

Googling for Sports: How NCAA Programs Advertise Online Through Paid Search

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A wealth of research has analyzed how NCAA programs market and advertise for their athletic offerings. Although research into the marketing of NCAA football programs have dominated the literature, this study examined an under-researched element of NCAA marketing and advertising: advertising through paid online search techniques, especially as COVID-19 has moved many marketing efforts online. To fill gaps in the research, this study reports on Google Adwords strategies of a stratified random sample of 250 NCAA Division I, II, and III programs just prior to the COVID-19 pandemic. Results suggest few NCAA programs engage with Google Adwords strategies (9.2%; 23 of 250 programs), while those that do are often Division I programs from Power 5 Conferences. Additionally, one institution spent over \$18,000 per month on Google Adwords advertising, while another institution in the same athletics conference spent just under \$500. Implications for NCAA program advertisement and online marketing—including in a COVID-19 environment—will be addressed.

To date, NCAA-focused research has covered a wide variety of topics related to on-field competition (Hoffman et al., 2011; Hildenbrand et al., 2009; Jones, 2013), the academic success of student-athletes (Bailey, 2017; LaForge & Hodge, 2011; Pellegrini & Hesla, 2018), and the way in which NCAA programs raise and spend funds (Cooper, 2010; Jewell, 2020; Richardson, 2015). Yet, when the World Health Organization declared COVID-19 a global pandemic on March 11, 2020 (World Health Organization, 2020), the collective world of higher edu-

cation changed. With this change, came drastic changes related to how NCAA programs administered their athletic offerings and protected all stakeholders involved while attempting to continue competition (National Collegiate Athletic Association, 2020). Perhaps aligned with many other organizations in the United States and across the world, the NCAA's reliance on Internet technologies has surged during the pandemic, with institutions of higher education reporting between a 60% and 100% increase in their everyday Internet use to conduct basic operations (De et al., 2020).

Although several studies have addressed how NCAA programs established a formidable web presence (Brannigan & Morse, 2020; Cooper, 2010, 2015; Cooper & Weight, 2011), NCAA-focused research has not evaluated how NCAA programs spend their finances on perhaps the most competitive turf in modern athletics: the Internet. Understanding that modern Internet measurement technologies have emerged in recent years to make this type of research possible (SEMrush, 2020), coupled with the staggering effects of COVID-19 and the necessity for so much programmatic information to be shared online (De et al., 2020), an investigation of NCAA online spending seems feasible, relevant, and important. One of these methods of Internet investment is through AdWords, or words and phrases that can be purchased which allows businesses (and institutions of higher education) to place paid advertisements on pages after Internet users search for those words or phrases (Taylor & Bicak,

2020). Prior research has found that elite institutions of higher education regularly purchase tens of thousands—if not, hundreds of thousands—of dollars' worth of Google AdWords and subsequent advertisements per month to drive traffic and student interest toward their websites (Taylor & Bicak, 2020). However, to date, no studies have investigated whether NCAA programs participate in the same type of advertising, even though paid advertisements through the Google system and other search engines represent a multibillion-dollar industry yearly in the U.S. alone (Taylor & Bicak, 2020). Coupled with the fact that Division I programs often enjoy much larger budgets and spend much more on their websites and on advertising than their Division II and III peers (Cooper 2010, 2015; Richardson, 2015), it is important to evaluate if NCAA programs participate in Google AdWords and subsequent ad placement and if there are differences by Division.

As a result, in this study, we analyze a stratified random sample of 250 NCAA programs to explore online expenditure differences between different Divisions, possibly illuminating the financial stratification among NCAA programs in the United States. Filling a large gap in the research related to how NCAA programs from all Divisions spend to compete online, this study will answer two critical questions:

R1: Do NCAA programs purchase online advertising and paid search positioning?

R2: If so, are NCAA programs from certain Divisions (I, II, and III) and

institutional sectors (public or private), more likely to purchase online advertising (AdWords) and paid search positioning than others?

By answering these questions, NCAA researchers and administrators will better understand how NCAA programs compete online through paid advertising techniques. Additionally, such Internet-based research is timely given the COVID-19 global pandemic and the essential nature of Internet communication and advertisement. From here, this study's results will comment upon the potential online stratification of NCAA programs and how that stratification may be amplified or affected by the COVID-19 global pandemic.

Literature Review

An extensive overview of how NCAA programs advertise is beyond the scope of this study, as researchers have produced hundreds of empirical studies focused on the topic. To be more precise, this literature review will provide context on how NCAA advertisement has changed over time, beginning with a summary of the historical context of NCAA advertisements. Next, we will explain the influence technology has had on NCAA advertisement, concluding with the current situation regarding NCAA advertising given how the COVID-19 pandemic has changed the landscape of the NCAA and college sports in general.

College Athletics and The Media

Intercollegiate athletics has been using various media innovations to increase

visibility and competition for people all across the United States (U.S.) scholars have suggested that college athletics play a major role in institutional identity that distinguishes universities (Clayton et al., 2012). Additionally, athletic programs among different universities often involve sponsorship to enhance university competition (Jayakumar & Comeaux, 2016). Historically, a rowing competition between Harvard and Yale in 1852 began universities competing for prestige while having sponsors and spectators (Lewis, 1967). The event included Elkins Railroad Line paying all the expenses for participants in exchange for the attention the event will bring to the company (Lewis, 1967). While this was not an NCAA event, it is important to understand how this event paved the way for universities to make money from sponsors, have regular season games, and brand association and recognition for their athletic program (Byers et al., 1997).

Generally speaking, the NCAA was developed in 1906 to regulate participants, events, and the commercialization of sports (Oriard, 2012). By the 1920s, intercollegiate athletics became an integral part of higher education with an increase of attendants and commercialization (Smith, 2000). Yet, as the NCAA continued to grow and evolve, so did technology. For example, television broadcasting had a significant and immediate impact on college athletics (Nite et al., 2017). In 1952, the NCAA earned approximately \$1.14 million from NBC for the rights to broadcast the first televised football games (Byers et al., 1997; Sparvero & Warner, 2013). According

to Dunnivant (2004), television media coverage and the NCAA have continually sought to include college athletics for substantial revenue and broadcasting contracts. Currently, NCAA television contracts have exceeded over \$2.6 billion in the U.S. alone (Nite et al., 2017). In this sense, the NCAA has continuously adapted to provide fans with marketing efforts to promote NCAA athletics.

The Internet and the NCAA

Despite the limited research on advertising through paid online search techniques, the internet has provided fans with a platform to be involved with their favorite NCAA teams. Specifically, the increase of the internet has provided various new ways to attract marketers to reach loyal NCAA viewers (LaMonica, 2007; Pegoraro et al., 2010). For example, different media outlets have allowed customers to support their favorite NCAA sports team from their television, cell phones, or any other portable device that connects to the internet (Sanderson et al., 2017). Also, NCAA institutions use their websites to inform fans of upcoming games, ticket sales, and donations (Childs et al., 2022; Jones, 2015). Lastly, fans have the opportunity to search for their NCAA institutions and purchase tickets to live games or purchase an online broadcast for the game (Sanderson et al., 2017).

Moreover, NCAA researchers have focused on gender equity and uncovered considerable financial stratification between NCAA programs from different sports (football versus golf) and Divi-

sions (I, II, and III). Regarding gender equity, early studies found that women's athletics were much less likely to be covered by major news outlets and be featured on television broadcasts than men's athletics, which have traditionally dominated popular media spaces (Hallmark & Armstrong, 1999; Shifflett & Revelle, 1994). Similarly, Cooper's (2008) and (2009) studies focused on NCAA website coverage and how NCAA programs positioned athletes of different genders on NCAA program home web pages and other web pages. Ultimately, Cooper's (2008, 2009) studies found that men's athletics and men athletes were much more likely to be featured online than women's athletics and athletes. Moreover, Childs et al. (2022) articulated how larger, wealthier NCAA programs spend much more on their websites than other programs, increasing this sense of digital stratification. Inequitable structures also exist regarding NCAA program finances, as researchers have long found that Division I NCAA programs support expensive athletic scholarships (Jones, 2020), raise millions for capital campaigns (Humphreys & Mondello, 2007), and spend millions on multimedia and advertising (Kittle, 2000) that their Division II and III peers cannot afford (Jones, 2020).

Additionally, scholars have argued that COVID-19 physical restrictions have put limitations on fans to their favorite NCAA teams, and thus, how NCAA programs can communicate with their fans. The pandemic has placed a burden on broadcasting revenue, ticket sales, and

cutting of sports programs (Swanson et al., 2020). For example, the NCAA Men's and Women's Basketball Final Four, which attracts 700,000 live event fans combined, was cancelled (NCAA, 2020). In addition, various NCAA athletic departments have cut 90 men's, 83 women's, and three coed sports programs (Swanson et al., 2020).

While COVID-19 has put a burden on many sporting events, there is still limited research on how NCAA institutions provide marketing efforts online. Scholars have suggested that institutions have created various marketing techniques for fans to watch their favorite sports teams. For example, Nebraska's Athletic Department (NAD) attracted approximately 85,000 fans by broadcasting an Xbox-simulated NCAA Football 2014 video game made up of legendary Nebraska players (Gabriel, 2020; Goldman et al., 2020). Furthermore, institutions like Iowa State University (ISU) have allowed fans to attend football games but with less than 25% of the stadium capacity (ESPN, 2020). However, the tickets were only open to fans who have paid for season tickets. Additionally, fans who cannot get tickers are able to watch ISU games online (ESPN, 2020). NAD and ISU are just a few examples of how institutions are marketing for their financial gain during COVID-19. Therefore, this study will contribute to the literature by examining what online marketing techniques can help illuminate NCAA programs' financial stratification, as well as explore any gender inequities present in paid online advertising techniques.

Methods

The following sections will detail how the research team identified this study's population, gathered and analyzed data, and addressed limitations. Moreover, this section will outline how the team used SEMrush (2020), a relatively novel method of online data collection related to website metrics, such as Google AdWords selection and purchase.

Population and Sample

The research team employed the Integrated Postsecondary Education Data System (IPEDS) to identify all institutions of higher education featuring at least one NCAA sport during the 2017-2018 academic year, resulting in over 1,100 institutions (Note: 2017-2018 was the latest date that IPEDS had complete NCAA data, even though data for this study was gathered in late 2019). IPEDS is perhaps the most common source of higher education information, reported to the U.S. Department of Education by every accredited institution in the United States. The team used SEMrush (2020) to gather data, and the time-consuming nature of SEMrush rendered this population size too large for data collection and analysis in a timely, feasible manner. From here, the research team used G*Power to perform a power analysis of the total population to determine a sample large enough for generalizability of this study's results, while also being a sample size small enough for the research team to collect data in a timely, efficient manner.

Using G*Power (a common software program to calculate sample size strength

based on known populations, such as the number of NCAA programs in the United States), the research team conducted an a priori one-way ANOVA F-test to identify sample size, including a power ($1-\beta$) of 90% and a significance level (α) of 10% between three groups (Division I, II, and III institutions), resulting in a stratified sample strong enough for subsequent generalizability of this study's results. This indicated that the best estimate of the true population standardized mean difference was 0.50 (moderate effect). This effect was entered into the power analysis with the following input parameters: power ($1-\beta$) of 90%, significance level (α) of 10%, and an allocation ratio of 1:1. The analysis result suggested that this study required an $n=218$ to detect a difference in online advertising among the three institutional groups with 90% probability.

We chose to purposively oversample to increase the generalizability of this study, resulting in a total of 250 institutions in this study. Initially, it was important to perform this power analysis, as the researchers wanted to explore sector (public and private) and division differences regarding the purchasing of Google AdWords in later analyses, even though there was no extant research to guide these experiments. However, as this study's data demonstrates, too few institutions participated in such paid online (Google) advertising tactics across the sample that any quantitative analysis would have been underpowered and unreliable. We will elaborate on the finding that few NCAA programs participated

in online advertising in a later section of this study.

To randomize the sample, the research team assigned a consecutive number to all 1,113 institutions and then used a random number generator to randomly select 250 institutions for the study. A description of this study's sample and all NCAA member institutions by sector and Division can be found in Table 1 below.

Data Collection

Data for this study was collected from two sources: the Knight Commission on Intercollegiate Athletics database (<https://www.knightcommission.org>) and SEMrush (2020), a digital marketing application which analyzes online marketing and search data using the Google database. The Knight Commission database is the largest and most comprehensive of its kind in NCAA finance, and researchers have used this database to advocate for NCAA policy change, including how to support student-athlete academic performance and mitigate sexual discrimination in NCAA workspaces (Lederman, 1991; Wolverson & Lipka, 2007). Additionally, Google is the largest search engine and online advertising platform in the world, with an over 90% market share globally (Statcounter, 2020), rendering Google an appropriate digital site of analysis. Data was collected in late 2019, just prior to the COVID-19 pandemic, representing a limitation of this study which we address in a later section.

Knight Commission data included all NCAA program variables that could be

Table 1*Description of sample of NCAA programs in the study (n=250)*

NCAA Division	Scholarshipped Athletes	NCAA sports
Division I (n=97)		
Mean	369.9	19.2
Standard deviation	177.1	3.7
High	941	31
Low	62	12
Division II (n=72)		
Mean	143.8	18.7
Standard deviation	63.9	4.3
High	504	27
Low	62	9
Division III (n=81)		
Mean	137.8	21.8
Standard deviation	46.8	4.5
High	212	31
Low	65	10
Sector		
Private (n=126)		
Mean	133.8	21.6
Standard deviation	46.2	4.2
High	212	31
Low	62	10
Public (n=124)		
Mean	327	18.2
Standard deviation	180.3	3.7
High	941	29
Low	64	9

related to expenditures on online marketing, including each institutional sector (public or private), the program's NCAA conference (e.g., Big 10, Conference USA), the program's number of sports and scholarshiped athletes, and whether the program belonged to the NCAA Division I (binary variable; 0=Division II and II, 1=Division I). SEMrush data included whether the NCAA program purchased advertising on the Google platform and the number of adwords the NCAA program purchased through the Google search engine results platform.

Other studies in higher education have engaged with the SEMrush database to report on similar online advertising techniques, such as Google Adwords purchases (Alsmadi & Taylor, 2019; Taylor & Bicak, 2020).

As a relatively novel method of online data collection, the research team felt it necessary to define various website metrics to help readers understand the data the team collected and what that data measures. Adwords are either single words (football) or strings of words (football tickets on sale) purchased by the

NCAA program each month through the Google Adwords system. Adwords then connect to an Internet user's Google search and depending on the proximity of that search to the paid adword, a paid advertisement will appear alongside a list of Google's Internet search results. Unlike organic keyword searches, websites (and thus, NCAA programs) only pay for adwords if an Internet user clicks on the advertisement (Alsmadi & Taylor, 2019; Taylor & Bicak, 2020). Traffic is the average number of users visiting an institutional website per month. For the purposes of this study, traffic measures the number of users visiting an NCAA website after clicking on a paid advertisement linked to an adword. Traffic can be considered one measurement of Internet popularity (Alsmadi & Taylor, 2019; Taylor & Bicak, 2020).

Overall cost or advertising cost is the total price paid by NCAA programs to link organic (non-paid) keywords to Internet search results placement each month, in addition to paid advertisement. Website administrators can purchase certain search terms (i.e., football tickets) and ensure their website is featured higher on the list of search results than websites who did not purchase the search term across multiple search engine platforms, such as Google. Overall cost can be considered a measure of internet investment (Alsmadi & Taylor, 2019; Taylor & Bicak, 2020). Finally, cost-per-click measures how much it costs a website for their link to be clicked on by an Internet user, whether that website paid for search results placement through organic (non-

paid) keywords or Google Adwords and advertisements. Cost-per-click can be considered one measurement of Internet investment (Alsmadi & Taylor, 2019; Taylor & Bicak, 2020; Taylor et al., 2019).

Analytic Framework

Initially, the research team planned on gathering both Knight Commission and SEMrush data and then conducting a regression analysis to explore which NCAA program characteristics were associated with purchasing online advertising through the Google system. However, given the dearth of programs participating in online advertising through the Google system, the research team decided to perform a descriptive statistical analysis present in Table 2, including the number of adwords, traffic driven by those adwords, the overall cost of the adwords, and the cost-per-click incurred by a program purchasing an adword and an Internet user clicking on that advertisement, thus driving traffic toward that NCAA program's website.

Additionally, the research team used the Natural Language Toolkit (NLTK) through Python to tokenize all adwords (n=442) purchased by all NCAA programs in the study purchasing adwords (n=23) to better understand which types of adwords are most popular among NCAA programs. The NLTK is a quantitative linguistics software program that allows large amounts of text to be analyzed quickly, including analyses of word frequency, such as the methodology for this study. Taylor and Bicak (2020) successfully used NLTK to sort thousands

of Google AdWords in their analysis of institutional use of Google advertising technology, and other studies have also used NLTK to sort keywords, generate themes, and analyze data (Loper & Bird, 2002; Perkins, 2014).

As a result, Table 3 displays the most frequent tokens across all adwords in the study that occurred at least twice in different strings of adwords. Although this study could not perform statistical analysis given the small sample size of NCAA programs purchasing adwords, the research team understood that an in-depth linguistic analysis of adword strings may serve useful to understand the adword strategies of the 23 NCAA programs in the study that did participate in this form of online advertising.

Results

Table 2 below displays summary statistics of Google Adword volume, traffic, overall cost, and cost-per-click among NCAA websites.

Out of the 250 randomly selected institutions, just 23 NCAA programs purchased advertising and paid for search positions. Nearly every program (22) was from the public sector except for one private sector program from the Big 12 conference. Of the 23 programs, their conference affiliation was as follows: ACC (5), Big 12 (4), SEC (3), Big 10 (2), Pac-12 (2), AAC (2), Conference USA (2), Big Sky (1), Colonial (1), and Mountain West (1).

Data in Table 2 suggests that programs in the NCAA Division I purchase more adwords than programs in the

NCAA Division II. On average, programs in Division I purchased 20.42 adwords compared to just 6.50 words for Division II programs. Comparing the number of purchased adwords by institutional sector reveals that, on average, institutions in the public sector buy more adwords (19.50) than their private sector peer (13.00). In regard to traffic, on average, Division I programs outpaced Division II programs 818.76 to 27.00. Similarly, institutions in the public sector averaged 781.81 website visits per month compared to just 48 for the institution in the private sector.

The overall cost for Division I programs was considerably larger than their Division II counterparts. On average, Division I programs spent about \$1,333.71 compared to just \$2.00 for Division II programs. Comparing the overall cost by sector reveals that institutions in the public sector paid an average of about \$1272.73 while the institution in the private sector paid \$12.00.

Lastly, comparing the cost per click between Division I and Division II programs reveals that Division I programs (\$1.31) paid, on average, less than Division II programs (\$13.50). Moreover, institutions in the public sector paid, on average, less (\$2.30) than the institution in the private sector (\$4.00).

Further analysis suggests that there is a lot of variation of adword purchases, traffic, overall cost, and cost per click by conference. The data reveals that programs in the SEC conference, on average, bested their peers in every aforementioned category. On average,

Table 2

Summary statistics of Google Adword volume, traffic, overall cost, and cost-per-click among NCAA websites (n=23)

Conference*	Sector	NCAA Division	NCAA Sports	NCAA Athletes	Adwords	Traffic	Overall Cost	Cost Per Click
SEC	Public	I	21	525	108	8,513	\$18,711	\$0.45
Conference USA	Public	I	18	426	62	3,612	\$4,321	\$0.84
Big 10	Public	I	24	602	46	1,701	\$1,307	\$1.30
Big 12	Public	I	18	530	17	1,005	\$760	\$1.32
Big 10	Public	I	20	495	24	216	\$585	\$0.37
Big 12	Public	I	17	442	11	560	\$553	\$1.01
SEC	Public	I	21	465	16	292	\$495	\$0.59
ACC	Public	I	23	611	4	267	\$469	\$0.57
ACC	Public	I	22	569	32	452	\$455	\$0.99
AAC	Public	I	19	492	5	75	\$127	\$0.59
Pac-12	Public	I	28	913	32	333	\$118	\$2.82
ACC	Public	I	23	514	6	46	\$51	\$0.90
Conference USA	Public	I	16	318	17	49	\$22	\$2.23
SEC	Public	I	20	580	18	9	\$13	\$0.69
Big 12	Private	I	22	89	13	48	\$12	\$4.00
ACC	Public	I	27	679	3	4	\$3	\$1.33
Mountain West	Public	I	16	541	3	3	\$3	\$1.00
Big Sky	Public	II	16	326	1	48	\$2	\$24.00
Colonial	Public	II	18	504	12	6	\$2	\$3.00
Big 12	Public	I	19	488	2	5	\$2	\$2.50
AAC	Public	I	16	437	5	4	\$1	\$4.00
ACC	Public	I	18	412	4	0	\$0	\$0.00
Pac-12	Public	I	22	600	1	0	\$0	\$0.00

*Note: Conferences include American Athletic Conference (AAC), Atlantic Coast Conference (ACC), Big 10 Conference, Big 12 Conference, Big Sky Conference (Big Sky), Colonial Conference (Colonial), Conference USA, Mountain West Conference (Mountain West), Pac-12 Conference, and Southeastern Conference (SEC).

programs in the SEC conference purchased about 47.00 adwords, which was about 8 adwords more than the second highest average from programs in the Conference USA conference (39.50). Moreover, the data suggests that there could be a possible positive relation between the number of adwords purchased and traffic, since again, programs in the SEC had the highest average of 2,938.00

website visits per month. In terms of overall cost, the programs in the SEC had the highest average cost of \$6,406.33 compared to the second highest average which was \$2,171.50 for the programs in Conference USA. Lastly, programs in the SEC had the lowest average cost per click of about \$0.58 compared to the highest which was \$24.00 for the program in the Big Sky conference.

Table 3*Most frequent tokens across Google Adwords (n=442) purchased by NCAA institutions (n=23)*

Token	Frequency	Token	Frequency
tickets	96	shoes	2
football	59	amazon	2
student	24	box	2
gear	23	shorts	2
store	23	fleece	2
basketball	23	section	2
jersey	22	crewneck	2
apparel	22	accessories	2
ticket	19	cover	2
shirts	19	school	2
office	16	schedule	2
women's	6	hitch	2
athletics	6	helmet	2
clothing	6	jackets	2
number	5	club	2
youth	5	jerseys	2
hat	5	polo	2
baseball	5	graduation	2
stores	4	regional	2
online	4	trucker	2
gifts	4	hats	2
volleyball	4	men's	2
nike	4		
sweatshirt	4		
beach	3		
bowl	3		
lanyard	3		
jacket	3		
alumni	3		
hoodie	3		
shopping	3		
buy	2		

Table 3 displays the most frequent tokens across Google Adwords purchased by NCAA institutions.

Data in Table 3 suggests that words like “tickets” and “football” were two of the most frequently purchased adwords. The ten most frequently purchased adwords were: tickets (96), football (59), student (24), gear (23), store (23), basketball (23), jersey (22), apparel (22), ticket (19), and shirts (19). Conversely, this list includes some of the least frequently purchased adwords: buy (2), shoes (2), amazon (2), box (2), shorts (2), fleece (2), section (2), crewneck (2), accessories (2), and cover (2).

Thematically, most of these adwords either advertise ticket sales or merchandising, evidenced by the frequency of tickets and many types of team clothing or other items (gear, jersey, apparel, shirts, clothing, hat). Here, this data suggest that many programs spend online to drive further revenue through tickets and merchandise, potentially stratifying the online market. Moreover, Table 2 suggest women’s athletics and program offerings may be advertised more frequently than men’s, as women’s (6) appeared more frequently than men’s (2). This result possibly speaks to online spaces presenting a unique opportunity for gender equity in NCAA athletics, although this study’s data frame (23 NCAA programs) is too small for generalizability.

Discussion and Implications

As the first study to analyze how NCAA programs purchase Google Adwords to position themselves favorably

within Google search results pages, the findings of this study imply much more how NCAA programs compete online and how that competitive landscape is heavily stratified. Such stratification also holds unique implications for online competition in a COVID-19 environment where many NCAA athletics can only advertise their programmatic offerings in online spaces. Moreover, actual Google Adwords purchased suggests a positive movement toward gender equity in NCAA athletics, regarding the frequency of women-focused tokens present within Google Adwords.

To begin, results in Table 2 suggest that many NCAA programs across the U.S. do not participate in Google Adwords purchasing, although this form of advertising is one of the most popular on the Internet, generating billions of dollars of revenue per year (Alsmadi & Taylor, 2019; Statscounter, 2020; Taylor & Bicak, 2020). Of the 250 NCAA programs sampled in this study, only 23 purchased Google Adwords, nearly all of them coming from Power 5 conferences. Here, this study suggests NCAA programs from Power 5 conferences—typically associated with well-known institutions of higher education and higher NCAA program budgets—may be better positioned in a competitive online space. Research already suggests that larger, Power 5 NCAA programs dominate television and merchandising revenue when compared to Group of 5 conference programs (Dunnivant, 2004; Caro & Benton, 2012; Greenwell et al., 2007; Pegoraro et al., 2010). Here, the results

of this study suggest Power 5 NCAA programs may also dominate in online advertising spaces, potentially stratifying another competitive landscape.

From here, the literature on financial stratification among intercollegiate athletic programs has illuminated how conference alignments, sports specifics, and marketability of players influence revenue (Collier, 2013; Gladden et al., 1998). Similar to the findings from Cheslock and Knight's (2012) study, we found that size matters when it comes to athletic programs' abilities to purchase adwords and align web metrics in their favor. For instance, Table 2 indicated that one NCAA program spent over \$18,000 in one month on Google Adwords, whereas another program in the same conference spent merely \$13 over the same time frame.

Furthermore, stratification among and between conference adword purchases also highlighted the amount programs were willing to spend to market their brands online. Over time, this can impact the amount of traffic and keyword searches about athletic programs, and their marketability both nationally and internationally. Studies like Caro and Benton's (2012), that found that football programs ranked in the top of their conference receive a greater portion of their conference's total revenue, highlight the differences between athletic departments and their ability to market their athletic offerings to a wider audience. Division I NCAA programs rely on the media revenue and publicity of their athletic departments (Dunnivant, 2004; Caro

& Benton, 2012; Greenwell et al., 2007; Pegoraro et al., 2010), and this study supports that prior research. This visibility spurs media deals, contracting rights, and sponsorships that help fund university and athletic department activities. This study elaborates on this phenomenon and reveals that such visibility is also stratified in online spaces.

This study also found that NCAA programs may view purchasing Google Adwords as a way to drive further revenue, mainly in the form of ticket sales and merchandise. Taylor and Bick's (2020) study of how institutions of higher education purchase Google Adwords found that many institutions promote expensive graduate and online degrees through Google Adwords, driving a perpetuation of spending: advertising drives sales which funds advertising which drives sales, ad infinitum. In this study, data suggest NCAA programs do the same. Table 3 suggests most NCAA programs who purchase in Google Adwords do so to sell tickets and merchandise. However, NCAA programs who do not achieve a level of success or popularity may not be able to compete in online spaces.

Consider a powerhouse football program such as the University of Alabama's or an instantly recognizable brand such as The University of Texas at Austin's Longhorns. These programs have either achieved a level of success or name brand recognition that could very well be perpetuating these programs' ability to purchase tens of thousands of dollars of online advertising per month.

Compare these Power 5 programs to the University of South Carolina's or West Virginia University's, neither of which feature a sport that has achieved the level of success as Alabama's football or name brand recognition such as Texas' Longhorns. Can South Carolina and West Virginia afford to compete in an online space with their conference peers? And if so, can they sustain online competition if their programs do not win championships or have name brand recognition? These questions could be addressed by future research into how either programmatic success (championships, tournament wins) or brand recognition (Texas Longhorns versus West Virginia Mountaineers) may influence a program's willingness to compete online and persist in that competition.

Finally, although a small sample size, this study suggests women's athletics may benefit from online advertising, as data in Table 3 suggest women's athletics may be more visible in online spaces due to concerted efforts made by NCAA programs. Historically, women's athletics have been marginalized by both the NCAA itself and member institutions, as women's programs often do not have access to the same budgets as men's programs, partially owed to the revenue driven by men's programs such as football and basketball. However, this study suggests women's athletics are provided equitable advertising opportunities in online spaces, even though this sampling frame is small. Little is known about how men's and women's athletics are advertised differently in online spaces (Cooper 2008, 2009),

but beyond the Internet, studies have found that men's NCAA sports dominate other advertising venues, such as television, print, and radio (Dunnivant, 2004; Jewell, 2020; Nite & Washington, 2017; Sanderson & Siegfried, 2018). Here, this study provides opportunity for future research to investigate how women's athletics are promoted and advertised in online spaces and whether NCAA programs can leverage the power of the Internet to advance women's athletics and better support women student-athletes.

Limitations

As with any study related to Internet advertising or Internet research in general, there are several limitations of this study that the research team needed to address. First, this information was gathered during Fall 2019, just before the COVID-19 pandemic was declared on March 11, 2020 (World Health Organization, 2020). As a result, this Internet marketing data is not current, as is the issue with all Internet data gathered for any study period. From here, researchers should gather longitudinal data to understand how NCAA programs and other organizations participate in online advertising through the Google system, which continues to dominate the online marketplace (Statscounter, 2020).

Moreover, this study only gathered data from August 2019 until December 2019 due to the time-consuming nature of gathering SEMrush data across several different Internet metrics. As technology advances, the research team is hopeful that these data gathering measures

will become simpler and more efficient, allowing researchers to gather more data over longer periods of time. However, considering the novelty of the data and the relative obscurity of the SEMrush data gathering system, we feel this study makes an important contribution to their body of research related to NCAA advertising and introduces a new source of Internet information that other researchers can use, expand, and expound upon.

Finally, related to the time-consuming nature of SEMrush data collection, this study only sampled a stratified number of institutions from the overall NCAA program population. As a result, this study's data may not be entirely generalizable to the larger population. Yet, this study is the first of its kind to report upon Google Adword purchasing a cross all three Divisions, all NCAA conferences, and both public and private institutions of higher education housing these NCAA programs. In the future, researchers could gather larger samples and track this Internet data over a longitudinal period to better understand purchasing techniques and trends over time. Gathering a larger sample size of longitudinal data is especially important as it relates to Internet advertising, as Internet advertising has changed substantially over the past ten years (Taylor & Bicak, 2020; Taylor et al., 2019) and will likely continue to do so. Although Google has a stronghold on the Internet search market to date (Statscounter, 2020), this could change and open up new opportunities for researchers to investigate NCAA programs and their online advertising techniques.

Conclusion

Our study explored the role of the Internet as it relates to online spending amongst NCAA institutions as a form of competition for revenue, marketability, and sponsorship allocation. We highlighted how the emerging online marketplace for NCAA athletics has created a competitive marketplace not only between NCAA athletic departments, but also between NCAA divisions. The online expenditure difference between NCAA divisions and member institutions has long-term consequences for how advertisers' partner with athletic departments to generate sustainable revenue. COVID-19 has only amplified the financial stratification among athletic departments, where approximately 60% of public 4-year universities are members of the NCAA, and losses of revenue impacted higher education institutions' debt, infrastructure and academic investments, and ability to incur necessary expenses (Friga, 2020; Swanson & Smith, 2020). Future qualitative research could examine how athletic departments leveraged the Internet to stay connected with respective fanbases, navigated the COVID-19 pandemic, and brought future advertisement and market investments to their athletic programs.

NCAA athletics will continue to be an important part of higher education, as well as entwined with American societal culture. As universities compete for students, advertising, research, and investments in their overall mission, the Internet will continue to serve as a tool for institutions to generate revenue and

increase market visibility. This study highlighted how online spending may influence financial stratification, and how future NCAA revenues could rely on how member institutions leverage their online presence to generate advertising and marketing investments. Understanding online spending will allow higher education administrators to reallocate budgets to increase competitiveness online, especially as it relates to marketing and advertising. Ultimately, fierce NCAA competition will continue to the delight of athletics fans across the country, but competition will also rage online, which portends much for the future of NCAA athletics.

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