular is a transition program known as Summer Bridge. The concept of Summer Bridge may be linked to the federal Upward Bound Program (Kallison & Stader, 2012). The Upward Bound Program was created with the enactment of the Economic Opportunity Act of 1964 (U.S. Department of Education, 2014). The program was a cooperative venture between high schools and colleges that provided coursework on college campuses as a way for high school students to receive tutoring and to be introduced to the college environment (Office of Economic Opportunity, 1966). This program, along with two subsequently created programs, forms the Federal TRIO Programs which have been providing post-secondary educational opportunities for low-income high school students since 1968 (U.S. Department of Education, 2014). Similarly, Summer Bridge has long been

relied upon to increase the success rate of academically underprepared college students (Moore & Carpenter, 1985). Though the contents of Summer Bridge vary from one program to another, some key components include university induction, academic courses, learning strategies courses, and mentoring of students. An analysis of various existing Summer Bridge programs reveals their structure and content.

Delaware State University offers two separate Summer Bridge programs – Jumpstart Program and Project Success. While the former is geared towards students with cumulative high school GPA of 2.7 or above combined with an SAT score of 800, the latter is offered to provisionally admitted students who do not meet the university's admission standards. Participation in the Jumpstart Program is by invitation only, while provisionally admitted students must complete the requirements of Project Success. Both programs are 5-week courses on English, Introduction to Algebra or College Algebra, and Learning Strategies. Students can earn up to a total of nine credits while benefiting from mentoring and academic advisement, career and leadership development workshops, and social and cultural experiences (Delaware State University, n.d.).

Since 1973, the University of California Berkeley has offered a 6-week residential Summer Bridge made up of four components: academics, advisement and counseling, academic resources, and residential life. Students enroll in a mandatory Personal Wellness Seminar and two academic courses of their own choice. Over 20 academic courses are offered, ranging from college writing and reading and composition to social science, mathematics, science, and computer science courses. Advisors and counselors assist students in areas such as academic and social adjustment as well as course and major selections. Students also gain accessibility to a wide network of peer academic support groups (Berkeley Student Learning Center, 2017).

Prairie View A&M University in Texas operates a unique program wherein each college within the university offers its own Summer Bridge. There are altogether 10 residential programs with their own acceptance requirements and guidelines. Students are required to apply for admission into these programs. Colleges such as the College of Agriculture and Human Sciences and the College of Engineering offer 5-week courses, during which students complete six credit hours of coursework while experiencing residence life at the colleges and networking with faculty members. Other colleges such as the College of Arts and Science and the College of Architecture hold 10-week courses. These programs allow students to complete 12 credit hours of intensive coursework while receiving advisement and counseling (Prairie View A&M University, 2017).

A similar structure of Summer Bridge is offered by the University of Hartford in Connecticut. Students participate in one of the eight Summer Bridge programs offered by various colleges. Each program accommodates up to 20 students, and they are admitted on a first-come first-served basis. However, these Summer Bridge programs are only a week long and do not enable students to earn coursework credit hours. Students are introduced to university campus and college level coursework and learn study skills such as note-taking and time management while building relationships with faculty members and other students (Isqur, 2014).

Another university that organizes a brief Summer Bridge is Indiana University–Purdue University Indianapolis (IUPUI). IUPUI runs an 8-day Summer Bridge, during which students receive instructions on math, English, and presentation skills. They have the opportunity to network with faculty, advisor, student mentors, and other participants. Additionally, they work with faculty in their majors on skills specific to their intended fields of study. Participation in this Summer Bridge is available to all freshmen on a first-come first-served basis (IUPUI, 2017).

Other universities focus on offering Summer Bridge to first-generation and low-income students. One such is the University of Redlands in California. Since 2004, the university has organized two-week residential Summer Bridge during which students receive helpful information before beginning classes in the fall. Students participate by invitation only and are introduced to other incoming students, exposed to campus facilities and resources, and provided an overview of proven academic strategies (University of Redlands, 2017).

At Brigham Young University in Utah, Summer Bridge is offered only to student athletes (SALLC learning specialist, personal communication, October 13, 2016). Student athletes who do not meet the admission requirements of the university are admitted as special admits and are required to attend Summer Bridge. Other student athletes, though not required to attend, are strongly encouraged to participate.

In summary, while some institutions of higher learning choose to offer classes specific to different majors of study, others focus on basic reading, writing, and math. Still others opt to teach a combination of academic classes in addition to learning skills, social skills, test-taking skills, adaptation skills, and non-cognitive skills such as persistence and stress management. However, the key objectives remain the same, which are to assist students to adjust to the college environment, to help them navigate the complexities of college resources, and to gear them towards college-level classes. Though some Summer Bridge programs benefit all students, many are directed at supporting academically underprepared high school students and adapting them to the rigors of higher education.

Under preparedness, which can be measured through admissions test scores and high school GPA, has been shown to be a vital predictor of the educational outcome of college students (Astin, 1971; Permzadian & Credé, 2016). In his study involving over 36,000 students,

Astin (1971) found that high school academic performance is the best indicator of college academic performance. Students' college grades were determined to correlate with their high school grades. Furthermore, a positive correlation was shown to exist between college grades and a combination high school grades and aptitude test scores.

At the University of California, Berkeley, researchers who conducted a study on almost 80,000 students over a course of four years concluded that high school GPA not only predicted the academic outcome of freshmen, but also their academic performance beyond freshman year (Geiser & Santelices, 2007). High school GPA was shown to be a predictor of long-term college academic achievement.

### **Efficacy of Summer Bridge**

There exists extensive research on the effectiveness of Summer Bridge in improving student retention, GPA, and other skills necessary for the successful attainment of a college degree. While many studies focused on underprepared, underrepresented, minority, and low-income students, others have been conducted on participants of all demographics. Differing results have been noted on the efficacy of Summer Bridge. One such research by Strayhorn (2011) revealed that economically disadvantaged minority students who participated in Summer Bridge demonstrated improved academic skills and academic self-efficacy leading to higher first semester GPA. The author sought to measure the effect of Summer Bridge in four areas: academic self-efficacy, sense of belonging, and academic and social skills. Paired-samples t-tests conducted to measure pretest and posttest scores which were collected during summer and at the beginning and end of fall semester showed improvements in all four areas.

In a study of underrepresented and low-income students at the University of California, Los Angeles (UCLA) Summer Bridge with a strong academic component not only facilitated the acclimation of students to university life, but also improved their academic performance

(Ackermann, 1990). Attitudinal and academic data were collected from the participation of 265 students during a 6-week program of either intensive math or English composition and general education. Although this study lacked a control group, the academic, social, and personal developments of underrepresented and low-income students were positively impacted by Summer Bridge.

Another study analyzed over 600 Summer Bridge and non-Summer Bridge students, retention rates, first semester GPA, and first year GPA of participants and nonparticipants (Vinson, 2008). A noteworthy finding was the lack of any substantial difference in the GPA of both groups of students. Neither was there any major difference in the enrollment status or retention rate of the two groups. Though there was no significant difference in the GPA and retention rate of participants and nonparticipants, this finding concluded that Summer Bridge fulfilled its purpose, which was to bridge the gap between the initial academic performance of participants and nonparticipants.

Other researchers have substantiated that Summer Bridge have positively impacted the retention rates of first year students, suggesting that there is a significant positive correlation between participating in Summer Bridge and student persistence (Ackermann, 1990; Cabrera, Miner, & Milem, 2013; Garcia, 1991). Ackermann (1990) found between 93 to 97% of Summer Bridge participants at UCLA persisted into their second year, while the persistence rate of the entire campus was 83 to 90%. Underrepresented students who participated in Summer Bridge were more inclined to persevere into their second year than their nonparticipating counterparts.

Similarly, a study on high-risk minority and low-income students at the University of California, San Diego discovered that higher retention rate was recorded among Summer Bridge participants (Meyers & Drevlow, 1982). Among the four comparison groups of demographically

similar students, students who participated in Summer Bridge had the highest retention rate. Summer Bridge participants not only recorded higher retention rate at the end of the first year but also maintained higher rates after three years.

Researchers at Rowan University examined longitudinal data on the academic and social activities of Summer Bridge participants and a control group of nonparticipants (Walpole et al., 2008). The study revealed that retention rate of participants was higher than nonparticipants in the fall semester of their junior year. While there were no significant differences in GPA, the control group earned more credits than Summer Bridge participants during two semesters, leading researchers to conclude that when compared to their peers, Summer Bridge participants may be advancing at a slower pace. In contrast, an earlier study of colleges in New Jersey revealed that while there was no difference in the GPA of participants and nonparticipants of Summer Bridge, participants earned a greater number of credits than non-participants (Fitts, 1989). These findings may suggest that Summer Bridge positively influence student persistence.

Stewart (2006) revealed some noteworthy findings regarding the effects of Summer Bridge on both academic achievement and retention. While there were no significant variances between the GPA and retention of Summer Bridge participants and nonparticipants, some major differences were noted among minority groups. Minorities who participated in Summer Bridge were more likely to return for their sophomore year and also more likely to graduate than minorities who did not participate in Summer Bridge.

However, data collected at Columbia College led administrators of the college to question the benefits of their program (McCurrie, 2009). The study revealed that though the retention rates of students who completed Summer Bridge were higher than nonparticipants, retention and GPA past the first year dropped in comparison with nonparticipants. Less than 15%



of participants remained enrolled past their first year. These findings, though unsettling, do not disregard the evidence that Summer Bridge can positively impact the learning experience of underprepared students.

### **Challenges of Student Athletes**

Included in the population of underprepared college students are academically at-risk athletes. For the past several decades college sports as governed by the National Collegiate Athletic Association (NCAA) have soared in popularity, leading to the generation of millions of dollars in revenue. For the year 2017, NCAA reported its revenue distribution for Division 1 sports to be over \$560 million (NCAA, 2017a). With sports commanding such popularity, there is an undeniable level of competitiveness, especially within Division 1. Universities endeavor to recruit top athletes and are willing to extend scholarships even to student athletes who are academically underprepared. Colleges and universities with competitive athletic programs enroll students with low standardized test scores if coupled with high GPAs (Winters & Gurney, 2012). Though these students fail to meet the admissions requirements of their respective institutions, they may be admitted if they meet the initial eligibility standards of NCAA. These athletes are enrolled as special admit students and many are academically at-risk.

Student athletes in general encounter unique challenges unlike those of their non-athlete counterparts. Student athletes face the task of balancing sports and academics, deal with distresses from physical injuries and exhaustion, and may face isolation with limited social relationships outside their athletic community. Their athletic status also places them in positions of prominence, and thus the topography of their behavior, both within and without the field, is often magnified. Such stresses can result in harmful behaviors or substance abuse (Walter & Smith, 1989). These psychosocial, non-cognitive, and academic concerns, though associated with general admit student athletes are no less prevalent among special admit students.

In her study of role discrepancy and psychosocial adjustment in male student-athletes, Killeya-Jones (2005) posits that due to the constant conflicting demand for time and resources, these athletes struggle with role identity in fulfilling their dual roles as students and athletes. More negative psychosocial adjustments, such as lower levels of self-esteem, life satisfaction, and academic satisfaction are intrinsic in student athletes who demonstrate a greater degree of role discrepancy. Student athletes are also shown to be susceptible to experiencing symptoms of depression. In a study of 257 collegiate student athletes who participated in Division 1 sports, Yang et al. (2007) reported that 23% of participants experienced symptoms of depression. Other psychosocial and non-cognitive concerns unique to student athletes include high levels of chronic injuries and physical and mental exhaustion (Vetter & Symonds, 2010), shame, perfectionism, and fear of failure (Elison & Partridge, 2012), and higher excessive use of alcohol as a sensation-seeking or coping mechanism (Yusko, Buckman, White, & Pandina, 2008). Special admit student athletes echo similar challenges of student athletes who were admitted based on their own merits. Special admit student athletes' challenges range from role identity to the lack of social involvement due to time constraint and a lack of academic support (Hendricks & Johnson, 2016).

Petrie and Russell (1995) determined that psychosocial and non-cognitive factors affect the academic performance of student athletes. Their investigation of life stress and competitive trait anxiety showed that these factors were inversely related to the academic achievements of nonminority athletes. Similarly, a study into the effects of psychosocial factors and study skills of college students made apparent the role of academic self- efficacy and achievement motivation in the academic outcome of students (Robbins et al., 2004). Academic performance and retention among student athletes remain major concerns of institutions of higher learning.

These problems can be further exacerbated by the added challenges borne by special admit student athletes who are academically at-risk. Data from 2007-2011 presented through a qualitative study at Rowan University showed that out of 199 specially admitted student athletes, only 117 graduated within six years with another 11 still pursuing a degree (Hendricks & Johnson, 2016).

### **NCAA Academic Policies**

Graduation rates and the academic integrity of student athletes have been at the forefront of argument since the 1920s. The Carnegie Foundation (1929) issued a call for reform after questioning the professionalism and commercialism of collegiate sports, and highlighting incidences of “conflicts between athletic ambitions and academic standards” and the admittance of academically underprepared student athletes (Savage, Bentley, McGovern, & Smiley, 1929, p. 118). Though some parties were unconvinced of the fairness of the the report, most were generally receptive of its findings. The report augmented efforts towards greater regulation of collegial sports (Falla, 1981).

The NCAA has since instituted numerous policies to regulate college sports (NCAA, 2017b; Table 1).

Table 1

*Timeline of NCAA Legislations*

Year	Legislation
1948	Sanity Code
1952	12-point code
1965	1.6 rule
1973	2.0 rule
1986	Proposition 48
1996	Proposition 16
2004	Academic Performance Program

In 1948, NCAA approved “The Principles for the Conduct of Intercollegiate Athletics,” also known as the Sanity Code (Falla, 1981). Two of its key principles were to hold athletes to the same academic standards as their non-athlete peers and to restrict financial aid based on athletic abilities. In the midst of mounting opposition from colleges, the Sanity Code drew positive reactions from the public who viewed it as an impetus towards the preservation of amateurism of college sports. Colleges raised concerns over the financial aid and recruiting aspects of the code, as well as the severity of penalty under the code, which was expulsion from NCAA.

The Sanity Code was repealed in 1951 and replaced by a 12-point code in 1952 (Falla, 1981). Of the 12 principles of the code, principles 5, 6, and 12 were attempts at improving the academic standards of athletes:

5. Insist upon normal academic progress toward a degree for purposes of eligibility;
6. Deny eligibility to any athlete not admitted under the institution’s published entrance requirements;

12. Give close attention to the curriculum of the athlete to assure that he is not diverted from his educational objective.

In 1959, NCAA defined normal academic progress as 12 academic credits per term. Then in 1965, it endorsed the 1.6 rule for financial aid eligibility. However, this rule came under heavy criticism and was abolished in 1973, to be replaced by the 2.0 rule which allowed any athlete with a high school diploma and a 2.0 GPA to participate in college sports (Falla, 1981). In that same year, the association was divided into Divisions I, II, and III, opening college sports to an immense pool of athletes with varied academic qualifications.

Though at this point no standardized collection of academic performance and graduation rates had been mandated by the federal government or NCAA, professional football players with college degrees from the 1930s through the 1950s ranged from 54.2 to 59.8% (Riess, 1991). However, the graduation rate of football players was a mere 31.5% in 1982 (Riess, 1991), and only 41% of professional football players in 1985 graduated with college degrees (Bogan, 1986). An NCAA study showed that overall graduation rate for the 1984-1985 cohort was 48.2% (Benson, 1993). This was also the period during which academic scandals were highlighted in the media. One such report by Axthelm, Foote, Coppola, & Kirsch (1980) underscored trespasses of half the Pacific-10 conference that were caught “altering academic transcripts and granting false course credits to athletes” (p. 54). In light of the numerous academic scandals that made the headlines, NCAA enforced Proposition 48 for Division I institutions in 1986 (Smith, 2010). The policy required student athletes to achieve a minimum high school GPA of 2.0 in eleven core curriculum subjects plus a minimum SAT score of 700 or ACT score of 15 in order to compete as college freshmen (Brown, 2014). Though this academic reform was met with great opposition particularly from various presidents of traditionally black colleges and universities who argued

that such enrollment requirements would exclude African American students with inadequate academic preparation, others opined that raising the academic expectations of these students would be for their betterment (Smith, 2010).

In 1990, both the U.S. Congress and NCAA adopted legislation requiring all schools to report their annual graduation rates. NCAA observed that graduation rates increased after Proposition 48 went into effect in 1986. While the overall graduation rate of the cohorts prior to Proposition 48 was 48.2%, the graduation rate of the 1986 cohort improved to 56.5% (Benson, 1993). Under Proposition 48, partial qualifiers, meaning student athletes who did not meet one of the eligibility requirements, could receive financial aid but could not practice or play during their freshman year, while nonqualifiers could be admitted but could not participate in athletics unless they showed satisfactory academic improvement.

In 1989, NCAA approved the highly contentious Proposition 42, which made financial aid unavailable to partial qualifiers. After much debate, it was decided in the subsequent year that student athletes who were able to meet continuing eligibility after their first year of college would be eligible for three years of athletic participation (Singleton, 2013).

The 2003-04 NCAA Guide for the College-Bound Student-Athlete (as cited in Waller, 2003) revealed that Proposition 16 replaced Proposition 48. Proposition 16, implemented in 1996, increased the number of required high school core courses from eleven to thirteen and applied a sliding scale for GPAs and standardized test scores. The number of core courses further increased in 2003 to fourteen with no minimum score on standardized tests. Subsequently, the number of core courses was set at sixteen while the required 2.0 GPA was raised to 2.3 (NCAA, 2017c). However, students who earned a minimum of 2.0 GPA and met the other academic requirements would still be eligible for financial aid and be admitted as academic redshirts.

These students could practice but could not compete during their freshman year (NCAA, 2017d). These conditions remain in effect, together with a number of other policies.

### **Current Requirements**

Among the other policies that have been put in place is the progress toward degree requirement for Division I student athletes. This standard requires that student athletes work towards earning their degree, and it includes minimum GPA required for graduation, term-by-term and annual credit hours requirements, and a continuing eligibility requirement (NCAA, 2017e). This rule specifies that students need to complete 40% of their degree by the start of their third academic year, and 60 and 80% respectively by the beginning of their fourth and fifth years (Brown, 2014).

Yet another NCAA strategy for academic reform is the academic performance program (APP) which places the responsibility on institutions to submit data for academic progress rate (APR), academic performance census (APC), and graduation success rate (GSR) (NCAA, 2017f). The APR is a composite team measurement based on individual team members. Teams that fail to meet a threshold of 930 points are subject to sanctions. Consequently, the implementation of the APR has engendered more academic facilities and support for student athletes (Comeaux, 2013). The APC is a compilation of academic performance variables which include GPAs and credit hours (NCAA, 2011). Division I athletes must earn at least six credit hours each term and meet the institution's required GPA to remain eligible (NCAA, 2017g). The GSR is a "six-year proportion of those student athletes who graduated versus those who entered an institution on institutional financial aid." (NCAA, 2011, p. 13) It takes into account students who transfer in and out of an institution. GSR is reported by NCAA to have risen from 74% in 2002 to 86% in 2016 (NCAA, 2017h).

## References

- Ackermann, S. P. (1990). *The benefits of Summer Bridge programs for underrepresented and low-income students*. Paper presented at the annual meeting of the American Education Research Association, Boston, MA. (ERIC Document Reproduction Service No. ED318385). Retrieved October 19, 2016, from EBSCOHost ERIC database.
- Astin, A. (1971). *Predicting academic performance in college*. New York, NY: The Free Press
- Axthelm, P., Foote, D. M., Coppola, V., & Kirsch, J. (1980, September 22). The shame of college sports. *Newsweek*, pp. 54-59.
- Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology*, 31(2), 179-189. doi:10.1037/0022-0167.31.2.179
- Barefoot, B. O., & Fidler, P. P. (1996). *The 1994 national survey of freshman seminar programs: Continuing innovations in the collegiate curriculum. The freshman year experience (Monograph No. 20)*. Columbia, SC: University of South Carolina, National Resource Center for the Freshman Year Experience and Students in Transition. (ERIC Document Reproduction Service No. ED393386). Retrieved July 3, 2017, from EBSCOHost ERIC database.
- Benson, M. T. (1993). *A comparison of college graduation rates of freshman student-athletes before and after Proposition 48* (NCAA Research Report 92-01). Overland Park, KS: National Collegiate Athletic Association.
- Berkeley Student Learning Center. (2017). *Summer Bridge*. Retrieved from <http://slc.berkeley.edu/summer-bridge>



- Bogan, C. (1986, January 27). 41% in NFL graduate from college: Rate in Pacific 10 Conference only 38%, report shows. *Los Angeles Times*. Retrieved from [http://articles.latimes.com/1986-01-27/sports/sp-719\\_1\\_graduation-rate](http://articles.latimes.com/1986-01-27/sports/sp-719_1_graduation-rate)
- Brown, G. (2014). *NCAA graduation rates: A quarter-century of tracking academic success*. Retrieved from <http://www.ncaa.org/about/resources/research/ncaa-graduation-rates-quarter-century-tracking-academic-success>
- Cabrera, N. L., Miner, D. D., & Milem, J. F. (2013). Can a Summer Bridge program impact first-year persistence and performance? A case study of the New Start Summer Program. *Research in Higher Education*, 54(5), 481-498. doi:10.1007/s11162-013-9286-7
- Comeaux, E. (2013). Rethinking academic reform and encouraging organizational innovations: Implications for stakeholder management in college sports. *Innovative Higher Education*, 38(4), 281-293. doi:10.1007/s10755-012-9240-1
- Credé, M., & Niehorster, S. (2012). Adjustment to college as measured by the student adaptation to college questionnaire: A quantitative review of its structure and relationships with correlates and consequences. *Educational Psychology Review*, 24(1), 133–165. doi:10.1007/s10648-011-9184-5
- Cronk, B.C. (2006). *How to use SPSS statistics: A step-by-step guide to analysis and interpretation (7<sup>th</sup> ed.)*. Florence, KY: Taylor & Frances.
- Delaware State University. (n.d.). *Jumpstart program*. Retrieved from <https://www.desu.edu/academics/university-college/summer-bridge-programs/jumpstart-program>

- Dyson, R., & Renk, K. (2006). Freshmen adaptation to university life: Depressive symptoms, stress, and coping. *Journal of Clinical Psychology, 62*(10), 1231-1244.  
doi:10.1002/jclp.20295
- Elison, J., & Partridge, J. A. (2012). Relationships between shame-coping, fear of failure, and perfectionism in college athletes. *Journal of Sport Behavior, 35*(1), 19-39.
- Falla, J. (1981). *NCAA: The voice of college sports*. Mission, KS: National Collegiate Athletic Association.
- Fitts, C. T., & Swift, F. H. (1928). The construction of orientation courses for college freshmen. *University of California Publications in Education, 1897-1929, 2*(3), 145-250. Retrieved from <https://babel.hathitrust.org/cgi/pt?id=mdp.39015074164065;view=image;page=root;size=100;seq=16;num=154>
- Fitts, J. D. (1989). A comparison of locus of control and achievement among remedial Summer Bridge and nonbridge students in community colleges in New Jersey. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED315102). Retrieved September 21, 2017, from EBSCOHost ERIC database.
- Garcia, P. (1991). Summer Bridge: Improving retention rates for underprepared students. *Journal of the Freshman Year Experience, 3*(2), 91-105. (ERIC Document Reproduction Service No. EJ433111). Retrieved February 27, 2017, from EBSCOHost ERIC database.
- Geiser, S., & Santelices, M. V. (2007). Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes. *Center for Studies in Higher Education*. (ERIC

- Document Reproduction Service No. ED502858). Retrieved September 28, 2017, from EBSCOHost ERIC database.
- Hendricks, S. P., & Johnson, A. T. (2016). The athletic-student dilemma. *Journal of Applied Sport Management*, 8(4), 1-20.
- Hudd, S. S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozura, N. (2000). Stress at college: Effects on health habits, health status and self-esteem. *College Student Journal*, 34(2), 217-228.
- Indiana University-Purdue University Indianapolis. (2017). *Summer Bridge*. Retrieved from <https://bridge.iupui.edu/>
- Isqur, D. (2014, July 24). *Summer Bridge: Giving Students a Head Start on College Life*. West Hartford, CT: University of Hartford. Retrieved from [http://www.hartford.edu/news/press-releases/2014/07/summer\\_bridge.aspx](http://www.hartford.edu/news/press-releases/2014/07/summer_bridge.aspx)
- Kallison, J. M., Jr., & Stader, D. L. (2012). Effectiveness of Summer Bridge programs in enhancing college readiness. *Community College Journal of Research and Practice*, 36(5), 340-357. doi: 10.1080/10668920802708595
- Killeya-Jones, L. A. (2005). Identity structure, role discrepancy and psychosocial adjustment in male college student-athletes. *Journal of Sports Behavior*, 28(2), 167-185.
- Lu, L. (1994). University transition: Major and minor stressors, personality characteristics, and mental health. *Psychology Medicine*, 24(1), 81-87.
- Martella, R. C., Nelson, J. R., Morgan, R. L., & Marchand-Martella, N. E. (2013). *Understanding and interpreting educational research*. New York, NY: The Guilford Press.

- McCurrie, M. K. (2009). Measuring success in Summer Bridge programs: Retention efforts and basic writing. *Journal of Basic Writing*, 28(2), 28-49. (ERIC Document Reproduction Service No. EJ877254). Retrieved July 7, 2017, from EBSCOHost ERIC database.
- Meyers, C., & Drevlow, S. (1982). *Summer Bridge program: A dropout intervention program for minority and low-income students at the University of California, San Diego*. Paper presented at the Annual Meeting of the American Educational Research Association. New York, NY. (ERIC Document Reproduction Service No. ED216630). Retrieved September 20, 2017, from EBSCOHost ERIC database.
- Moore, W. & Carpenter, L. C. (1985). *Academically underprepared students. Increasing student retention*. L. Noel, R. Levitz, & D. Saluri (Eds.). San Francisco, CA: Jossey-Bass.
- NCAA. (2011). *NCAA division I academic performance program data collection guide*. Retrieved from [http://fs.ncaa.org/Docs/Misc\\_Committees\\_DB/CAP/Committee%20Guides%20and%20Documents/Data\\_Collection\\_Guide.pdf](http://fs.ncaa.org/Docs/Misc_Committees_DB/CAP/Committee%20Guides%20and%20Documents/Data_Collection_Guide.pdf)
- NCAA. (2017a). *2017 Division I revenue distribution plan*. Retrieved from [http://www.ncaa.org/sites/default/files/2017NCAA\\_DivisionI\\_RevenueDistributionPlan\\_20170426.pdf](http://www.ncaa.org/sites/default/files/2017NCAA_DivisionI_RevenueDistributionPlan_20170426.pdf)
- NCAA. (2017b). *NCAA graduation rates: A quarter century of tracking academic success*. Retrieved from <http://www.ncaa.org/about/resources/research/ncaa-graduation-rates-quarter-century-tracking-academic-success>
- NCAA. (2017c). *Educational resources*. Retrieved from <http://www.ncaa.org/student-athletes/future/educational-resources>

- NCAA. (2017d). *Play division I sports*. Retrieved from <http://www.ncaa.org/student-athletes/play-division-i-sports>
- NCAA. (2017e). *Division I progress toward degree requirements*. Retrieved from <http://www.ncaa.org/about/division-i-progress-toward-degree-requirements>
- NCAA. (2017f). *Division I manual 2016-2017* (p.143). Indianapolis, IN: National Collegiate Athletic Association.
- NCAA. (2017g). *Staying on track to graduate*. Retrieved from <http://www.ncaa.org/student-athletes/current/staying-track-graduate>
- NCAA. (2017h). *Graduation rates*. Retrieved from <http://www.ncaa.org/about/resources/research/division-i-academic-progress-rate-apr>
- Office of Economic Opportunity. (October, 1966). *Upward Bound: A program to help youth from low-income families achieve a college education. Policy guidelines and application instructions*. Washington, DC: Office of Economic Opportunity.
- Padgett, R. D., Keup, J. R., & Pascarella, E. T. (2013). The impact of first-year seminars on college students' life-long learning orientations. *Journal of Student Affairs Research and Practice, 50*(2), 133–151. doi:10.1515/jsarp-2013-0011
- Permzadian, V., & Credé, M. (2016). Do first-year seminars improve college grades and retention? A quantitative review of their overall effectiveness and examination of moderators of effectiveness. *Review of Educational Research, 86*(1), 277-316. doi:10.3102/0034654315584955
- Petrie, T. A., & Russell, R. K. (1995). Academic and psychosocial antecedents of academic performance for minority and nonminority college football players. *Journal of Counseling and Development, 73*(6), 615-620.

- Prairie View A&M University. (2017). *Summer Bridge programs for incoming freshmen*. Retrieved from <http://www.pvamu.edu/universitycollege/summer/summer-bridge-programs/>
- Riess, S. A. (1991). A social profile of the professional football player. In P. D. Staudohar & J. A. Magum (Eds.), *The business of professional sports* (pp. 222-246). Urbana, IL: University of Illinois Press.
- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130(2), 261-288. doi:10.1037/0033-2909.130.2.261
- Savage, H. J., Bentley, H. W., McGovern, J. T., & Smiley, D. F. (1929). *American College Athletics*. New York, NY: The Carnegie Foundation for the Advancement of Teaching.
- Shanley, M. G., & Witten, C. H. (1990). University 101 freshman seminar course: A longitudinal study of persistence, retention, and graduation rates. *NASPA Journal*, 27, 344-352.
- Singleton, J. A. (2013). *A history of the national collegiate association's academic reform movement and analysis of the academic progress rate in division I-A institutions*. (Unpublished doctoral dissertation, George Mason University, Virginia). Retrieved from [http://eboot.gmu.edu/bitstream/handle/1920/8760/Singleton\\_gmu\\_0883E\\_10469.pdf?sequence=1&isAllowed=y](http://eboot.gmu.edu/bitstream/handle/1920/8760/Singleton_gmu_0883E_10469.pdf?sequence=1&isAllowed=y)
- Smith, R. A. (2010). *Pay for play: A history of big-time college athletic reform*. Chicago, IL: University of Illinois Press.
- Stewart, J. A. (2006). *The effects of a pre-freshman college summer program on the academic achievement and retention of at-risk students* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3208076)

- Strayhorn, T. L. (2009). An examination of the impact of first-year seminars on correlates of college student retention. *Journal of the First-Year Experience & Students in Transition*, 21(1), 9-27.
- Strayhorn, T. L. (2011). Bridging the pipeline: Increasing underrepresented students' preparation for college through a Summer Bridge program. *American Behavioral Scientist*, 55(2), 142-159. doi: 10.1177/0002764210381871
- University of Redlands. (2017). *Summer Bridge*. Retrieved from <https://www.redlands.edu/student-life/campus-diversity-and-inclusion/programs/first-generation-student-programs/summer-bridge/>
- U.S. Department of Education. (2014, October 17). *Federal TRIO programs 50<sup>th</sup> Anniversary Fact Sheet*. Retrieved from: <https://www2.ed.gov/about/offices/list/ope/trio/trio50anniv-factsheet.pdf>
- Vetter, R. E., & Symonds, M. L. (2010). Correlations between injury, training intensity and physical and mental exhaustion among college athletes. *Journal of Strength and Conditioning Research*, 24(3), 587-596. doi:10.1519/JSC.0b013e3181c7c2eb
- Vinson, T. L. (2008). The relationship that Summer Bridge and non-Summer Bridge participation, demographics, and high school academic performance have on first-year college students: Effects of grade point average and retention. *Available from ProQuest Dissertations & Theses Global; Social Science Premium Collection* (Order No. 3438048). Retrieved from <https://search-proquest-com.erl.lib.byu.edu/docview/837465512?accountid=4488>
- Waller, J. M. (2003). A necessary evil: Proposition 16 and its impact on academics and athletics in the NCAA. *DePaul Journal of Sports Law & Contemporary Problems*, 1(2), 189-206.

- Walpole, M., Simmerman, H., Mack, C., Mills, J. T., Scales, M., & Albano, D. (2008). Bridge to success: Insight into Summer Bridge program students' college transition. *Journal of First-Year Experience & Students in Transition*, 20(1), 11-30. (ERIC Document Reproduction Service No. EJ798201). Retrieved October 1, 2017, from EBSCOHost ERIC database.
- Walter, T. L., & Smith, D. E. P. (1989). Starting a freshman seminar program. In M. L. Upcraft, J. N. Gardner, and Associates. *The freshman year experience* (pp. 327-339). San Francisco, CA: Jossey-Bass.
- Winters, C. A., & Gurney, G. S. (2012). Academic preparation of specially-admitted student athletes: A question of basic skills. *College & University*, 88(2), 3-9. (ERIC Document Reproduction Service No. EJ995761). Retrieved October 3, 2016, from EBSCOHost ERIC database.
- Yang, J., Peek-Asa, C., Corlette, J. D., Cheng, G., Foster, D. T., & Albright, J. (2007). Prevalence of and risk factors associated with symptoms of depression in competitive collegiate student athletes. *Clinical Journal of Sport Medicine*, 17(6), 481-487.  
doi:10.1097/JSM.0b013e31815aed6b
- Yusko, D. A., Buckman, J. F., White, H. R., & Pandina, R. J. (2008). Risk of excessive alcohol use and drinking-related problems in college student athletes. *Addict Behavior*, 33(12), 1546-1556. doi:10.1016/j.addbeh.2008.07.010