# An Empirical Analysis of Individual Events in Collegiate Forensics 

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## Abstract

Anecdotally, it is a widely accepted notion in the United States' collegiate competitive speech and debate community that a competitor's strong record of competitive performance in the activity at the high school level is a powerful predictor of similar success in the activity at the collegiate level. However, no evidence has been brought to bear supporting this claim. This paper uses the universe of American Forensic Association National Individual Events Tournament results from 2013 to 2018 and links collegiate competitors to their respective high school performance data. I demonstrate evidence that high school experience does, in fact, appear to play a role in determining success at the collegiate level; however, it is far less impactful than experience at the collegiate level, and these effects vary across collegiate teams.

Key Words: Speech, Debate, Forensics, NSDA, AFA-NIET, Communication Studies, Speechwire, Individual Events

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## 1 Introduction

In the United States, the competitive Speech and Debate (SD) activity has thousands of competitors every year at the high school level, typically organized by the National Speech and \& Debate Association (NSDA) (National Speech \& Debate Association 2020). Of these students, a select few choose to pursue competition at the collegiate level (American Forensic Association 2020). The most prestigious of these tournaments, the American Forensic Association National Individual Events Tournament (AFA-NIET) draws hundreds of competitors from approximately 60 to 80 American Colleges and Universities each year (Speechwire 2020).

Within this community, it is commonly assumed that the competitors who enjoyed the most success at the high school level will also go on to succeed at the collegiate level, on average. Furthermore, members of the community - coaches, judges, competitors, and spectators - are often quick to assume the causality of this relationship. And this rationale results in the top level AFA programs dedicating tremendous amounts of resources and energy into scouring the county for top-level high school recruits, often with thousands of scholarship dollars on the line (Bradley University Scholarships and Other Assistance 2020) (University of Texas at Austin Speech 2020).

However, no one has ever actually conducted data analysis investigating this relationship. Although it makes intuitive sense, there is currently no empirical basis for backing the claim that stronger high school SD prospects evolve into strong collegiate competitors. In fact, it may be other omitted variables, such as quality of coaching, regional differences, or experience levels that are stronger predictors of collegiate SD success.

The implications of this research for the SD community cannot be understated. If it is indeed true that strong high school competitors, on average, develop into strong collegiate competitors, then AFA programs have reason to double down on their recruitment efforts, justifying thousands of dollars and hours of work. Conversely, if the relationship is weak or nonexistent, then the paradigm that recruitment matters could be upended entirely. If such is the case, then the community must consider other factors, and adjust their strategies accordingly.

Thus, this paper uses a novel approach to evaluate the strength of the relationship claim: by directly linking data of AFA-NIET competitors with their high school level National Speech \& Debate Association (NSDA) data, it becomes possible to determine to what extent a relationship exists: in the aggregate, stratified by AFA-NIET event category, controlled for team effects, and so on.

The rest of the paper is organized as follows: Section 2 is an overview of the activity, including necessary descriptions of AFA-NIET event categories. Section 3 describes the data used, and the process of its collection. Section 4 provides evidence on the relationship between high school and collegiate success. Section 5 discusses, and Section 6 concludes. All results tables are contained in the Appendix.

## 2 An Overview of Speech and Debate

### 2.1 Predictive Power

A useful analogy of the SD activity to the unfamiliar is that of track and field. Just as track and field events are essentially competitions of who can run fastest, jump highest, or throw furthest, SD events are competitions of various types of speaking, performing, and critical
thinking. Students at the high school level compete in various events and gain experience. Some of the skill is transferrable to other events; just as a participant in the 200-meter dash may be suited to compete in the 800 -meter dash, a contestant in Informative Speaking may be suited to compete in Persuasive Speaking. Furthermore, track and field events do not change very much at varying levels of the sport: the 100 -meter dash at the high school level is fundamentally the same as the 100 -meter dash at the Olympics. Only the level of competition, and maybe some subtle rules, are different.

This transferability of skill across events and competitive levels is the motivation for this research. Although there exists no empirical research of this kind for SD, there is plenty of documentation of competitor results - and their predictive power - for other activities. In American football, for instance, the physical profile of a prospect is often a powerful predictor of how that prospect will perform at a higher level of the sport (Mulholland and Jensen 2016) (Kuzmits and Adams 2008) (Robbins 2010). However, the results of these evaluations are limited: Kuzmits and Adams note, for instance, that an NFL prospect's physical performance grades in tests such as the 40-yard dash are interpreted best as a gatekeeping tool: for instance, a wide-receiver prospect who runs a five-second 40-yard dash is highly unlikely to succeed at the next level, but a wide-receiver prospect who runs a 4.5 -second 40 -yard dash - a good but unremarkable time - may or may not succeed in the NFL.

Similarly, statistics from live competition can be a useful, but not perfect, predictor. College football prospects at the tight end position who passed a certain threshold of touchdown catches in live games, for instance, were more likely than their peers to succeed at the NFL level (Mulholland and Jensen 2016). Across other positions, similar trends hold: on a position-byposition basis, holding all else equal, players who perform better in live competitions do tend to
perform more capably at the next higher level of competition, on average (Lyons, et al. 2011). But these metrics are often best evaluated holistically.

These trends occur across other American sports, including basketball (Berri, Brook and Fenn 2011), baseball (Burger and Walters 2009), and - of course - track and field (Loturco, et al. 2019). However, even given the best-quality measurements, their predictive power is limited, and the act of prospect selection itself is inherently probabilistic (Burger and Walters 2009) (Lyons, et al. 2011). Selecting a prospect with all of the best metrics still does not guarantee that a prospect will be successful; there are too many other factors, including quality of competition, coaching, motivation, injury risk, and others, to consistently and precisely select the best prospects all of the time. But competitors who perform worst in these settings often perform poorly at the next level of the sport - if they are selected to perform at all.

All of these factors - save perhaps injury risk - pertain to evaluating SD prospects as well. The act of recruiting SD competitors is also probabilistic: just because a prospect performed well in high school, for any given individual, may or may not translate to success at the collegiate level. But when team such as the Bradley University - a top-level school for this activity - choose who to offer scholarships to, they heavily consider metrics of high school success. Often, these teams have the ability to restrict team membership along these lines. Other teams, such as the University of Nebraska-Lincoln, also offer small scholarships, but do not restrict team membership: a student with no SD background whatsoever is free to join the UNL team, should they choose. As such, the filtration process seen in professional sports is not nearly as selective in SD recruiting, but this also enables competitors from lower levels of experience and success to succeed - or fail.

### 2.2 College Speech and Debate Recruiting Practices

The practices that go into developing and maintaining a collegiate SD team vary wildly. In the ideal setting, a team is operated out of their institution's Department of Speech or Communication Studies (Schnoor and Kozinski 2005). Since the mission of most collegiate teams is education (Boileau 1990), many institutions - but certainly not all - dedicate some degree of funding to the maintenance of a team. This may depend upon the size of an existing program: some teams have an incentive to demonstrate to their institutions as many members as possible (Schnoor and Kozinski 2005). Some of the most prestigious within the activity have scholarship endowments set aside explicitly for recruitment (University of Texas at Austin Speech 2020), whereas others do not. And some even go so far as to maintain close professional and personal relationships with high school teams (Brand 1996). Others have no form of outreach other than word of mouth.

All of this has created a sprawling system of formal and informal networks through which high school students choose to become involved in the activity at the collegiate level. Many students are directly recruited at regional or national high school tournaments; others find college teams through individual inquiry. Similarly, some collegiate teams restrict membership via audition (George Mason University Forensics 2020). Others open membership to all who are interested (University of Nebraska - Lincoln Department of Communication Studies 2020).

### 2.3 Overview of Individual Events

College speech and debate teams compete in a wide variety of categories, or "events." For the purposes of this study, only consider the events offered at the AFA-NIET. There are 11 events, known colloquially as "Individual Events," offered at this tournament - here, only ten are
considered. It was conceptually too difficult to evaluate performances of competitors entered in duo interpretation, and to determine which competitors in each pairing contributed to what proportion of their results. The following are the other ten AFA-NIET events; these descriptions are worth including because the skill set demanded of each is unique but similar (AFA-NIET Event Descriptions 2020).

After Dinner Speaking (ADS): An original, humorous speech by the student, designed to exhibit sound speech composition, thematic, coherence, direct communicative public speaking skills, and good taste. The speech should not resemble a night club act, an impersonation, or comic dialogue. Audio-visual aids may or may not be used to supplement and reinforce the message. Minimal notes are permitted. Maximum time limit is 10 minutes.

Communication Analysis (CA): Also known as "rhetorical criticism," an original speech by the student designed to offer an explanation and/or evaluation of a communication event such as a speech, speaker, movement, poem, poster, film, campaign, etc., through use of rhetorical principles. Audio-visual aids may or may not be used to supplement and reinforce the message. Manuscripts are permitted. Maximum time limit is 10 minutes.

Drama Interpretation (DI): A cutting that represents one or more characters from a play or plays of literary merit. The focus of the event is on the development of characterization. This material may be drawn from stage, screen, or radio. Use of manuscript is required. Maximum time limit is 10 minutes including introduction.

Extemporaneous Speaking (EXT): Contestants will be given three topics in the general area of current events, choose one, and have 30 minutes to prepare a speech that is the original work of the student. Maximum time limit for the speech is 7 minutes. Limited notes are permitted. Student will speak in listed order. Postings of topics will be staggered.

Impromptu Speaking (IMP): An impromptu speech, substantive in nature, with topic selections varied by round and by section. Topics will be derived from quotations. Speakers will have a total of 7 minutes for both preparation and speaking. Timing commences with the acceptance of the topics sheet. Limited notes are permitted.

Informative Speaking (INFO): An original, factual speech by the student on a realist subject to fulfill the general aim to inform the audience. Audio-visual aids may or may not be used to supplement and reinforce the message. Multiple sources should be used and cited in the development of the speech. Minimal notes are permitted. Maximum time is 10 minutes.

Persuasive Speaking (PERS): An original speech by the student designed to inspire, reinforce, or change the beliefs, attitudes, values or actions of the audience. Audio-visual aids may or may
not be used to supplement and reinforce the message. Multiple sources should be used and cited in the development of the speech. Minimal notes are permitted. Maximum time is 10 minutes.

Poetry Interpretation (POE): A selection or selections of poetry of literary merit, which may be drawn from more than one source. A primary focus of this event should be on the development of language. Play cuttings and prose works are prohibited. Use of manuscript is required. Maximum time limit is 10 minutes including introduction.

Program Oral Interpretation (POI): A program of thematically-linked selections of literary merit, chosen from two or three recognized genres of competitive interpretation (poetry/prose/drama). A primary focus of this event should be on the development of the theme through the use of narrative/story, language, and/or characterization. A substantial portion of the total time must be devoted to each of the genres used in the program. Different genre means the material must appear in separate pieces of literature (e.g. a poem included in a short story that appears only in that short story does not constitute a poetry genre). Only one selection may be original. Use of manuscript is required. Maximum time limit is 10 minutes including introduction.

Prose Interpretation (PRO): An original or selections of prose material of literary merit, which may be drawn from more than one source. Focus of this event is on the development of the narrative/story. Play cuttings and poetry are prohibited. Use of manuscript is required. Maximum time limit is 10 minutes including introduction.

These events are lumped into three categories, based on style, skillset used, and procedure of composition. They are as follows: ADS, CA, INFO and PERS are considered "public address" (PA), EXT and IMP are "limited preparation" (LP), and DI, POE, POI and PRO are "interp." It is commonly assumed (with limited evidence later in this paper) that competitors who succeed in one event in a category are typically capable of succeeding at other events in the same category - that is, success in event categories are positively correlated.

PA events are what unfamiliar audiences are most likely to associate with the activity. They are defined by their emphasis on research (albeit not traditionally "academic" research), argument, and analysis, they follow unique but similar expectations and criteria for performance (Jensen 1990): clean, conversational delivery, with minimal use of notes or script. Anyone familiar with a lecture from any undergraduate course in postsecondary education would likely
be able to distinguish the quality of performances, if not necessarily the quality of composition or argument.

LP events are structurally and performatively similar to PA events. However, as one could imagine, the time constraint of LP dramatically changes the skillset necessary to succeed. The ability to "think on one's feet" (Williams, Carver and Hart 1993) and condense the entire preparation process into a few short minutes makes LP a fundamentally different skillset from PA, even if their finished and delivered presentations appear similar.

Interp events would be recognized by lay audiences as resembling a one-person theatrical performance, where the competitor assumes the role of one or more characters in the retelling (interpretation) of published work(s) to advance a greater argument. Ideally, Interp performances balance both the characterization and performative aspect with the analytic (Rice 1991). The skillset is more distinct than those of PA or LP.

Most of these events are offered nationally at the high school level (National Speech \& Debate Association 2020), meaning that collegiate competitors likely have some familiarity and training with the corresponding collegiate event. ADS is one event that isn't nationally recognized by the NSDA, but some regional circuits such as Nebraska offer events with names such as "Entertainment Speaking" (Nebraska School Activities Association 2019), which is roughly analogous to ADS at the AFA-NIET. The only event with no real high school analogue is CA. Although many of the performative aspects of CA are similar to other public address events, the composition process for CA has no parallel at the high school level - although many high school rules manuals have no prohibition against using the CA structure in an event such as informative speaking.

## 3 Data and Methods

### 3.1 AFA-NIET Points Data

The AFA-NIET is held at the beginning of April each year at varying locations, typically a university campus, around the United States (American Forensic Association 2020). Students compete in up to six of eleven Individual Events and the best 24 performers in each event, based on the results of three preliminary rounds, are invited to compete in a six-competitor quarterfinal round, although on occasion, due to unbreakable ties, there is a seven-competitor quarterfinal. From there, the top three competitors in a quarterfinal advance to that event's six-competitor semifinal round, and the top three of each semifinal advance to that event's final round.

Placement is based on a combination of ranks and speaker points earned. In a typical AFA-NIET preliminary round, six competitors will perform, and a panel two judges will rank the competitors from 1st to 5th. Although there are usually six competitors, the judges rank the bottom two competitors 5 th and 5 th. Speaker points are a subjective measure of quality, ranked on a scale of 1-25, where 25 is the highest quality.

To determine who advances to the quarterfinal round of an event, each student's cumulative rank totals are summed after dropping their worst. For example, this system, after three preliminary rounds with two judges each, a competitor who took a 1st place ranking from five judges and a 3rd from the sixth would have a "rank total" of five - since the 3rd place ranking, that competitor's worst, would be dropped from consideration. In order to break ties of rank, the same procedure is applied to speaker points: summing speaker points and dropping the competitor's lowest score.

In determining which competitors overall had the most success, the tournament calculates what are called "individual sweepstakes" points. In this study, a simplified but analogous form is used to determine competitors' AFA-NIET success, the primary dependent variables of interest. For each 1st place ranking a competitor earns, they receive three points; each 2 nd two points, and each 3 rd one point. Ranks of 4 th or below receive no points. Although the AFA-NIET has a different scoring system for elimination rounds, this study still uses the 1-2-3 system, operating under the assumption that, on the margin, there is little to no difference between the 24 th-best speaker, who places last amongst all of the quarterfinalists, and the competitor who placed 25 th , and thus didn't make a quarterfinal at all.

This study uses AFA-NIET results from 2013 to 2018, collected from Speechwire Tournament Services. 2013 is the first year that the tournament results included team names associated with each student. Considered is every single competitor and event that participated at the AFA-NIET over this timeframe. Table 1 displays summary statistics of points earned within each event.

Table 1: Summary of AFA-NIET Events 2013-2018

| Event | N | Mean | St. Dev. Min | Pctl(25) | Median | Pctl(75) | Max |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ADS | 790 | 7.699 | 8.349 | 0.000 | 2.000 | 5.500 | 9.000 | 49.000 |
| CA | 689 | 7.994 | 8.233 | 0.000 | 3.000 | 6.000 | 9.000 | 49.000 |
| DI | 846 | 7.546 | 8.100 | 0.000 | 2.000 | 6.000 | 9.000 | 59.000 |
| EXT | 765 | 7.810 | 8.649 | 0.000 | 2.000 | 5.000 | 10.000 | 51.000 |
| IMP | 853 | 7.597 | 7.939 | 0.000 | 2.000 | 6.000 | 9.000 | 51.000 |
| INFO | 846 | 7.660 | 7.865 | 0.000 | 3.000 | 6.000 | 9.000 | 49.000 |
| PERS | 798 | 7.668 | 8.258 | 0.000 | 2.000 | 6.000 | 9.000 | 52.000 |
| POE | 806 | 7.778 | 8.411 | 0.000 | 2.250 | 6.000 | 9.000 | 50.000 |
| POI | 797 | 7.671 | 8.425 | 0.000 | 2.000 | 6.000 | 9.000 | 54.000 |
| PRO | 929 | 7.471 | 7.712 | 0.000 | 3.000 | 6.000 | 9.000 | 52.000 |
| Total | 2,874 | 21.695 | 25.322 | 0 | 5 | 13 | 29 | 230 |

Each observation in the data set is a competitor, indexed by year, team, and points, both across events and in total. Each observation also has a variable indicating how much experience in collegiate forensics that they have, defined as the number of AFA-NIETs the student has competed at previously.

A note on the experience variable: there are likely some errors in the 2013, 2014, and 2015 year observations. Since the variable was coded as the student's most recent year minus their first year (e.g. $2017-2015=2$ years of experience), it fails to capture the experience of the 2013 senior class of competitors, for instance. Furthermore, attempting to code the variable in reverse - seeing who dropped out after 2013, for instance - would not work because there isn't a consistent way to tell whether or not competitors disappeared because they graduated or otherwise lost AFA-NIET eligibility, or because they simply quit the activity after 2013. All experience variables from 2015 onward should be correct.

### 3.2 NSDA Points Data

Since this paper investigates the relationship between high school and collegiate performance in Individual Events, it is quite convenient that the NSDA has a points system used to track the career success of nearly every high school competitor. There are three ways for high school competitors to earn points: debate events, speech (Individual Events) events, or service points (National Speech \& Debate Association 2020). The NSDA explicitly defines the criteria for earning points as follows:

## Debate:

Public Forum, Lincoln-Douglas, and Policy Debate are recorded in the "Debate" category, and are worth 6 points per win and 3 points per loss or non-decision.

Only one win/loss record is recorded per round, so for a panel of judges, the prevailing decision is entered. Congressional Debate or other assembly speaking is recorded in the "Congress" category. Students earn 1-6 points per speech or per complete hour of presiding (so a panel of judge scores must be averaged). NonAssociation debate events, such as Mock Trial, Parliamentary Debate, or Spontaneous Argument are recorded in the "Debate" category, and are worth 4 points per win and 2 points per loss or non-decision.

## Speech:

Public speaking or interpretive events are recorded by their individual category name. Student ranks, or rank equivalents (conversion for point totals or alternate systems) are used. Only one rank or round placing may be entered for a panel of judges. For elimination rounds prior to a final round, an average of a panel's ranks may be used. For the final round, tournament placement is the rank. Main Association events may earn 6 points per $1_{\text {st }}$ rank, 5 points per 2 nd rank, 4 points per 3 rd rank, 3 points per 4th rank, and 2 points for ranks of 5 and below. Those events include Extemporaneous Speaking, Original Oratory, Informative Speaking, and Humorous and Dramatic, Duo, and Program Oral Interpretation.

Students may also earn up to 200 "service points" per academic year, which are earned for public speaking in some non-forensics setting, judging a competition, coaching at a lower level of the activity, and others types of service to the activity (National Speech \& Debate Association 2020). For the most part, an overwhelming majority of a student's points over a high school career will not be service points.

Although this study only analyzes collegiate Individual Events, the use of points does not discriminate between points earned for debate, speech, or service. However, since the accumulation of total points is considered as a broad measure of experience and success, using this measure is justified.

The NSDA also publishes a list of the top 500 high schools in the nation. These rankings are based upon what the NSDA calls "team strength:" a measure of how many active students and coaches a high school team has, weighted by their competitive success. Using this list as a guide, I downloaded the complete competitor history from each top 500 school, which includes students' names, NSDA identification numbers, high school graduation year, and points earned. In addition, I acquired the points data for all AFA-NIET competitors who did not attend a top 500 high school, and subset the data to all graduation years between 2007 and 2018, which encompass the reasonable timeframes for the AFA-NIET competitors to have graduated high school.

Table 2 shows summary statistics for NSDA points across all competitors in the sample.

Table 2: Summary of NSDA Points

| Statistic | N | Mean | St. Dev. Min Pctl(25) Median | Pctl(75) | Max |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NSDA Points | 148,470 | 284.907 | 425.535 | 0.010 | 36.000 | 106.000 | 349.000 |
| $7,942.000$ |  |  |  |  |  |  |  |

### 3.3 Linking Data

The most difficult part of creating the data set was linking the NSDA points data to their collegiate counterparts. With heavy assistance, I designed a matching algorithm to search over the pool of AFA-NIET competitors and link them, by first and last name, to their high school counterparts. On occasion, this linked a competitor to a wrong name
and point total, where there were multiple entries of that competitor's name. For instance, "Jordan Wong" in the AFA-NIET dataset graduated high school in 2016, but the algorithm matched to a "Jordan Wong" who graduated in 2008. Other errors of this type were identified and corrected manually.

Another issue wasn't with the matching algorithm itself but instead the data pool. Initially, only the top 500 high schools were collected, but only about $10 \%$ of the AFANIET pool had a match to high school data - indicating that most AFA-NIET competitors, in fact, did not come from a top 500 high school. To remedy this, I manually searched for each individual AFA-NIET competitor in the NSDA database who had a missing entry from the algorithm and made a manual correction.

Finally, all NSDA point scores were converted into standard deviations, rather than raw point totals. For instance, a competitor whose NSDA point variable is close to "one" acquired around 710 NSDA points in real life: 710 being close to one standard deviation above the high school average of 284 . Table 3 shows compares summary statistics for the entire NSDA sample with the AFA-NIET pool, calculated in standard deviations of the NSDA pool.

Table 3: NSDA Sample versus AFA-NIET sample

| Points (SD) | N | Mean St. Dev. |  |  |  | Min | Pctl(25) | Median | Pctl(75) |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | Max |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NSDA | 150,229 | 0 | 1.000 | -0.689 | -0.601 | -0.427 | 0.165 | 14.266 |
| AFA-NIET | 2870 | 1.040 | 1.821 | -0.687 | 0.000 | 0.000 | 1.737 | 14.266 |

### 3.4 Empirical Design

This study uses simple linear regression to consider the relationship between high school forensics success, measured as a standardized NSDA point total, and AFA-NIET outcomes, controlling for factors such as team and experience. Each regression is assumes the following form:

$$
Y=\beta_{0}+\beta_{1} X_{1}+\cdots+\beta_{n} X_{n}+\epsilon
$$

Where $Y$ is the AFA-NIET outcome in question, $\beta_{0}$ is a constant, $\beta_{1 \ldots n}$ are coefficients, $X_{1 \ldots \mathrm{n}}$ are explanatory variables of interest, and $\epsilon$ is the error term. Additionally, the empirical design uses a series of correlation matrices to describe the relationship between the various events.

## 4 Results

> All results tables are listed in the Appendix.

### 4.1 Event Correlations

Tables 4, 5 and 6 are correlation matrices for the PA, LP, and Interp categories of events. That each correlation is positive matches the predictions made in Section 2.3. It also makes sense that no correlations (save X -to-X) are particularly close to 1 , an example of both the variability of event success and the different skills needed for each, despite being the same category.

### 4.2 NSDA and AFA-NIET Experience on Overall Outcomes

Table 7 summarizes the regressions of experience levels at the high school and collegiate levels on AFA-NIET total points, points per event, and number of events competed in. Note that
total mean points are statistically significant at the 0.01 level for both explanatory variables, whereas NSDA points lacks significance on number of events, although AFA-NIET experience has statistical significance for the number of events at the 0.01 level. The sign of the coefficients matches the predictions made by the activity: that, on average, higher high school success is associated with higher AFA-NIET success.

Table 8 summarizes the regressions of high school experience on AFA-NIET outcomes for first-year competitors only. Table 9 summarizes the regressions of high school and AFANIET experience on AFA-NIET outcomes for non-first-year competitors. As in Table 7, Tables 8 and 9 show statistical significance at the 0.01 level for each variable except NSDA points on number of events.

### 4.3 Team Fixed-Effects on Overall Outcomes

Table 10 shows the team-fixed effects estimates for NSDA and AFA-NIET experience on AFA-NIET outcomes. Table 11 shows the team fixed-effects estimates for first-years only, and Table 12 shows the team fixed-effects estimates for non-first-years only. Note that the team not listed is Arizona State University, and all coefficient estimates are in comparison to ASU.

### 4.4 NSDA and AFA-NIET Experience on Outcomes by Event

Table 13 shows the estimates for experience levels on total points acquired in each event.
Tables 14 and 15 show these estimates for first-years and non-first-years, respectively. Note that the only section lacking statistical significance is NSDA points on ADS, for first-years only.

## 5 Discussion

### 5.1 Event Correlations

It isn't surprising to see that the three categories of event have positive correlations: this evidence supports the claim that the skillset demanded of each event transfers roughly across other events in the same category. However, there are a couple of limitations of this analysis.

First, the study only observed events that actually qualified for the AFA-NIET. It is possible that events that failed to qualify for the tournament have individual-specific correlations that are different. It could also be that events that qualified for the NFA National Tournament, or a number of other non AFA-NIET tournaments, have different measures of these relationships.

Second, the measurement only considers competitors who competed in each and every event in a given category. For competitors who do both LP events, this isn't an issue. But for competitors who do PA or Interp, the correlations between just two events in the category may be different. And, since no competitor did each of the ten events - per tournament rules - it is impossible to create a correlation matrix across all ten events.

### 5.2 NSDA and AFA-NIET Experience on Overall Outcomes

That there is a positive correlation and statistically significant relationship between high school experience and AFA-NIET success is no surprise; after all, it is the foundational assumption for the recruiting paradigm within the activity. However, the effects seem to be strongest in the short term: the magnitude of the AFA-NIET experience coefficients dwarfs the NSDA experience ones, implying that the effects come close to equalizing over the course of a four-year collegiate career.

It's worth noting that the number of events variable saw no statistical significance as a function of high school experience. There may be a number of reasons for this. Some teams, such as Western Kentucky University, restrict their entries in such a way that even a top-tier recruit only competes in one or two events in their first year. As an example, Lily Nellans at Western Kentucky University only competed in a single event at her first AFA-NIET, despite having earned the most NSDA points of anyone in the history of the activity. It could be that enough programs have this sort of restriction that the number of events that a first-year competes in, even if it doesn't reflect their true ability to succeed in multiple events.

Interestingly, the constant for total points for first-years is actually higher than that of their more experienced peers - indicating that, on average and controlling for high school experience, a first-year competitor can expect to earn slightly more points than a person at their second, third, or fourth AFA-NIET. This lacks any sort of simple explanation.

The number of observations in the first-year vs non-first-year data subsets is a bit misleading: as addressed in Section 3.1, every competitor in the 2013 data subset is considered a first-year competitor, which is factually false. An implication of this is that the estimates for the first-year dataset are likely biased upward, as they get to enjoy the successes of every "first-year" from 2013.

Finally, the R-Squared values are fairly low; in particular, the R-Squared totals for the first-years dataset are incredibly close to zero, implying that high school experience alone has very little explanatory power for AFA-NIET outcomes amongst these individuals. Team-level effects play a role, as discussed in Section 5.3.

### 5.3 Team Fixed-Effects on Overall Outcomes

Team-level effects account for much of the variation in AFA-NIET outcomes. Although the coefficients for high school and prior collegiate experience don't change significantly, there is considerable evidence that differences in teams - be it coaching staffs, institutional resources, or something else - makes a difference in predicting competitor outcomes. For instance, a firstyear student competing at Arizona State University (the "constant" in Tables 10-12) could expect to earn, on average, 16 total points distributed across nearly three events. But that's 20 points fewer than a first-year student at Bradley University - widely considered one of the best teams in the country - could expect to earn.

Also of note are the high R-Squared values, relative to the analyses without team effects. Obviously, there is still a great degree of factors that the data does not capture, but including the team effects often doubles the R-Squared value, if not more, suggesting that there is a great deal of explanatory power that can be attributed to individual teams.

This reveals another limitation of using NSDA data as an operationalization of high school experience: it is not precisely the same thing as high school quality. A high NSDA point total is only a sure sign of one thing: volume. High-point earners likely have competed in more competitions than their low-point counterparts, but that says nothing about the quality of an individual's raw talent. Obviously, there is more to high school success than point totals, and the AFA team-effects captures some of that. A typical Bradley or George Mason University recruit is likely a "higher quality" prospect, even if their NSDA point totals do not reflect this.

A limitation these tables, however, is that it only captures the most extreme cases of team-level effects: either a top-tier team such as the University of Texas at Austin, or a lowerpedigree team such as Cornell University sees statistically significant effects. Teams in the
middle don't have a clear picture of team effects - either because there aren't any, or because the AFA data fails to capture some other critical measure.

### 5.4 NSDA and AFA-NIET Experience on Outcomes by Event

As above, it isn't surprising that all of the relationships between NSDA points and eventspecific point totals are positive. If it turned out to be otherwise, then the entire recruiting paradigm might need to be reevaluated. It also isn't surprising that collegiate experience has a much stronger effect than high school experience - in particular, in the non-first-year pool, the experience estimate grows incredibly strong.

The distribution of effects across events also seems to be related to the events available at the high school level. Extemp, Poetry, and Program Oral Interpretation have the highest NSDA coefficients, and relatively low constants, suggesting that those are the events where high school experience matters the most, and that those without high school experience have the hardest time picking that event up.

The only event that lacks a statistically significant NSDA coefficient is ADS within the first-year sample, although other events are only significant at the 0.05 or 0.01 levels. Furthermore, the magnitude of most coefficients is smaller. This is a little surprising; amongst a group of first-year competitors, one would expect that high school experience would make more of a difference, rather than less. It could be that the high school impact is more pronounced over a longer timeframe, as Table 15 suggests. The coefficients jumping higher there imply that the recruitment strength may not be realized until that talent is more fully developed over several years.

## 6 Conclusion

Collegiate speech and debate teams often claim that recruitment is an integral part of their success - while a sensible claim, one that had not been empirically tested. Since thousands of people compete in this activity and the best compete for collegiate scholarship funding, having evidence to support such a claim is paramount.

Using high school competitive data linked to collegiate competitors, I offer evidence that generally supports such a claim. It is not absolute: by no means does having a successful high school recruit always translate into collegiate success. And the effects vary across different teams. It is difficult to precisely tease out the direction of causality: teams are successful because they attract strong recruits, but also have significant team-effects abilities to develop talent which makes that team more attractive for recruits.

There are strong limitations to this analysis. First, by only considering the AFA-NIET and not another national tournament, we lose data that could generate different estimates although I suspect the general direction wouldn't change. Second, NSDA points are only so useful as an evaluation of high school success. There are many cases of competitors who had relatively low point totals but saw tremendous high school success; conversely, there were some who had high point totals not because of skill, but volume and longevity. A more complete and thorough analysis would use additional tournaments and more nuanced measures of high school success. And future research might do well to use factors such as tournament location, individual judge fixed-effects (where available), and consider specific coaches instead of merely their teams.

## Appendix

Table 4: PA Correlations

|  | ADS | CA | INFO PERS |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| ADS | 1 | 0.516 | 0.330 | 0.506 |
| CA |  | 1 | 0.426 | 0.580 |
| INFO |  |  | 1 | 0.472 |
| PERS |  |  |  | 1 |

Table 5: LP Correlations

|  | EXT | IMP |
| :--- | :---: | :---: |
| EXT | 1 | 0.535 |
| IMP |  | 1 |

Table 6: Interp Correlations
DI POE POI PRO
DI $\quad 10.4310 .5210 .370$
POE $\quad 1 \quad 0.4950 .315$

POI 10.347
PRO 1

Table 7: NSDA and AFA-NIET Experience on AFA-NIET Outcomes

|  | Outcome |  |  |
| :--- | :---: | :---: | :---: |
|  | Total | Mean | Number of Events |
|  | $(1)$ | $(2)$ | $(3)$ |
| NSDA Points (Standard Deviation) | $2.484_{* * *}$ | $0.858^{* * *}$ | 0.015 |
| AFA-NIET Experience | $(0.232)$ | $(0.059)$ | $(0.013)$ |
|  | $11.641^{* * *}$ | $2.143^{* * *}$ | $0.663^{* * *}$ |
| Constant | $(0.480)$ | $(0.121)$ | $(0.028)$ |
|  | $11.504^{* * *}$ | $4.531^{* * *}$ | $2.374 * * *$ |
| Observations | $(0.557)$ | $(0.140)$ | $(0.032)$ |
| R2 | 2,870 | 2,870 | 2,870 |
| Adjusted R2 | 0.216 | 0.176 | 0.172 |
| Residual Std. Error (df = 2867) | 0.216 | 0.176 | 0.172 |
| F Statistic (df =2; 2867) | 22.421 | 5.655 | 1.292 |
| Note: | $395.872 * * * 306.594 * * *$ | $298.424 * * *$ |  |

Table 8: NSDA and AFA-NIET Experience on AFA-NIET Outcomes for First-Years

|  | Outcome |  |  |
| :--- | :---: | :---: | :---: |
|  | Total | Mean | Number of Events |
|  | $(1)$ | $(2)$ | $(3)$ |
| NSDA Points (Standard Deviation) | $1.638^{* * *}$ | $0.815^{* * *}$ | 0.022 |
| Constant | $(0.275)$ | $(0.076)$ | $(0.019)$ |
|  | $12.279_{* * *}$ | $4.548^{* * *}$ | $2.305^{* * *}$ |
| Observations | $(0.511)$ | $(0.141)$ | $(0.034)$ |
| R2 | 1,644 | 1,644 | 1,644 |
| Adjusted R2 | 0.021 | 0.065 | 0.001 |
| Residual Std. Error (df = 1642) | 0.021 | 0.064 | 0.0002 |
| F Statistic (df = 1; 1642) | 18.363 | 5.087 | 1.235 |
| Note: | $35.388^{* * *}$ | $114.015 * * *$ | 1.396 |

Table 9: NSDA and AFA-NIET Experience on AFA-NIET Outcomes for non-First-Years

|  | Outcome |  |  |
| :--- | :---: | :---: | :---: |
|  | Total | Mean | Number of Events |
|  | $(1)$ | $(2)$ | $(3)$ |
| NSDA Points (Standard Deviation) | $3.252^{* * *}$ | $0.898^{* * *}$ | 0.011 |
| AFA-NIET Experience | $(0.384)$ | $(0.091)$ | $(0.019)$ |
|  | $11.610^{* * *}$ | $2.042 * * *$ | $0.397 * * *$ |
| Constant | $(1.109)$ | $(0.262)$ | $(0.056)$ |
|  | $10.496^{* * *}$ | $4.661 * * *$ | $2.870 * * *$ |
| Observations | $(1.873)$ | $(0.443)$ | $(0.094)$ |
| R2 | 1,226 | 1,226 | 1,226 |
| Adjusted R2 | 0.143 | 0.127 | 0.041 |
| Residual Std. Error (df = 1223) | 0.141 | 0.126 | 0.040 |
| F Statistic (df = 2; 1223) | 26.846 | 6.342 | 1.347 |
| Note: | $101.635 * * *$ | $88.947 * * *$ | $26.388 * * *$ |

Table 10: Team Fixed-Effects

|  | Outcome |  |  |
| :---: | :---: | :---: | :---: |
|  | Total <br> (1) | Mean <br> (2) | Number of Events (3) |
| NSDA Points (Standard Deviation) | $\begin{aligned} & 1.293 * * * \\ & (0.234) \end{aligned}$ | $\begin{gathered} 0.299_{* * *}^{*} \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.058^{* * *} \\ (0.014) \end{gathered}$ |
| AFA-NIET Experience | $\begin{gathered} 10.294 * * * \\ (0.456) \end{gathered}$ | $\begin{aligned} & 1.646 * * * \\ & (0.100) \end{aligned}$ | $\begin{gathered} 0.634^{* * *} \\ (0.027) \end{gathered}$ |
| Azusa Pacific University | $\begin{aligned} & -13.658 \\ & (12.330) \end{aligned}$ | $\begin{aligned} & -3.932 \\ & (2.707) \end{aligned}$ | $\begin{gathered} 0.759 \\ (0.717) \end{gathered}$ |
| Ball State University | $\begin{gathered} 27.719 * * * \\ (7.037) \end{gathered}$ | $\begin{aligned} & 6.897 * * * \\ & (1.545) \end{aligned}$ | $\begin{gathered} 0.470 \\ (0.409) \end{gathered}$ |
| Belmont University | $\begin{gathered} 4.032 \\ (7.317) \end{gathered}$ | $\begin{gathered} 2.376 \\ (1.607) \end{gathered}$ | $\begin{aligned} & -0.138 \\ & (0.425) \end{aligned}$ |
| Bethel College | $\begin{gathered} -18.163 * * * \\ (4.929) \end{gathered}$ | $\begin{aligned} & -2.400 * * \\ & (1.082) \end{aligned}$ | $\begin{gathered} -1.232^{* * *} \\ (0.287) \end{gathered}$ |
| Bethel University | $\begin{aligned} & -14.924 \\ & (10.811) \end{aligned}$ | $\begin{aligned} & -3.789 \\ & (2.373) \end{aligned}$ | $\begin{aligned} & -0.912 \\ & (0.628) \end{aligned}$ |
| Boise State University | $\begin{aligned} & -13.785 \\ & (12.324) \end{aligned}$ | $\begin{aligned} & -4.398 \\ & (2.706) \end{aligned}$ | $\begin{gathered} 2.026^{* * *} \\ (0.716) \end{gathered}$ |
| Bradley University | $\begin{gathered} 14.648^{* * *} \\ (3.812) \end{gathered}$ | $\begin{gathered} 6.412^{* * *} \\ (0.837) \end{gathered}$ | $\begin{gathered} -0.628_{* * *} \\ (0.222) \end{gathered}$ |
| Butte College | $\begin{gathered} -17.223 \\ (10.812) \end{gathered}$ | $\begin{gathered} -4.909 * * \\ (2.374) \end{gathered}$ | $\begin{aligned} & -0.903 \\ & (0.629) \end{aligned}$ |
| California State University Chico | $\begin{gathered} -13.824 \\ (9.787) \end{gathered}$ | $\begin{aligned} & -3.872^{*} \\ & (2.149) \end{aligned}$ | $\begin{aligned} & -0.312 \\ & (0.569) \end{aligned}$ |
| California State University, Fullerton | $\begin{aligned} & -17.748 \\ & (10.807) \end{aligned}$ | $\begin{aligned} & -3.617 \\ & (2.373) \end{aligned}$ | $\begin{gathered} -1.821^{* * *} \\ (0.628) \end{gathered}$ |
| California State University, Long Beach | $\begin{aligned} & -9.901 * \\ & (5.698) \end{aligned}$ | $\begin{gathered} -2.866 * * \\ (1.251) \end{gathered}$ | $\begin{aligned} & -0.435 \\ & (0.331) \end{aligned}$ |
| California State University, Los Angeles | $\begin{gathered} -12.275 * * \\ (4.949) \end{gathered}$ | $\begin{gathered} -2.272 * * \\ (1.087) \end{gathered}$ | $\begin{gathered} -0.844 * * * \\ (0.288) \end{gathered}$ |


| California State University, Northridge | $\begin{gathered} -15.705_{* *} \\ (8.007) \end{gathered}$ | $\begin{gathered} -3.556 * * \\ (1.758) \end{gathered}$ | $\begin{gathered} -0.991 * * \\ (0.465) \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Carroll College | $\begin{gathered} -19.340^{* * *} \\ (6.429) \end{gathered}$ | $\begin{gathered} -4.437 * * * \\ (1.412) \end{gathered}$ | $\begin{aligned} & -0.659 * \\ & (0.374) \end{aligned}$ |
| Cedar Crest College | $\begin{gathered} -15.500 * * \\ (7.041) \end{gathered}$ | $\begin{aligned} & -3.356 * * \\ & (1.546) \end{aligned}$ | $\begin{gathered} -1.093 * * * \\ (0.409) \end{gathered}$ |
| Central Michigan University | $\begin{gathered} -6.091 \\ (12.329) \end{gathered}$ | $\begin{gathered} 0.934 \\ (2.707) \end{gathered}$ | $\begin{gathered} -0.912 \\ (0.717) \end{gathered}$ |
| Central Wyoming College | $\begin{gathered} -18.049 \\ (12.324) \end{gathered}$ | $\begin{aligned} & -4.075 \\ & (2.706) \end{aligned}$ | $\begin{gathered} -2.001^{* * *} \\ (0.716) \end{gathered}$ |
| City College of San Francisco | $\begin{gathered} -11.602 * \\ (7.044) \end{gathered}$ | $\begin{aligned} & -0.801 \\ & (1.546) \end{aligned}$ | $\begin{gathered} -1.120 * * * \\ (0.409) \end{gathered}$ |
| Clark College | $\begin{aligned} & -17.424 \\ & (20.813) \end{aligned}$ | $\begin{aligned} & -4.955 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -1.912 \\ & (1.210) \end{aligned}$ |
| Colorado Christian University | $\begin{gathered} -17.127_{* *} \\ (7.628) \end{gathered}$ | $\begin{gathered} -4.536_{* * *} \\ (1.675) \end{gathered}$ | $\begin{gathered} -1.008_{* *}^{*} \\ (0.443) \end{gathered}$ |
| Concordia - Moorhead | $\begin{gathered} -13.653^{* * *} \\ (4.202) \end{gathered}$ | $\begin{gathered} -2.446 * * * \\ (0.923) \end{gathered}$ | $\begin{gathered} -0.556 * * \\ (0.244) \end{gathered}$ |
| Concordia University Irvine | $\begin{aligned} & -7.666^{*} \\ & (4.294) \end{aligned}$ | $\begin{aligned} & -1.322 \\ & (0.943) \end{aligned}$ | $\begin{aligned} & -0.204 \\ & (0.250) \end{aligned}$ |
| Concordia University, Nebraska | $\begin{gathered} -14.424 \\ (12.329) \end{gathered}$ | $\begin{aligned} & -2.622 \\ & (2.707) \end{aligned}$ | $\begin{gathered} -1.579 * * \\ (0.717) \end{gathered}$ |
| Copper Mountain College | $\begin{aligned} & -16.112 \\ & (14.911) \end{aligned}$ | $\begin{aligned} & -4.550 \\ & (3.274) \end{aligned}$ | $\begin{aligned} & -0.898 \\ & (0.867) \end{aligned}$ |
| Cornell University | $\begin{gathered} -20.362^{* * *} \\ (6.128) \end{gathered}$ | $\begin{gathered} -4.457 * * * \\ (1.345) \end{gathered}$ | $\begin{gathered} -1.762^{* * *} \\ (0.356) \end{gathered}$ |
| Creighton University | $\begin{gathered} -2.460 \\ (14.905) \end{gathered}$ | $\begin{gathered} 0.356 \\ (3.272) \end{gathered}$ | $\begin{aligned} & -0.482 \\ & (0.866) \end{aligned}$ |
| CSU Pueblo | $\begin{gathered} -16.424 \\ (20.813) \end{gathered}$ | $\begin{aligned} & -3.955 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -1.912 \\ & (1.210) \end{aligned}$ |
| CSU Speech and Debate Society | $\begin{gathered} -17.588 \\ (12.328) \end{gathered}$ | $\begin{aligned} & -4.993 * \\ & (2.707) \end{aligned}$ | $\begin{aligned} & -0.920 \\ & (0.717) \end{aligned}$ |
| Diablo Valley College. | $\begin{gathered} -14.424 \\ (14.910) \end{gathered}$ | $\begin{aligned} & -1.955 \\ & (3.273) \end{aligned}$ | $\begin{gathered} -1.912 * * \\ (0.867) \end{gathered}$ |


| Doane University | $\begin{aligned} & -4.973 \\ & (4.409) \end{aligned}$ | $\begin{aligned} & -0.544 \\ & (0.968) \end{aligned}$ | $\begin{aligned} & -0.156 \\ & (0.256) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Eastern Michigan University | $\begin{gathered} 10.042 * * \\ (5.085) \end{gathered}$ | $\begin{gathered} 3.187_{* * *}^{* *} \\ (1.116) \end{gathered}$ | $\begin{gathered} 0.399 \\ (0.296) \end{gathered}$ |
| El Paso Community College | $\begin{aligned} & -7.904 \\ & (4.993) \end{aligned}$ | $\begin{aligned} & -1.125 \\ & (1.096) \end{aligned}$ | $\begin{gathered} -0.375 \\ (0.290) \end{gathered}$ |
| Florida State University | $\begin{aligned} & -7.307 \\ & (4.665) \end{aligned}$ | $\begin{aligned} & -1.745 * \\ & (1.024) \end{aligned}$ | $\begin{gathered} 0.057 \\ (0.271) \end{gathered}$ |
| George Mason University | $\begin{gathered} 2.584 \\ (3.739) \end{gathered}$ | $\begin{gathered} 4.341 * * * \\ (0.821) \end{gathered}$ | $\begin{gathered} -1.121 * * * \\ (0.217) \end{gathered}$ |
| Glendale Community College of Arizona | $\begin{gathered} -14.674 \\ (10.811) \end{gathered}$ | $\begin{gathered} -3.872 \\ (2.373) \end{gathered}$ | $\begin{aligned} & -0.412 \\ & (0.628) \end{aligned}$ |
| Glendale Community College, CA | $\begin{gathered} -12.424 \\ (14.910) \end{gathered}$ | $\begin{gathered} -0.705 \\ (3.273) \end{gathered}$ | $\begin{aligned} & -1.412 \\ & (0.867) \end{aligned}$ |
| Grand Canyon University | $\begin{gathered} -7.424 \\ (20.813) \end{gathered}$ | $\begin{gathered} 0.045 \\ (4.569) \end{gathered}$ | $\begin{aligned} & -0.912 \\ & (1.210) \end{aligned}$ |
| Grossmont College | $\begin{aligned} & -17.424 \\ & (20.813) \end{aligned}$ | $\begin{aligned} & -4.955 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -1.912 \\ & (1.210) \end{aligned}$ |
| Gustavus Adolphus College | $\begin{gathered} 4.131 \\ (4.451) \end{gathered}$ | $\begin{gathered} 1.357 \\ (0.977) \end{gathered}$ | $\begin{aligned} & -0.073 \\ & (0.259) \end{aligned}$ |
| Hastings College | $\begin{aligned} & -6.538 \\ & (4.082) \end{aligned}$ | $\begin{aligned} & -1.554 * \\ & (0.896) \end{aligned}$ | $\begin{aligned} & -0.290 \\ & (0.237) \end{aligned}$ |
| Hutchinson Community College | $\begin{gathered} -14.900^{* * *} \\ (5.374) \end{gathered}$ | $\begin{gathered} -3.627 * * * \\ (1.180) \end{gathered}$ | $\begin{gathered} -0.922 * * * \\ (0.312) \end{gathered}$ |
| Illinois State University | $\begin{gathered} 2.948 \\ (3.959) \end{gathered}$ | $\begin{aligned} & 1.630 * \\ & (0.869) \end{aligned}$ | $\begin{gathered} 0.042 \\ (0.230) \end{gathered}$ |
| James Madison University | $\begin{gathered} -13.554^{* * *} \\ (4.341) \end{gathered}$ | $\begin{gathered} -2.579 * * * \\ (0.953) \end{gathered}$ | $\begin{aligned} & -0.476 * \\ & (0.252) \end{aligned}$ |
| Kansas City KS Community College | $\begin{aligned} & -14.026 \\ & (14.906) \end{aligned}$ | $\begin{aligned} & -2.460 \\ & (3.273) \end{aligned}$ | $\begin{aligned} & -1.462^{*} \\ & (0.867) \end{aligned}$ |
| Kansas State University | $\begin{aligned} & -4.477 \\ & (4.408) \end{aligned}$ | $\begin{aligned} & -0.936 \\ & (0.968) \end{aligned}$ | $\begin{gathered} 0.095 \\ (0.256) \end{gathered}$ |
| Las Positas College | $\begin{gathered} -4.424 \\ (20.813) \end{gathered}$ | $\begin{aligned} & -1.705 \\ & (4.569) \end{aligned}$ | $\begin{gathered} 1.088 \\ (1.210) \end{gathered}$ |


| Lewis and Clark College | $\begin{gathered} -14.367 * * * \\ (4.927) \end{gathered}$ | $\begin{gathered} -3.134 * * * \\ (1.082) \end{gathered}$ | $\begin{aligned} & -0.151 \\ & (0.286) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Liberty University | $\begin{gathered} 2.356 \\ (7.620) \end{gathered}$ | $\begin{gathered} 0.675 \\ (1.673) \end{gathered}$ | $\begin{aligned} & -0.068 \\ & (0.443) \end{aligned}$ |
| Linfield College | $\begin{gathered} -17.482 * * * \\ (6.622) \end{gathered}$ | $\begin{gathered} -4.680 * * * \\ (1.454) \end{gathered}$ | $\begin{gathered} -0.886 * * \\ (0.385) \end{gathered}$ |
| Lone Star College-Cyfair | $\begin{gathered} -7.155 \\ (20.809) \end{gathered}$ | $\begin{gathered} 0.644 \\ (4.569) \end{gathered}$ | $\begin{aligned} & -0.990 \\ & (1.210) \end{aligned}$ |
| Lone Star College-North Harris | $\begin{aligned} & -10.878 \\ & (7.312) \end{aligned}$ | $\begin{gathered} -2.154 \\ (1.605) \end{gathered}$ | $\begin{aligned} & -0.270 \\ & (0.425) \end{aligned}$ |
| Los Angeles City College | $\begin{gathered} -5.424 \\ (20.813) \end{gathered}$ | $\begin{aligned} & -0.955 \\ & (4.569) \end{aligned}$ | $\begin{gathered} 0.088 \\ (1.210) \end{gathered}$ |
| Louisiana State University | $\begin{gathered} -13.369_{* *} \\ (6.133) \end{gathered}$ | $\begin{gathered} -2.963 * * \\ (1.346) \end{gathered}$ | $\begin{gathered} -0.768^{* *} \\ (0.357) \end{gathered}$ |
| Lower Columbia College | $\begin{gathered} -13.980 \\ (14.912) \end{gathered}$ | $\begin{aligned} & -1.853 \\ & (3.274) \end{aligned}$ | $\begin{aligned} & -1.392 \\ & (0.867) \end{aligned}$ |
| Marshall University | $\begin{gathered} 2.324 \\ (14.907) \end{gathered}$ | $\begin{gathered} 0.204 \\ (3.273) \end{gathered}$ | $\begin{gathered} 0.554 \\ (0.867) \end{gathered}$ |
| McKendree University | $\begin{gathered} -15.043 * * \\ (7.314) \end{gathered}$ | $\begin{aligned} & -2.542 \\ & (1.606) \end{aligned}$ | $\begin{gathered} -0.981 * * \\ (0.425) \end{gathered}$ |
| Miami University Forensics IE | $\begin{gathered} 2.966 \\ (7.052) \end{gathered}$ | $\begin{aligned} & 3.105 * * \\ & (1.548) \end{aligned}$ | $\begin{aligned} & -0.387 \\ & (0.410) \end{aligned}$ |
| Minnesota State University, Mankato | $\begin{aligned} & -4.616 \\ & (5.513) \end{aligned}$ | $\begin{aligned} & -0.861 \\ & (1.210) \end{aligned}$ | $\begin{gathered} 0.043 \\ (0.321) \end{gathered}$ |
| Mississippi State University | $\begin{aligned} & -15.713 \\ & (20.815) \end{aligned}$ | $\begin{aligned} & -3.791 \\ & (4.570) \end{aligned}$ | $\begin{aligned} & -1.880 \\ & (1.210) \end{aligned}$ |
| Monmouth College | $\begin{gathered} -8.413 \\ (10.807) \end{gathered}$ | $\begin{aligned} & -0.139 \\ & (2.373) \end{aligned}$ | $\begin{aligned} & -1.067 * \\ & (0.628) \end{aligned}$ |
| Mt. Hood Community College | $\begin{aligned} & -17.424 \\ & (14.910) \end{aligned}$ | $\begin{aligned} & -4.955 \\ & (3.273) \end{aligned}$ | $\begin{gathered} -1.912 * * \\ (0.867) \end{gathered}$ |
| Nassau Community College | $\begin{aligned} & -14.924 \\ & (10.811) \end{aligned}$ | $\begin{aligned} & -3.122 \\ & (2.373) \end{aligned}$ | $\begin{aligned} & -0.912 \\ & (0.628) \end{aligned}$ |
| North Central College | $\begin{aligned} & -5.691 \\ & (4.585) \end{aligned}$ | $\begin{aligned} & -0.334 \\ & (1.007) \end{aligned}$ | $\begin{gathered} -0.646 * * \\ (0.267) \end{gathered}$ |


| North Dakota State University | $\begin{gathered} -10.564 \\ (12.325) \end{gathered}$ | $\begin{aligned} & -3.182 \\ & (2.706) \end{aligned}$ | $\begin{gathered} 0.613 \\ (0.716) \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Northern Arizona University | $\begin{gathered} -23.703 * * * \\ (7.625) \end{gathered}$ | $\begin{gathered} -4.486^{* * *} \\ (1.674) \end{gathered}$ | $\begin{gathered} -1.281 * * * \\ (0.443) \end{gathered}$ |
| Northern Illinois University | $\begin{aligned} & -8.366 \\ & (8.010) \end{aligned}$ | $\begin{gathered} -2.333 \\ (1.759) \end{gathered}$ | $\begin{aligned} & -0.285 \\ & (0.466) \end{aligned}$ |
| Northwest Christian University | $\begin{aligned} & -15.424 \\ & (20.813) \end{aligned}$ | $\begin{aligned} & -3.955 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -0.912 \\ & (1.210) \end{aligned}$ |
| Northwestern University | $\begin{gathered} 0.143 \\ (4.481) \end{gathered}$ | $\begin{gathered} 0.335 \\ (0.984) \end{gathered}$ | $\begin{aligned} & -0.053 \\ & (0.260) \end{aligned}$ |
| Oregon State University | $\begin{aligned} & -14.826 \\ & (20.809) \end{aligned}$ | $\begin{aligned} & -3.844 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -0.021 \\ & (1.210) \end{aligned}$ |
| Ottawa University - KS | $\begin{gathered} -25.585 * * \\ (12.316) \end{gathered}$ | $\begin{aligned} & -5.918_{* *} \\ & (2.704) \end{aligned}$ | $\begin{gathered} -2.105 * * * \\ (0.716) \end{gathered}$ |
| Pacific University Forensics | $\begin{aligned} & -4.609 \\ & (8.458) \end{aligned}$ | $\begin{gathered} 0.114 \\ (1.857) \end{gathered}$ | $\begin{aligned} & -0.563 \\ & (0.492) \end{aligned}$ |
| Rice University | $\begin{gathered} -10.944_{* *} \\ (4.857) \end{gathered}$ | $\begin{aligned} & -1.181 \\ & (1.066) \end{aligned}$ | $\begin{gathered} -0.687 * * \\ (0.282) \end{gathered}$ |
| Ripon College | $\begin{gathered} -12.636 * \\ (7.313) \end{gathered}$ | $\begin{gathered} -1.789 \\ (1.606) \end{gathered}$ | $\begin{gathered} -1.159^{* * *} \\ (0.425) \end{gathered}$ |
| Saint Joseph's University | $\begin{gathered} -14.276 * * * \\ (4.978) \end{gathered}$ | $\begin{gathered} -2.293 * * \\ (1.093) \end{gathered}$ | $\begin{aligned} & -0.377 \\ & (0.289) \end{aligned}$ |
| San Antonio College | $\begin{gathered} -8.594 \\ (12.324) \end{gathered}$ | $\begin{aligned} & -1.525 \\ & (2.706) \end{aligned}$ | $\begin{aligned} & -0.980 \\ & (0.716) \end{aligned}$ |
| San Diego State University | $\begin{gathered} -17.003 * \\ (9.032) \end{gathered}$ | $\begin{gathered} -2.718 \\ (1.983) \end{gathered}$ | $\begin{gathered} -1.400 * * * \\ (0.525) \end{gathered}$ |
| San Francisco State University | $\begin{gathered} -17.017 * * * \\ (5.693) \end{gathered}$ | $\begin{gathered} -3.622^{* * *} \\ (1.250) \end{gathered}$ | $\begin{gathered} -0.941^{* * *} \\ (0.331) \end{gathered}$ |
| Santa Rosa Junior College | $\begin{aligned} & -18.196 \\ & (20.809) \end{aligned}$ | $\begin{aligned} & -4.865 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -0.992 \\ & (1.210) \end{aligned}$ |
| Seton Hall University | $\begin{aligned} & -9.033 * \\ & (4.982) \end{aligned}$ | $\begin{gathered} -2.657 * * \\ (1.094) \end{gathered}$ | $\begin{aligned} & 0.635 * * \\ & (0.290) \end{aligned}$ |
| South Central College | $\begin{gathered} -16.720 * \\ (9.028) \end{gathered}$ | $\begin{aligned} & -3.646 * \\ & (1.982) \end{aligned}$ | $\begin{aligned} & -0.837 \\ & (0.525) \end{aligned}$ |


| South Dakota State University | $\begin{gathered} -15.724^{* * *} \\ (5.440) \end{gathered}$ | $\begin{gathered} -2.570 * * \\ (1.194) \end{gathered}$ | $\begin{gathered} -1.065 * * * \\ (0.316) \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Southeastern Oklahoma State University | $\begin{gathered} -12.914 \\ (14.910) \end{gathered}$ | $\begin{aligned} & -1.953 \\ & (3.273) \end{aligned}$ | $\begin{aligned} & -1.412 \\ & (0.867) \end{aligned}$ |
| Southwest Minnesota State University | $\begin{gathered} -16.961 * * \\ (7.997) \end{gathered}$ | $\begin{gathered} -4.083 * * \\ (1.756) \end{gathered}$ | $\begin{gathered} -1.002^{* *} \\ (0.465) \end{gathered}$ |
| Speech at Berkeley | $\begin{gathered} -19.951 * * * \\ (5.503) \end{gathered}$ | $\begin{gathered} -4.444 * * * \\ (1.208) \end{gathered}$ | $\begin{aligned} & -0.575 * \\ & (0.320) \end{aligned}$ |
| St. Cloud State University | $\begin{gathered} -19.142 * \\ (9.781) \end{gathered}$ | $\begin{gathered} -3.214 \\ (2.147) \end{gathered}$ | $\begin{gathered} -2.166 * * * \\ (0.569) \end{gathered}$ |
| Sterling College | $\begin{gathered} -17.166^{* *} \\ (7.312) \end{gathered}$ | $\begin{gathered} -3.977 * * \\ (1.605) \end{gathered}$ | $\begin{gathered} -1.726 * * * \\ (0.425) \end{gathered}$ |
| Tennessee State University | $\begin{gathered} -12.775^{*} \\ (7.636) \end{gathered}$ | $\begin{gathered} -2.008 \\ (1.676) \end{gathered}$ | $\begin{gathered} -1.575_{* * *} \\ (0.444) \end{gathered}$ |
| Texas A\&M University | $\begin{gathered} -13.326 * \\ (7.993) \end{gathered}$ | $\begin{aligned} & -2.046 \\ & (1.755) \end{aligned}$ | $\begin{gathered} -1.140 * * \\ (0.465) \end{gathered}$ |
| Texas Christian University | $\begin{gathered} -15.232 * \\ (8.456) \end{gathered}$ | $\begin{aligned} & -3.181 * \\ & (1.857) \end{aligned}$ | $\begin{aligned} & -0.630 \\ & (0.492) \end{aligned}$ |
| Texas State University | $\begin{gathered} -9.297 * * \\ (4.640) \end{gathered}$ | $\begin{aligned} & -1.068 \\ & (1.019) \end{aligned}$ | $\begin{aligned} & -0.522 * \\ & (0.270) \end{aligned}$ |
| The College of Idaho | $\begin{gathered} -18.426 \\ (14.905) \end{gathered}$ | $\begin{aligned} & -4.784 \\ & (3.272) \end{aligned}$ | $\begin{aligned} & -1.525^{*} \\ & (0.866) \end{aligned}$ |
| The Colorado College | $\begin{gathered} -18.632^{* * *} \\ (6.804) \end{gathered}$ | $\begin{gathered} -4.386 * * * \\ (1.494) \end{gathered}$ | $\begin{aligned} & -0.731 * \\ & (0.396) \end{aligned}$ |
| The Ohio State University | $\begin{gathered} -0.860 \\ (14.908) \end{gathered}$ | $\begin{gathered} 1.694 \\ (3.273) \end{gathered}$ | $\begin{aligned} & -0.432 \\ & (0.867) \end{aligned}$ |
| The University of Oklahoma | $\begin{gathered} -18.722^{* *} \\ (9.029) \end{gathered}$ | $\begin{gathered} -4.371 * * \\ (1.982) \end{gathered}$ | $\begin{gathered} -1.329 * * \\ (0.525) \end{gathered}$ |
| Tulsa Community College | $\begin{aligned} & -16.424 \\ & (20.813) \end{aligned}$ | $\begin{aligned} & -4.455 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -0.912 \\ & (1.210) \end{aligned}$ |
| Tyler Junior College | $\begin{gathered} -14.365 * * * \\ (5.367) \end{gathered}$ | $\begin{aligned} & -2.083 * \\ & (1.178) \end{aligned}$ | $\begin{gathered} -1.256 * * * \\ (0.312) \end{gathered}$ |
| United States Air Force Academy | $\begin{gathered} -16.143 \\ (14.906) \end{gathered}$ | $\begin{gathered} -2.737 \\ (3.273) \end{gathered}$ | $\begin{aligned} & -1.467 * \\ & (0.866) \end{aligned}$ |


| University of Akron | $\begin{gathered} -13.247 * * * \\ (4.941) \end{gathered}$ | $\begin{gathered} -2.780 * * \\ (1.085) \end{gathered}$ | $\begin{gathered} -0.626^{* *} \\ (0.287) \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| University of Alabama | $\begin{aligned} & -2.035 \\ & (3.802) \end{aligned}$ | $\begin{gathered} 1.307 \\ (0.835) \end{gathered}$ | $\begin{gathered} -0.640 * * * \\ (0.221) \end{gathered}$ |
| University of Central Florida | $\begin{gathered} -16.080 * \\ (8.461) \end{gathered}$ | $\begin{aligned} & -3.140 * \\ & (1.858) \end{aligned}$ | $\begin{gathered} -1.379 * * * \\ (0.492) \end{gathered}$ |
| University of Florida | $\begin{aligned} & -2.232 \\ & (4.863) \end{aligned}$ | $\begin{gathered} -0.628 \\ (1.068) \end{gathered}$ | $\begin{gathered} 0.436 \\ (0.283) \end{gathered}$ |
| University of Houston | $\begin{aligned} & -11.620 \\ & (20.810) \end{aligned}$ | $\begin{aligned} & -2.899 \\ & (4.569) \end{aligned}$ | $\begin{gathered} 0.034 \\ (1.210) \end{gathered}$ |
| University of Illinois at Chicago | $\begin{gathered} 9.376 \\ (9.787) \end{gathered}$ | $\begin{gathered} 3.355 \\ (2.149) \end{gathered}$ | $\begin{gathered} 0.688 \\ (0.569) \end{gathered}$ |
| University of Illinois at Urbana-Champaign | $\begin{aligned} & -4.853 \\ & (8.467) \end{aligned}$ | $\begin{gathered} 0.188 \\ (1.859) \end{gathered}$ | $\begin{aligned} & -0.626 \\ & (0.492) \end{aligned}$ |
| University of Louisiana at Lafayette | $\begin{gathered} -21.153 * * * \\ (6.802) \end{gathered}$ | $\begin{gathered} -4.140 * * * \\ (1.493) \end{gathered}$ | $\begin{gathered} -1.495 * * * \\ (0.395) \end{gathered}$ |
| University of Mary Hardin-Baylor | $\begin{gathered} -18.540 * * \\ (7.312) \end{gathered}$ | $\begin{gathered} -3.610^{* *} \\ (1.605) \end{gathered}$ | $\begin{gathered} -1.775_{* * *} \\ (0.425) \end{gathered}$ |
| University of Minnesota | $\begin{aligned} & -8.962 \\ & (7.038) \end{aligned}$ | $\begin{aligned} & -1.705 \\ & (1.545) \end{aligned}$ | $\begin{aligned} & -0.481 \\ & (0.409) \end{aligned}$ |
| University of Nebraska - Kearney | $\begin{gathered} -12.383^{* *} \\ (6.012) \end{gathered}$ | $\begin{aligned} & -1.421 \\ & (1.320) \end{aligned}$ | $\begin{gathered} -1.160^{* * *} \\ (0.349) \end{gathered}$ |
| University of Nebraska Omaha | $\begin{gathered} 12.457 * * * \\ (4.074) \end{gathered}$ | $\begin{gathered} 2.880 * * * \\ (0.894) \end{gathered}$ | $\begin{aligned} & 0.530 * * \\ & (0.237) \end{aligned}$ |
| University of Nebraska-Lincoln | $\begin{aligned} & -1.618 \\ & (3.862) \end{aligned}$ | $\begin{gathered} 0.423 \\ (0.848) \end{gathered}$ | $\begin{aligned} & -0.332 \\ & (0.224) \end{aligned}$ |
| University of North Dakota | $\begin{aligned} & -16.693 \\ & (12.330) \end{aligned}$ | $\begin{aligned} & -4.607 * \\ & (2.707) \end{aligned}$ | $\begin{gathered} -1.576 * * \\ (0.717) \end{gathered}$ |
| University of Northern Iowa | $\begin{aligned} & -0.826 \\ & (4.490) \end{aligned}$ | $\begin{gathered} 0.207 \\ (0.986) \end{gathered}$ | $\begin{aligned} & -0.142 \\ & (0.261) \end{aligned}$ |
| University of Oregon | $\begin{aligned} & -13.215 \\ & (20.809) \end{aligned}$ | $\begin{gathered} -2.370 \\ (4.569) \end{gathered}$ | $\begin{aligned} & -0.993 \\ & (1.210) \end{aligned}$ |
| University of Portland | $\begin{aligned} & -20.908^{*} \\ & (12.322) \end{aligned}$ | $\begin{gathered} -5.448 * * \\ (2.705) \end{gathered}$ | $\begin{aligned} & -0.489 \\ & (0.716) \end{aligned}$ |


| University of South Dakota | $\begin{aligned} & -12.640 \\ & (9.023) \end{aligned}$ | $\begin{aligned} & -1.630 \\ & (1.981) \end{aligned}$ | $\begin{aligned} & -0.860 \\ & (0.525) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| University of Southern Mississippi | $\begin{aligned} & -16.723 \\ & (20.815) \end{aligned}$ | $\begin{aligned} & -4.793 \\ & (4.570) \end{aligned}$ | $\begin{aligned} & -0.880 \\ & (1.210) \end{aligned}$ |
| University of Texas at Austin | $\begin{gathered} 11.058 * * * \\ (3.746) \end{gathered}$ | $\begin{gathered} 6.829_{* * *}^{* *} \\ (0.822) \end{gathered}$ | $\begin{gathered} -1.102 * * * \\ (0.218) \end{gathered}$ |
| University of Texas at El Paso | $\begin{gathered} -14.543 * * * \\ (5.237) \end{gathered}$ | $\begin{gathered} -3.732 * * * \\ (1.150) \end{gathered}$ | $\begin{aligned} & -0.574 * \\ & (0.304) \end{aligned}$ |
| University of Utah | $\begin{gathered} -18.556 * * * \\ (4.284) \end{gathered}$ | $\begin{gathered} -3.667 * * * \\ (0.940) \end{gathered}$ | $\begin{gathered} -1.342^{* * *} \\ (0.249) \end{gathered}$ |
| University of WI Platteville | $\begin{aligned} & -17.424 \\ & (20.813) \end{aligned}$ | $\begin{aligned} & -4.955 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -1.912 \\ & (1.210) \end{aligned}$ |
| University of Wisconsin-Eau Claire | $\begin{aligned} & -6.847 \\ & (4.399) \end{aligned}$ | $\begin{aligned} & -1.593 * \\ & (0.966) \end{aligned}$ | $\begin{gathered} 0.329 \\ (0.256) \end{gathered}$ |
| Wartburg College | $\begin{gathered} -13.856 \\ (12.325) \end{gathered}$ | $\begin{aligned} & -2.004 \\ & (2.706) \end{aligned}$ | $\begin{aligned} & -1.123 \\ & (0.716) \end{aligned}$ |
| Wayland Baptist University | $\begin{gathered} -20.071 \\ (14.905) \end{gathered}$ | $\begin{aligned} & -4.612 \\ & (3.272) \end{aligned}$ | $\begin{aligned} & -1.229 \\ & (0.866) \end{aligned}$ |
| Wayne State University | $\begin{aligned} & -0.476 \\ & (6.129) \end{aligned}$ | $\begin{gathered} 0.129 \\ (1.346) \end{gathered}$ | $\begin{gathered} 0.325 \\ (0.356) \end{gathered}$ |
| Webster University | $\begin{gathered} -16.246 * \\ (9.778) \end{gathered}$ | $\begin{aligned} & -3.874 * \\ & (2.147) \end{aligned}$ | $\begin{gathered} -1.282 * * \\ (0.568) \end{gathered}$ |
| West Chester University | $\begin{gathered} -7.391 \\ (9.784) \end{gathered}$ | $\begin{gathered} -2.037 \\ (2.148) \end{gathered}$ | $\begin{gathered} 0.271 \\ (0.569) \end{gathered}$ |
| West Texas A\&M | $\begin{gathered} -12.666^{* * *} \\ (4.718) \end{gathered}$ | $\begin{gathered} -2.143 * * \\ (1.036) \end{gathered}$ | $\begin{aligned} & -0.492 * \\ & (0.274) \end{aligned}$ |
| Western Kentucky University | $\begin{gathered} 12.969^{* * *} \\ (3.740) \end{gathered}$ | $\begin{gathered} 9.365 * * * \\ (0.821) \end{gathered}$ | $\begin{gathered} -1.191^{* * *} \\ (0.217) \end{gathered}$ |
| Western Nebraska Community College | $\begin{gathered} -17.424 \\ (20.813) \end{gathered}$ | $\begin{aligned} & -4.955 \\ & (4.569) \end{aligned}$ | $\begin{aligned} & -1.912 \\ & (1.210) \end{aligned}$ |
| Western Wyoming Community College | $\begin{gathered} -19.515 * * \\ (7.622) \end{gathered}$ | $\begin{gathered} -4.870 * * * \\ (1.673) \end{gathered}$ | $\begin{gathered} -0.953 * * \\ (0.443) \end{gathered}$ |
| Wiley College | $\begin{aligned} & -2.950 \\ & (4.275) \end{aligned}$ | $\begin{aligned} & 1.645 * \\ & (0.939) \end{aligned}$ | $\begin{gathered} -0.910 * * * \\ (0.249) \end{gathered}$ |


| William Carey University | -1.588 | $1.814 *$ | $-0.726^{* * *}$ |
| :--- | :---: | :---: | :---: |
|  | $(4.573)$ | $(1.004)$ | $(0.266)$ |
| Constant | $17.424^{* * * *}$ | $4.955^{* * *}$ | $2.912 * * *$ |
|  | $(3.382)$ | $(0.742)$ | $(0.197)$ |
| Observations | 2,870 | 2,870 | 2,870 |
| R2 | 0.373 | 0.500 | 0.325 |
| Adjusted R2 | 0.342 | 0.476 | 0.292 |
| Residual Std. Error (df = 2735) | 20.536 | 4.509 | 1.194 |
| F Statistic (df = 134; 2735) | $12.136^{* * *}$ | $20.450 * * *$ | $9.846 * * *$ |
| Note: | ${ }^{* \mathrm{p}<0.1 ; * * \mathrm{p}<0.05 ; ~ * * * \mathrm{p}<0.01}$ |  |  |

Table 11: First Year Team Fixed-Effects

|  | Outcome |  |  |
| :---: | :---: | :---: | :---: |
|  | Mean <br> (1) | Total <br> (2) | Number of Events <br> (3) |
| NSDA Points (Standard Deviation) | $\begin{aligned} & 0.205^{* * *} \\ & (0.068) \end{aligned}$ | $\begin{gathered} 0.401 \\ (0.280) \end{gathered}$ | $\begin{gathered} 0.059 * * * \\ (0.019) \end{gathered}$ |
| Azusa Pacific University | $\begin{aligned} & -3.779 \\ & (2.548) \end{aligned}$ | $\begin{aligned} & -12.180 \\ & (10.457) \end{aligned}$ | $\begin{gathered} 0.850 \\ (0.720) \end{gathered}$ |
| Ball State University | $\begin{gathered} 8.129 * * * \\ (1.819) \end{gathered}$ | $\begin{gathered} 37.887 * * * \\ (7.465) \end{gathered}$ | $\begin{aligned} & 0.959 * \\ & (0.514) \end{aligned}$ |
| Belmont University | $\begin{gathered} 2.796 \\ (1.737) \end{gathered}$ | $\begin{gathered} 6.462 \\ (7.128) \end{gathered}$ | $\begin{aligned} & -0.077 \\ & (0.491) \end{aligned}$ |
| Bethel College | $\begin{gathered} 0.452 \\ (1.382) \end{gathered}$ | $\begin{aligned} & -8.427 \\ & (5.671) \end{aligned}$ | $\begin{gathered} -1.341 * * * \\ (0.391) \end{gathered}$ |
| Bethel University | $\begin{aligned} & -3.628 \\ & (2.258) \end{aligned}$ | $\begin{gathered} -13.378 \\ (9.270) \end{gathered}$ | $\begin{aligned} & -0.822 \\ & (0.639) \end{aligned}$ |
| Boise State University | $\begin{gathered} -4.138 \\ (2.546) \end{gathered}$ | $\begin{aligned} & -11.300 \\ & (10.452) \end{aligned}$ | $\begin{gathered} 2.116 * * * \\ (0.720) \end{gathered}$ |
| Bradley University | $\begin{gathered} 8.272 * * * \\ (1.106) \end{gathered}$ | $\begin{gathered} 20.363 * * * \\ (4.541) \end{gathered}$ | $\begin{aligned} & -0.608^{*} \\ & (0.313) \end{aligned}$ |
| Butte College | $\begin{gathered} -4.763 * * \\ (2.259) \end{gathered}$ | $\begin{gathered} -15.815 * \\ (9.271) \end{gathered}$ | $\begin{aligned} & -0.812 \\ & (0.639) \end{aligned}$ |
| California State University Chico | $\begin{aligned} & -3.711^{*} \\ & (2.066) \end{aligned}$ | $\begin{gathered} -12.278 \\ (8.478) \end{gathered}$ | $\begin{aligned} & -0.222 \\ & (0.584) \end{aligned}$ |
| California State University, Fullerton | $\begin{aligned} & -3.128 \\ & (2.548) \end{aligned}$ | $\begin{aligned} & -14.211 \\ & (10.456) \end{aligned}$ | $\begin{gathered} -1.822^{* *} \\ (0.720) \end{gathered}$ |
| California State University, Long Beach | $\begin{aligned} & -2.638^{*} \\ & (1.405) \end{aligned}$ | $\begin{aligned} & -7.846 \\ & (5.769) \end{aligned}$ | $\begin{aligned} & -0.379 \\ & (0.397) \end{aligned}$ |
| California State University, Los Angeles | $\begin{aligned} & -2.229 * \\ & (1.329) \end{aligned}$ | $\begin{aligned} & -9.768^{*} \\ & (5.455) \end{aligned}$ | $\begin{gathered} -0.820 * * \\ (0.376) \end{gathered}$ |
| California State University, Northridge | $\begin{aligned} & -3.317 * \\ & (1.820) \end{aligned}$ | $\begin{gathered} -13.161 * \\ (7.472) \end{gathered}$ | $\begin{aligned} & -0.821 \\ & (0.515) \end{aligned}$ |


| Carroll College | $\begin{gathered} -3.539^{* *} \\ (1.736) \end{gathered}$ | $\begin{gathered} -12.321 * \\ (7.124) \end{gathered}$ | $\begin{aligned} & -0.350 \\ & (0.491) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Cedar Crest College | $\begin{aligned} & -3.387 * \\ & (1.737) \end{aligned}$ | $\begin{gathered} -13.770 * \\ (7.128) \end{gathered}$ | $\begin{gathered} -1.324 * * * \\ (0.491) \end{gathered}$ |
| Central Michigan University | $\begin{gathered} 1.094 \\ (2.548) \end{gathered}$ | $\begin{gathered} -4.545 \\ (10.456) \end{gathered}$ | $\begin{aligned} & -0.822 \\ & (0.720) \end{aligned}$ |
| Central Wyoming College | $\begin{aligned} & -3.772 \\ & (2.546) \end{aligned}$ | $\begin{aligned} & -15.152 \\ & (10.452) \end{aligned}$ | $\begin{gathered} -1.911^{* * *} \\ (0.720) \end{gathered}$ |
| City College of San Francisco | $\begin{gathered} -1.633 \\ (1.926) \end{gathered}$ | $\begin{gathered} -9.942 \\ (7.905) \end{gathered}$ | $\begin{aligned} & -0.998_{*} \\ & (0.545) \end{aligned}$ |
| Clark College | $\begin{aligned} & -4.795 \\ & (4.196) \end{aligned}$ | $\begin{aligned} & -15.878 \\ & (17.222) \end{aligned}$ | $\begin{aligned} & -1.822 \\ & (1.186) \end{aligned}$ |
| Colorado Christian University | $\begin{aligned} & -4.290^{* *} \\ & (1.736) \end{aligned}$ | $\begin{gathered} -14.698_{* *} \\ (7.124) \end{gathered}$ | $\begin{gathered} -1.100 * * \\ (0.491) \end{gathered}$ |
| Concordia - Moorhead | $\begin{aligned} & -1.484 \\ & (1.169) \end{aligned}$ | $\begin{gathered} -6.970 \\ (4.797) \end{gathered}$ | $\begin{aligned} & -0.441 \\ & (0.330) \end{aligned}$ |
| Concordia University Irvine | $\begin{gathered} -1.704 \\ (1.193) \end{gathered}$ | $\begin{aligned} & -6.425 \\ & (4.896) \end{aligned}$ | $\begin{aligned} & -0.026 \\ & (0.337) \end{aligned}$ |
| Concordia University, Nebraska | $\begin{gathered} -2.461 \\ (2.548) \end{gathered}$ | $\begin{gathered} -12.878 \\ (10.456) \end{gathered}$ | $\begin{gathered} -1.488 * * \\ (0.720) \end{gathered}$ |
| Copper Mountain College | $\begin{aligned} & -4.412 \\ & (3.045) \end{aligned}$ | $\begin{aligned} & -14.781 \\ & (12.498) \end{aligned}$ | $\begin{aligned} & -0.807 \\ & (0.861) \end{aligned}$ |
| Cornell University | $\begin{aligned} & -3.147 * * \\ & (1.522) \end{aligned}$ | $\begin{gathered} -13.572 * * \\ (6.246) \end{gathered}$ | $\begin{gathered} -1.637 * * * \\ (0.430) \end{gathered}$ |
| Creighton University | $\begin{gathered} 0.628 \\ (3.043) \end{gathered}$ | $\begin{gathered} 0.146 \\ (12.492) \end{gathered}$ | $\begin{aligned} & -0.392 \\ & (0.861) \end{aligned}$ |
| CSU Pueblo | $\begin{gathered} -3.795 \\ (4.196) \end{gathered}$ | $\begin{gathered} -14.878 \\ (17.222) \end{gathered}$ | $\begin{aligned} & -1.822 \\ & (1.186) \end{aligned}$ |
| CSU Speech and Debate Society | $\begin{aligned} & -4.821 * \\ & (2.547) \end{aligned}$ | $\begin{gathered} -15.929 \\ (10.455) \end{gathered}$ | $\begin{aligned} & -0.829 \\ & (0.720) \end{aligned}$ |
| Diablo Valley College. | $\begin{aligned} & -1.795 \\ & (3.044) \end{aligned}$ | $\begin{aligned} & -12.878 \\ & (12.496) \end{aligned}$ | $\begin{gathered} -1.822^{* *} \\ (0.861) \end{gathered}$ |
| Doane University | $\begin{gathered} -0.208 \\ (1.263) \end{gathered}$ | $\begin{aligned} & -2.373 \\ & (5.183) \end{aligned}$ | $\begin{aligned} & -0.259 \\ & (0.357) \end{aligned}$ |
| Eastern Michigan University | $2.865^{* *}$ | 8.767 | 0.470 |


|  | (1.328) | (5.452) | (0.376) |
| :---: | :---: | :---: | :---: |
| El Paso Community College | $\begin{aligned} & -1.166 \\ & (1.263) \end{aligned}$ | $\begin{aligned} & -6.970 \\ & (5.186) \end{aligned}$ | $\begin{aligned} & -0.401 \\ & (0.357) \end{aligned}$ |
| Florida State University | $\begin{aligned} & -0.746 \\ & (1.274) \end{aligned}$ | $\begin{aligned} & -3.251 \\ & (5.231) \end{aligned}$ | $\begin{aligned} & -0.006 \\ & (0.360) \end{aligned}$ |
| George Mason University | $\begin{gathered} 3.770^{* * *} \\ (1.088) \end{gathered}$ | $\begin{gathered} 3.250 \\ (4.464) \end{gathered}$ | $\begin{gathered} -1.026^{* * *} \\ (0.308) \end{gathered}$ |
| Glendale Community College of Arizona | $\begin{aligned} & -3.711 \\ & (2.258) \end{aligned}$ | $\begin{aligned} & -13.128 \\ & (9.270) \end{aligned}$ | $\begin{aligned} & -0.322 \\ & (0.639) \end{aligned}$ |
| Glendale Community College, CA | $\begin{aligned} & -0.545 \\ & (3.044) \end{aligned}$ | $\begin{gathered} -10.878 \\ (12.496) \end{gathered}$ | $\begin{aligned} & -1.322 \\ & (0.861) \end{aligned}$ |
| Grand Canyon University | $\begin{gathered} 0.205 \\ (4.196) \end{gathered}$ | $\begin{gathered} -5.878 \\ (17.222) \end{gathered}$ | $\begin{aligned} & -0.822 \\ & (1.186) \end{aligned}$ |
| Grossmont College | $\begin{aligned} & -4.795 \\ & (4.196) \end{aligned}$ | $\begin{gathered} -15.878 \\ (17.222) \end{gathered}$ | $\begin{aligned} & -1.822 \\ & (1.186) \end{aligned}$ |
| Gustavus Adolphus College | $\begin{gathered} 1.143 \\ (1.197) \end{gathered}$ | $\begin{gathered} 2.519 \\ (4.913) \end{gathered}$ | $\begin{aligned} & -0.221 \\ & (0.338) \end{aligned}$ |
| Hastings College | $\begin{aligned} & -1.797 \\ & (1.155) \end{aligned}$ | $\begin{aligned} & -6.881 \\ & (4.741) \end{aligned}$ | $\begin{aligned} & -0.443 \\ & (0.327) \end{aligned}$ |
| Hutchinson Community College | $\begin{gathered} -3.454_{* * *} \\ (1.327) \end{gathered}$ | $\begin{gathered} -12.878 * * \\ (5.448) \end{gathered}$ | $\begin{gathered} -1.051 * * * \\ (0.375) \end{gathered}$ |
| Illinois State University | $\begin{aligned} & 2.485^{* *} \\ & (1.143) \end{aligned}$ | $\begin{aligned} & 8.623 * \\ & (4.691) \end{aligned}$ | $\begin{gathered} 0.229 \\ (0.323) \end{gathered}$ |
| James Madison University | $\begin{gathered} -1.674 \\ (1.197) \end{gathered}$ | $\begin{aligned} & -8.919 * \\ & (4.914) \end{aligned}$ | $\begin{gathered} -0.703 * * \\ (0.338) \end{gathered}$ |
| Kansas City KS Community College | $\begin{aligned} & -2.220 \\ & (3.044) \end{aligned}$ | $\begin{aligned} & -11.720 \\ & (12.492) \end{aligned}$ | $\begin{aligned} & -1.372 \\ & (0.861) \end{aligned}$ |
| Kansas State University | $\begin{aligned} & -1.073 \\ & (1.252) \end{aligned}$ | $\begin{gathered} -2.374 \\ (5.140) \end{gathered}$ | $\begin{gathered} 0.287 \\ (0.354) \end{gathered}$ |
| Las Positas College | $\begin{aligned} & -1.545 \\ & (4.196) \end{aligned}$ | $\begin{gathered} -2.878 \\ (17.222) \end{gathered}$ | $\begin{gathered} 1.178 \\ (1.186) \end{gathered}$ |
| Lewis and Clark College | $\begin{gathered} -2.393 \\ (1.455) \end{gathered}$ | $\begin{aligned} & -8.792 \\ & (5.974) \end{aligned}$ | $\begin{aligned} & -0.272 \\ & (0.412) \end{aligned}$ |
| Liberty University | $\begin{aligned} & -0.657 \\ & (1.819) \end{aligned}$ | $\begin{gathered} -2.020 \\ (7.466) \end{gathered}$ | $\begin{aligned} & -0.007 \\ & (0.514) \end{aligned}$ |


| Linfield College | $\begin{gathered} -4.381 * * * \\ (1.524) \end{gathered}$ | $\begin{gathered} -15.134 * * \\ (6.254) \end{gathered}$ | $\begin{aligned} & -0.823^{*} \\ & (0.431) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Lone Star College-Cyfair | $\begin{gathered} 0.931 \\ (4.195) \end{gathered}$ | $\begin{gathered} -4.415 \\ (17.219) \end{gathered}$ | $\begin{aligned} & -0.901 \\ & (1.186) \end{aligned}$ |
| Lone Star College-North Harris | $\begin{aligned} & -1.563 \\ & (1.736) \end{aligned}$ | $\begin{aligned} & -7.577 \\ & (7.124) \end{aligned}$ | $\begin{aligned} & -0.351 \\ & (0.491) \end{aligned}$ |
| Los Angeles City College | $\begin{gathered} -0.795 \\ (4.196) \end{gathered}$ | $\begin{gathered} -3.878 \\ (17.222) \end{gathered}$ | $\begin{gathered} 0.178 \\ (1.186) \end{gathered}$ |
| Louisiana State University | $\begin{aligned} & -2.330 \\ & (1.522) \end{aligned}$ | $\begin{aligned} & -9.193 \\ & (6.248) \end{aligned}$ | $\begin{gathered} -0.856^{* *} \\ (0.430) \end{gathered}$ |
| Lower Columbia College | $\begin{gathered} -1.724 \\ (3.045) \end{gathered}$ | $\begin{aligned} & -12.740 \\ & (12.499) \end{aligned}$ | $\begin{aligned} & -1.301 \\ & (0.861) \end{aligned}$ |
| Marshall University | $\begin{gathered} 0.419 \\ (3.044) \end{gathered}$ | $\begin{gathered} 4.389 \\ (12.493) \end{gathered}$ | $\begin{gathered} 0.644 \\ (0.861) \end{gathered}$ |
| McKendree University | $\begin{aligned} & -1.715 \\ & (1.927) \end{aligned}$ | $\begin{gathered} -10.777 \\ (7.910) \end{gathered}$ | $\begin{gathered} -1.140 * * \\ (0.545) \end{gathered}$ |
| Miami University Forensics IE | $\begin{aligned} & 2.791 * \\ & (1.669) \end{aligned}$ | $\begin{gathered} 2.349 \\ (6.850) \end{gathered}$ | $\begin{aligned} & -0.377 \\ & (0.472) \end{aligned}$ |
| Minnesota State University, Mankato | $\begin{gathered} -0.606 \\ (1.428) \end{gathered}$ | $\begin{aligned} & -2.801 \\ & (5.862) \end{aligned}$ | $\begin{gathered} 0.150 \\ (0.404) \end{gathered}$ |
| Mississippi State University | $\begin{gathered} -3.682 \\ (4.197) \end{gathered}$ | $\begin{aligned} & -14.657 \\ & (17.225) \end{aligned}$ | $\begin{aligned} & -1.789 \\ & (1.187) \end{aligned}$ |
| Monmouth College | $\begin{aligned} & -0.175 \\ & (2.548) \end{aligned}$ | $\begin{gathered} -5.194 \\ (10.457) \end{gathered}$ | $\begin{aligned} & -0.819 \\ & (0.720) \end{aligned}$ |
| Mt. Hood Community College | $\begin{aligned} & -4.795 \\ & (3.044) \end{aligned}$ | $\begin{aligned} & -15.878 \\ & (12.496) \end{aligned}$ | $\begin{gathered} -1.822^{* *} \\ (0.861) \end{gathered}$ |
| Nassau Community College | $\begin{aligned} & -2.961 \\ & (2.258) \end{aligned}$ | $\begin{gathered} -13.378 \\ (9.270) \end{gathered}$ | $\begin{aligned} & -0.822 \\ & (0.639) \end{aligned}$ |
| North Central College | $\begin{gathered} 0.166 \\ (1.253) \end{gathered}$ | $\begin{gathered} -0.117 \\ (5.143) \end{gathered}$ | $\begin{gathered} -0.307 \\ (0.354) \end{gathered}$ |
| North Dakota State University | $\begin{aligned} & -2.793 \\ & (2.548) \end{aligned}$ | $\begin{gathered} -6.852 \\ (10.458) \end{gathered}$ | $\begin{gathered} 0.701 \\ (0.720) \end{gathered}$ |
| Northern Arizona University | $\begin{gathered} -2.205 \\ (2.259) \end{gathered}$ | $\begin{gathered} -12.365 \\ (9.270) \end{gathered}$ | $\begin{aligned} & -0.820 \\ & (0.639) \end{aligned}$ |
| Northern Illinois University | -2.177 | -6.860 | -0.194 |


|  | (1.737) | (7.129) | (0.491) |
| :---: | :---: | :---: | :---: |
| Northwest Christian University | $\begin{aligned} & -3.795 \\ & (4.196) \end{aligned}$ | $\begin{aligned} & -13.878 \\ & (17.222) \end{aligned}$ | $\begin{gathered} -0.822 \\ (1.186) \end{gathered}$ |
| Northwestern University | $\begin{gathered} -0.038 \\ (1.298) \end{gathered}$ | $\begin{aligned} & -2.239 \\ & (5.327) \end{aligned}$ | $\begin{aligned} & -0.532 \\ & (0.367) \end{aligned}$ |
| Oregon State University | $\begin{gathered} -3.509 \\ (4.195) \end{gathered}$ | $\begin{gathered} -11.623 \\ (17.220) \end{gathered}$ | $\begin{gathered} 0.068 \\ (1.186) \end{gathered}$ |
| Ottawa University - KS | $\begin{aligned} & -4.534 \\ & (3.043) \end{aligned}$ | $\begin{aligned} & -15.846 \\ & (12.492) \end{aligned}$ | $\begin{gathered} -1.891 * * \\ (0.861) \end{gathered}$ |
| Pacific University Forensics | $\begin{gathered} 0.403 \\ (1.819) \end{gathered}$ | $\begin{aligned} & -1.851 \\ & (7.466) \end{aligned}$ | $\begin{gathered} -0.474 \\ (0.514) \end{gathered}$ |
| Rice University | $\begin{gathered} 0.768 \\ (1.383) \end{gathered}$ | $\begin{aligned} & -0.829 \\ & (5.676) \end{aligned}$ | $\begin{aligned} & -0.718 * \\ & (0.391) \end{aligned}$ |
| Ripon College | $\begin{gathered} -1.593 \\ (1.736) \end{gathered}$ | $\begin{gathered} -9.804 \\ (7.124) \end{gathered}$ | $\begin{gathered} -0.973 * * \\ (0.491) \end{gathered}$ |
| Saint Joseph's University | $\begin{aligned} & -1.907 \\ & (1.487) \end{aligned}$ | $\begin{aligned} & -8.836 \\ & (6.103) \end{aligned}$ | $\begin{aligned} & -0.234 \\ & (0.420) \end{aligned}$ |
| San Antonio College | $\begin{aligned} & -1.256 \\ & (2.546) \end{aligned}$ | $\begin{gathered} -6.011 \\ (10.451) \end{gathered}$ | $\begin{aligned} & -0.890 \\ & (0.720) \end{aligned}$ |
| San Diego State University | $\begin{aligned} & -2.033 \\ & (2.547) \end{aligned}$ | $\begin{gathered} -13.019 \\ (10.454) \end{gathered}$ | $\begin{aligned} & -1.176 \\ & (0.720) \end{aligned}$ |
| San Francisco State University | $\begin{gathered} -2.871 * * \\ (1.430) \end{gathered}$ | $\begin{gathered} -11.254 * \\ (5.869) \end{gathered}$ | $\begin{aligned} & -0.551 \\ & (0.404) \end{aligned}$ |
| Santa Rosa Junior College | $\begin{aligned} & -4.576 \\ & (4.195) \end{aligned}$ | $\begin{aligned} & -15.428 \\ & (17.219) \end{aligned}$ | $\begin{aligned} & -0.903 \\ & (1.186) \end{aligned}$ |
| Seton Hall University | $\begin{gathered} -2.233 \\ (1.404) \end{gathered}$ | $\begin{gathered} -7.292 \\ (5.764) \end{gathered}$ | $\begin{gathered} 0.163 \\ (0.397) \end{gathered}$ |
| South Central College | $\begin{gathered} -3.386 \\ (2.257) \end{gathered}$ | $\begin{aligned} & -11.591 \\ & (9.264) \end{aligned}$ | $\begin{aligned} & -0.640 \\ & (0.638) \end{aligned}$ |
| South Dakota State University | $\begin{gathered} -2.198 \\ (1.428) \end{gathered}$ | $\begin{gathered} -11.603 * * \\ (5.862) \end{gathered}$ | $\begin{gathered} -1.050 * * * \\ (0.404) \end{gathered}$ |
| Southeastern Oklahoma State University | $\begin{gathered} -1.793 \\ (3.044) \end{gathered}$ | $\begin{aligned} & -11.375 \\ & (12.496) \end{aligned}$ | $\begin{aligned} & -1.321 \\ & (0.861) \end{aligned}$ |
| Southwest Minnesota State University | $\begin{aligned} & -3.378 \\ & (2.065) \end{aligned}$ | $\begin{gathered} -11.942 \\ (8.477) \end{gathered}$ | $\begin{aligned} & -1.031 * \\ & (0.584) \end{aligned}$ |


| Speech at Berkeley | $\begin{gathered} -3.279 * * \\ (1.611) \end{gathered}$ | $\begin{gathered} -11.057 * \\ (6.611) \end{gathered}$ | $\begin{aligned} & -0.363 \\ & (0.455) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| St. Cloud State University | $\begin{gathered} -3.461 \\ (2.548) \end{gathered}$ | $\begin{aligned} & -14.545 \\ & (10.456) \end{aligned}$ | $\begin{gathered} -1.822 * * \\ (0.720) \end{gathered}$ |
| Sterling College | $\begin{gathered} -3.435 * * \\ (1.667) \end{gathered}$ | $\begin{gathered} -13.595^{* *} \\ (6.842) \end{gathered}$ | $\begin{gathered} -1.545 * * * \\ (0.471) \end{gathered}$ |
| Tennessee State University | $\begin{aligned} & -1.854 \\ & (1.669) \end{aligned}$ | $\begin{gathered} -11.293 * \\ (6.850) \end{gathered}$ | $\begin{gathered} -1.484 * * * \\ (0.472) \end{gathered}$ |
| Texas A\&M University | $\begin{aligned} & -1.821 \\ & (2.066) \end{aligned}$ | $\begin{aligned} & -8.976 \\ & (8.478) \end{aligned}$ | $\begin{aligned} & -0.954 \\ & (0.584) \end{aligned}$ |
| Texas Christian University | $\begin{aligned} & -2.316 \\ & (2.065) \end{aligned}$ | $\begin{aligned} & -10.050 \\ & (8.475) \end{aligned}$ | $\begin{aligned} & -0.847 \\ & (0.584) \end{aligned}$ |
| Texas State University | $\begin{aligned} & -0.361 \\ & (1.253) \end{aligned}$ | $\begin{aligned} & -4.549 \\ & (5.143) \end{aligned}$ | $\begin{aligned} & -0.424 \\ & (0.354) \end{aligned}$ |
| The College of Idaho | $\begin{aligned} & -4.442 \\ & (3.044) \end{aligned}$ | $\begin{aligned} & -15.154 \\ & (12.494) \end{aligned}$ | $\begin{aligned} & -1.436^{*} \\ & (0.861) \end{aligned}$ |
| The Colorado College | $\begin{gathered} -3.630 * * \\ (1.819) \end{gathered}$ | $\begin{gathered} -12.616 * \\ (7.466) \end{gathered}$ | $\begin{aligned} & -0.582 \\ & (0.514) \end{aligned}$ |
| The Ohio State University | $\begin{gathered} 1.886 \\ (3.044) \end{gathered}$ | $\begin{gathered} 0.987 \\ (12.494) \end{gathered}$ | $\begin{gathered} -0.342 \\ (0.861) \end{gathered}$ |
| The University of Oklahoma | $\begin{aligned} & -3.421 * \\ & (2.064) \end{aligned}$ | $\begin{aligned} & -12.725 \\ & (8.474) \end{aligned}$ | $\begin{aligned} & -1.058 * \\ & (0.584) \end{aligned}$ |
| Tulsa Community College | $\begin{aligned} & -4.295 \\ & (4.196) \end{aligned}$ | $\begin{aligned} & -14.878 \\ & (17.222) \end{aligned}$ | $\begin{aligned} & -0.822 \\ & (1.186) \end{aligned}$ |
| Tyler Junior College | $\begin{aligned} & -1.776 \\ & (1.361) \end{aligned}$ | $\begin{gathered} -10.665 * \\ (5.587) \end{gathered}$ | $\begin{gathered} -1.158 * * * \\ (0.385) \end{gathered}$ |
| United States Air Force Academy | $\begin{aligned} & -2.488 \\ & (3.044) \end{aligned}$ | $\begin{aligned} & -13.756 \\ & (12.492) \end{aligned}$ | $\begin{aligned} & -1.377 \\ & (0.861) \end{aligned}$ |
| University of Akron | $\begin{gathered} -2.679 * * \\ (1.312) \end{gathered}$ | $\begin{gathered} -11.383^{* *} \\ (5.385) \end{gathered}$ | $\begin{gathered} -0.956 * * \\ (0.371) \end{gathered}$ |
| University of Alabama | $\begin{aligned} & 1.926 * \\ & (1.096) \end{aligned}$ | $\begin{gathered} 2.325 \\ (4.497) \end{gathered}$ | $\begin{aligned} & -0.552 * \\ & (0.310) \end{aligned}$ |
| University of Central Florida | $\begin{aligned} & -2.545 \\ & (1.926) \end{aligned}$ | $\begin{gathered} -12.545 \\ (7.907) \end{gathered}$ | $\begin{gathered} -1.488_{* * *} \\ (0.545) \end{gathered}$ |


| University of Florida | $\begin{aligned} & -0.527 \\ & (1.363) \end{aligned}$ | $\begin{aligned} & -2.368 \\ & (5.594) \end{aligned}$ | $\begin{gathered} 0.227 \\ (0.385) \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| University of Houston | $\begin{gathered} -2.651 \\ (4.195) \end{gathered}$ | $\begin{gathered} -9.249 \\ (17.219) \end{gathered}$ | $\begin{gathered} 0.124 \\ (1.186) \end{gathered}$ |
| University of Illinois at Chicago | $\begin{aligned} & 3.515 * \\ & (2.066) \end{aligned}$ | $\begin{aligned} & 10.922 \\ & (8.478) \end{aligned}$ | $\begin{gathered} 0.778 \\ (0.584) \end{gathered}$ |
| University of Illinois at Urbana-Champaign | $\begin{gathered} 0.348 \\ (1.820) \end{gathered}$ | $\begin{aligned} & -3.306 \\ & (7.472) \end{aligned}$ | $\begin{aligned} & -0.536 \\ & (0.515) \end{aligned}$ |
| University of Louisiana at Lafayette | $\begin{aligned} & -2.860 \\ & (1.819) \end{aligned}$ | $\begin{aligned} & -10.899 \\ & (7.466) \end{aligned}$ | $\begin{aligned} & -0.909^{*} \\ & (0.514) \end{aligned}$ |
| University of Mary Hardin-Baylor | $\begin{aligned} & -3.112 * \\ & (1.820) \end{aligned}$ | $\begin{gathered} -13.510 * \\ (7.470) \end{gathered}$ | $\begin{gathered} -1.545 * * * \\ (0.515) \end{gathered}$ |
| University of Minnesota | $\begin{aligned} & -1.424 \\ & (1.735) \end{aligned}$ | $\begin{aligned} & -7.793 \\ & (7.122) \end{aligned}$ | $\begin{aligned} & -0.883^{*} \\ & (0.491) \end{aligned}$ |
| University of Nebraska - Kearney | $\begin{aligned} & -1.616 \\ & (1.524) \end{aligned}$ | $\begin{aligned} & -9.632 \\ & (6.254) \end{aligned}$ | $\begin{gathered} -0.906 * * \\ (0.431) \end{gathered}$ |
| University of Nebraska Omaha | $\begin{gathered} 3.511 * * * \\ (1.173) \end{gathered}$ | $\begin{gathered} 14.824 * * * \\ (4.816) \end{gathered}$ | $\begin{gathered} 0.632 * \\ (0.332) \end{gathered}$ |
| University of Nebraska-Lincoln | $\begin{gathered} 0.806 \\ (1.109) \end{gathered}$ | $\begin{gathered} -0.356 \\ (4.551) \end{gathered}$ | $\begin{gathered} -0.622^{* *} \\ (0.314) \end{gathered}$ |
| University of North Dakota | $\begin{aligned} & -4.451 * \\ & (2.548) \end{aligned}$ | $\begin{aligned} & -15.191 \\ & (10.457) \end{aligned}$ | $\begin{gathered} -1.485 * * \\ (0.720) \end{gathered}$ |
| University of Northern Iowa | $\begin{gathered} 0.921 \\ (1.285) \end{gathered}$ | $\begin{gathered} 1.915 \\ (5.276) \end{gathered}$ | $\begin{gathered} -0.250 \\ (0.363) \end{gathered}$ |
| University of Oregon | $\begin{aligned} & -2.079 \\ & (4.195) \end{aligned}$ | $\begin{gathered} -10.433 \\ (17.219) \end{gathered}$ | $\begin{gathered} -0.904 \\ (1.186) \end{gathered}$ |
| University of Portland | $\begin{aligned} & -4.633 \\ & (3.044) \end{aligned}$ | $\begin{gathered} -15.213 \\ (12.492) \end{gathered}$ | $\begin{aligned} & -0.371 \\ & (0.861) \end{aligned}$ |
| University of South Dakota | $\begin{aligned} & -1.545 \\ & (2.548) \end{aligned}$ | $\begin{gathered} -6.878 \\ (10.456) \end{gathered}$ | $\begin{aligned} & -0.488 \\ & (0.720) \end{aligned}$ |
| University of Southern Mississippi | $\begin{aligned} & -4.683 \\ & (4.197) \end{aligned}$ | $\begin{aligned} & -15.660 \\ & (17.225) \end{aligned}$ | $\begin{aligned} & -0.790 \\ & (1.187) \end{aligned}$ |
| University of Texas at Austin | $\begin{aligned} & 5.694 * * * \\ & (1.094) \end{aligned}$ | $\begin{gathered} 4.847 \\ (4.492) \end{gathered}$ | $\begin{gathered} -1.060 * * * \\ (0.309) \end{gathered}$ |


| University of Texas at El Paso | $\begin{gathered} -3.715 * * * \\ (1.382) \end{gathered}$ | $\begin{gathered} -12.457 * * \\ (5.673) \end{gathered}$ | $\begin{aligned} & -0.661 * \\ & (0.391) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| University of Utah | $\begin{gathered} -3.125^{* * *} \\ (1.174) \end{gathered}$ | $\begin{gathered} -12.660 * * * \\ (4.819) \end{gathered}$ | $\begin{gathered} -1.151 * * * \\ (0.332) \end{gathered}$ |
| University of WI Platteville | $\begin{aligned} & -4.795 \\ & (4.196) \end{aligned}$ | $\begin{gathered} -15.878 \\ (17.222) \end{gathered}$ | $\begin{aligned} & -1.822 \\ & (1.186) \end{aligned}$ |
| University of Wisconsin-Eau Claire | $\begin{aligned} & -0.981 \\ & (1.254) \end{aligned}$ | $\begin{gathered} -2.660 \\ (5.147) \end{gathered}$ | $\begin{gathered} 0.248 \\ (0.355) \end{gathered}$ |
| Wartburg College | $\begin{aligned} & -1.545 \\ & (3.044) \end{aligned}$ | $\begin{gathered} -9.378 \\ (12.496) \end{gathered}$ | $\begin{aligned} & -0.822 \\ & (0.861) \end{aligned}$ |
| Wayland Baptist University | $\begin{aligned} & -3.795 \\ & (4.196) \end{aligned}$ | $\begin{gathered} -14.878 \\ (17.222) \end{gathered}$ | $\begin{aligned} & -1.822 \\ & (1.186) \end{aligned}$ |
| Wayne State University | $\begin{gathered} 0.211 \\ (1.611) \end{gathered}$ | $\begin{gathered} 1.163 \\ (6.610) \end{gathered}$ | $\begin{gathered} 0.325 \\ (0.455) \end{gathered}$ |
| Webster University | $\begin{gathered} -3.194 \\ (2.257) \end{gathered}$ | $\begin{gathered} -11.501 \\ (9.264) \end{gathered}$ | $\begin{gathered} -1.127 * \\ (0.638) \end{gathered}$ |
| West Chester University | $\begin{aligned} & -1.850 \\ & (2.065) \end{aligned}$ | $\begin{gathered} -5.592 \\ (8.476) \end{gathered}$ | $\begin{gathered} 0.362 \\ (0.584) \end{gathered}$ |
| West Texas A\&M | $\begin{aligned} & -1.107 \\ & (1.298) \end{aligned}$ | $\begin{aligned} & -6.429 \\ & (5.327) \end{aligned}$ | $\begin{gathered} -0.331 \\ (0.367) \end{gathered}$ |
| Western Kentucky University | $\begin{gathered} 8.717 * * * \\ (1.090) \end{gathered}$ | $\begin{gathered} 12.480 * * * \\ (4.472) \end{gathered}$ | $\begin{gathered} -1.029 * * * \\ (0.308) \end{gathered}$ |
| Western Nebraska Community College | $\begin{aligned} & -4.795 \\ & (4.196) \end{aligned}$ | $\begin{gathered} -15.878 \\ (17.222) \end{gathered}$ | $\begin{aligned} & -1.822 \\ & (1.186) \end{aligned}$ |
| Western Wyoming Community College | $\begin{gathered} -4.438 * * \\ (1.926) \end{gathered}$ | $\begin{gathered} -14.828 * \\ (7.904) \end{gathered}$ | $\begin{aligned} & -1.006 * \\ & (0.545) \end{aligned}$ |
| Wiley College | $\begin{gathered} 0.849 \\ (1.190) \end{gathered}$ | $\begin{aligned} & -3.679 \\ & (4.886) \end{aligned}$ | $\begin{gathered} -0.850 * * \\ (0.337) \end{gathered}$ |
| William Carey University | $\begin{gathered} 1.648 \\ (1.344) \end{gathered}$ | $\begin{aligned} & -0.310 \\ & (5.515) \end{aligned}$ | $\begin{aligned} & -0.556 \\ & (0.380) \end{aligned}$ |
| Constant | $\begin{gathered} 4.795_{* * *} \\ (0.966) \end{gathered}$ | $\begin{gathered} 15.878^{* * *} \\ (3.963) \end{gathered}$ | $\begin{gathered} 2.822^{* * *} \\ (0.273) \end{gathered}$ |
| Observations | 1,644 | 1,644 | 1,644 |
| R2 | 0.446 | 0.250 | 0.197 |
| Adjusted R2 | 0.397 | 0.184 | 0.126 |


| Residual Std. Error $(\mathrm{df}=1510)$ | 4.083 | 16.760 | 1.155 |
| :--- | :---: | :---: | :---: |
| F Statistic $(\mathrm{df}=133 ; 1510)$ | $9.1355^{* * *}$ | $3.787 * * *$ | $2.780 * * *$ |
| Note: |  | ${ }^{*} \mathrm{p}<0.1 ;{ }^{* *} \mathrm{p}<0.05 ;{ }^{* * *} \mathrm{p}<0.01$ |  |

Table 12: Non-First-Year Team Fixed-Effects

|  | Outcome |  |  |
| :---: | :---: | :---: | :---: |
|  | Mean <br> (1) | Total <br> (2) | Number of Events (3) |
| NSDA Points (Standard Deviation) | $\begin{gathered} 0.410 * * * \\ (0.082) \end{gathered}$ | $\begin{gathered} 2.176 * * * \\ (0.400) \end{gathered}$ | $\begin{gathered} 0.060 * * * \\ (0.020) \end{gathered}$ |
| AFA-NIET Experience | $\begin{aligned} & 1.872^{* * *} \\ & (0.213) \end{aligned}$ | $\begin{gathered} 11.120^{* * *} \\ (1.042) \end{gathered}$ | $\begin{gathered} 0.371 * * * \\ (0.052) \end{gathered}$ |
| Ball State University | $\begin{aligned} & 5.305 * \\ & (2.741) \end{aligned}$ | $\begin{gathered} 14.336 \\ (13.423) \end{gathered}$ | $\begin{gathered} -0.470 \\ (0.671) \end{gathered}$ |
| Belmont University | $\begin{gathered} 1.579 \\ (3.712) \end{gathered}$ | $\begin{gathered} 1.375 \\ (18.180) \end{gathered}$ | $\begin{aligned} & -0.330 \\ & (0.909) \end{aligned}$ |
| Bethel College | $\begin{gathered} -5.410^{* * *} \\ (1.706) \end{gathered}$ | $\begin{gathered} -27.516 * * * \\ (8.357) \end{gathered}$ | $\begin{gathered} -1.172^{* * *} \\ (0.418) \end{gathered}$ |
| Bradley University | $\begin{gathered} 4.968^{* * *} \\ (1.274) \end{gathered}$ | $\begin{aligned} & 10.535 * \\ & (6.240) \end{aligned}$ | $\begin{gathered} -0.719 * * \\ (0.312) \end{gathered}$ |
| California State University, Fullerton | $\begin{aligned} & -4.436 \\ & (5.121) \end{aligned}$ | $\begin{aligned} & -23.502 \\ & (25.081) \end{aligned}$ | $\begin{aligned} & -1.854 \\ & (1.254) \end{aligned}$ |
| California State University, Long Beach | $\begin{aligned} & -2.998 \\ & (2.745) \end{aligned}$ | $\begin{gathered} -12.002 \\ (13.445) \end{gathered}$ | $\begin{aligned} & -0.604 \\ & (0.672) \end{aligned}$ |
| California State University, Los Angeles | $\begin{gathered} -1.949 \\ (1.837) \end{gathered}$ | $\begin{gathered} -13.817 \\ (8.995) \end{gathered}$ | $\begin{gathered} -0.998 * * \\ (0.450) \end{gathered}$ |
| California State University, Northridge | $\begin{aligned} & -3.936 \\ & (5.121) \end{aligned}$ | $\begin{aligned} & -22.502 \\ & (25.081) \end{aligned}$ | $\begin{aligned} & -1.854 \\ & (1.254) \end{aligned}$ |
| Carroll College | $\begin{gathered} -5.312^{* *} \\ (2.330) \end{gathered}$ | $\begin{gathered} -26.481^{* *} \\ (11.413) \end{gathered}$ | $\begin{gathered} -1.170 * * \\ (0.570) \end{gathered}$ |
| Cedar Crest College | $\begin{aligned} & -2.979 \\ & (3.093) \end{aligned}$ | $\begin{aligned} & -17.227 \\ & (15.147) \end{aligned}$ | $\begin{gathered} -0.277 \\ (0.757) \end{gathered}$ |
| City College of San Francisco | $\begin{gathered} 0.558 \\ (2.507) \end{gathered}$ | $\begin{gathered} -11.489 \\ (12.279) \end{gathered}$ | $\begin{gathered} -1.464 * * \\ (0.614) \end{gathered}$ |
| Colorado Christian University | $\begin{aligned} & -4.686 \\ & (5.121) \end{aligned}$ | $\begin{gathered} -20.502 \\ (25.081) \end{gathered}$ | $\begin{gathered} 0.146 \\ (1.254) \end{gathered}$ |
| Concordia - Moorhead | $\begin{gathered} -3.512 * * \\ (1.479) \end{gathered}$ | $\begin{gathered} -20.881^{* * *} \\ (7.241) \end{gathered}$ | $\begin{gathered} -0.760 * * \\ (0.362) \end{gathered}$ |


| Concordia University Irvine | $\begin{aligned} & -0.529 \\ & (1.511) \end{aligned}$ | $\begin{gathered} -7.430 \\ (7.398) \end{gathered}$ | $\begin{aligned} & -0.507 \\ & (0.370) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Cornell University | $\begin{gathered} -7.744 * * * \\ (2.738) \end{gathered}$ | $\begin{gathered} -35.319 * * * \\ (13.407) \end{gathered}$ | $\begin{gathered} -2.105 * * * \\ (0.670) \end{gathered}$ |
| Doane University | $\begin{aligned} & -0.679 \\ & (1.491) \end{aligned}$ | $\begin{gathered} -6.178 \\ (7.305) \end{gathered}$ | $\begin{aligned} & -0.114 \\ & (0.365) \end{aligned}$ |
| Eastern Michigan University | $\begin{aligned} & 4.439^{* *} \\ & (2.018) \end{aligned}$ | $\begin{aligned} & 16.655^{*} \\ & (9.882) \end{aligned}$ | $\begin{gathered} 0.135 \\ (0.494) \end{gathered}$ |
| El Paso Community College | $\begin{aligned} & -0.008 \\ & (2.336) \end{aligned}$ | $\begin{gathered} -4.050 \\ (11.439) \end{gathered}$ | $\begin{aligned} & -0.197 \\ & (0.572) \end{aligned}$ |
| Florida State University | $\begin{aligned} & -2.964 * \\ & (1.681) \end{aligned}$ | $\begin{aligned} & -11.338 \\ & (8.232) \end{aligned}$ | $\begin{gathered} 0.114 \\ (0.411) \end{gathered}$ |
| George Mason University | $\begin{gathered} 4.965 * * * \\ (1.249) \end{gathered}$ | $\begin{gathered} 3.150 \\ (6.116) \end{gathered}$ | $\begin{gathered} -1.257 * * * \\ (0.306) \end{gathered}$ |
| Gustavus Adolphus College | $\begin{gathered} 2.250 \\ (1.681) \end{gathered}$ | $\begin{aligned} & 10.864 \\ & (8.234) \end{aligned}$ | $\begin{gathered} 0.177 \\ (0.412) \end{gathered}$ |
| Hastings College | $\begin{aligned} & -1.012 \\ & (1.401) \end{aligned}$ | $\begin{aligned} & -4.360 \\ & (6.861) \end{aligned}$ | $\begin{aligned} & -0.209 \\ & (0.343) \end{aligned}$ |
| Hutchinson Community College | $\begin{aligned} & -3.328 \\ & (2.743) \end{aligned}$ | $\begin{gathered} -15.184 \\ (13.436) \end{gathered}$ | $\begin{aligned} & -0.129 \\ & (0.672) \end{aligned}$ |
| Illinois State University | $\begin{gathered} 0.996 \\ (1.329) \end{gathered}$ | $\begin{aligned} & -1.330 \\ & (6.509) \end{aligned}$ | $\begin{aligned} & -0.195 \\ & (0.325) \end{aligned}$ |
| James Madison University | $\begin{gathered} -3.675 * * \\ (1.546) \end{gathered}$ | $\begin{gathered} -18.522 * * \\ (7.574) \end{gathered}$ | $\begin{gathered} -0.162 \\ (0.379) \end{gathered}$ |
| Kansas State University | $\begin{gathered} -0.562 \\ (1.504) \end{gathered}$ | $\begin{aligned} & -5.095 \\ & (7.368) \end{aligned}$ | $\begin{aligned} & -0.193 \\ & (0.368) \end{aligned}$ |
| Lewis and Clark College | $\begin{gathered} -3.618^{* *} \\ (1.623) \end{gathered}$ | $\begin{gathered} -18.065^{* *} \\ (7.948) \end{gathered}$ | $\begin{gathered} -0.102 \\ (0.397) \end{gathered}$ |
| Liberty University | $\begin{gathered} 6.023 \\ (3.703) \end{gathered}$ | $\begin{gathered} 23.694 \\ (18.136) \end{gathered}$ | $\begin{aligned} & -0.141 \\ & (0.906) \end{aligned}$ |
| Linfield College | $\begin{aligned} & -6.165 \\ & (5.121) \end{aligned}$ | $\begin{aligned} & -26.835 \\ & (25.079) \end{aligned}$ | $\begin{aligned} & -0.863 \\ & (1.254) \end{aligned}$ |
| Lone Star College-North Harris | $\begin{gathered} -3.584 \\ (3.708) \end{gathered}$ | $\begin{aligned} & -16.455 \\ & (18.162) \end{aligned}$ | $\begin{gathered} 0.107 \\ (0.908) \end{gathered}$ |


| Louisiana State University | $\begin{aligned} & -4.156 \\ & (2.740) \end{aligned}$ | $\begin{gathered} -20.105 \\ (13.421) \end{gathered}$ | $\begin{aligned} & -0.476 \\ & (0.671) \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| McKendree University | $\begin{aligned} & -3.511 \\ & (2.741) \end{aligned}$ | $\begin{gathered} -19.552 \\ (13.427) \end{gathered}$ | $\begin{gathered} -0.782 \\ (0.671) \end{gathered}$ |
| Miami University Forensics IE | $\begin{gathered} 5.431 \\ (3.711) \end{gathered}$ | $\begin{gathered} 13.119 \\ (18.177) \end{gathered}$ | $\begin{aligned} & -0.337 \\ & (0.909) \end{aligned}$ |
| Minnesota State University, Mankato | $\begin{aligned} & -0.947 \\ & (2.198) \end{aligned}$ | $\begin{gathered} -4.856 \\ (10.765) \end{gathered}$ | $\begin{gathered} -0.187 \\ (0.538) \end{gathered}$ |
| Monmouth College | $\begin{gathered} 0.619 \\ (5.121) \end{gathered}$ | $\begin{aligned} & -13.211 \\ & (25.083) \end{aligned}$ | $\begin{aligned} & -1.846 \\ & (1.254) \end{aligned}$ |
| North Central College | $\begin{aligned} & -0.790 \\ & (1.654) \end{aligned}$ | $\begin{gathered} -11.879 \\ (8.101) \end{gathered}$ | $\begin{gathered} -1.194 * * * \\ (0.405) \end{gathered}$ |
| Northern Arizona University | $\begin{gathered} -6.240 * * \\ (2.503) \end{gathered}$ | $\begin{gathered} -32.124^{* * *} \\ (12.259) \end{gathered}$ | $\begin{gathered} -1.622^{* * *} \\ (0.613) \end{gathered}$ |
| Northwestern University | $\begin{gathered} 0.579 \\ (1.498) \end{gathered}$ | $\begin{gathered} 1.926 \\ (7.337) \end{gathered}$ | $\begin{gathered} 0.292 \\ (0.367) \end{gathered}$ |
| Ottawa University - KS | $\begin{aligned} & -8.484 * \\ & (5.116) \end{aligned}$ | $\begin{aligned} & -42.862 * \\ & (25.054) \end{aligned}$ | $\begin{aligned} & -2.395 * \\ & (1.252) \end{aligned}$ |
| Rice University | $\begin{aligned} & -3.108 * \\ & (1.651) \end{aligned}$ | $\begin{gathered} -20.894 * * * \\ (8.087) \end{gathered}$ | $\begin{aligned} & -0.684 * \\ & (0.404) \end{aligned}$ |
| Ripon College | $\begin{aligned} & -1.603 \\ & (3.710) \end{aligned}$ | $\begin{aligned} & -16.002 \\ & (18.172) \end{aligned}$ | $\begin{gathered} -1.854 * * \\ (0.908) \end{gathered}$ |
| Saint Joseph's University | $\begin{aligned} & -2.455 \\ & (1.628) \end{aligned}$ | $\begin{gathered} -17.566 * * \\ (7.971) \end{gathered}$ | $\begin{aligned} & -0.561 \\ & (0.398) \end{aligned}$ |
| San Diego State University | $\begin{gathered} -3.023 \\ (3.101) \end{gathered}$ | $\begin{aligned} & -18.748 \\ & (15.190) \end{aligned}$ | $\begin{gathered} -1.842 * * \\ (0.759) \end{gathered}$ |
| San Francisco State University | $\begin{aligned} & -5.508^{* *} \\ & (2.502) \end{aligned}$ | $\begin{gathered} -30.637 * * \\ (12.255) \end{gathered}$ | $\begin{gathered} -1.951 * * * \\ (0.613) \end{gathered}$ |
| Seton Hall University | $\begin{aligned} & -2.946^{*} \\ & (1.712) \end{aligned}$ | $\begin{aligned} & -9.667 \\ & (8.384) \end{aligned}$ | $\begin{aligned} & 1.121^{* * *} \\ & (0.419) \end{aligned}$ |
| South Central College | $\begin{aligned} & -3.467 \\ & (3.710) \end{aligned}$ | $\begin{gathered} -21.666 \\ (18.170) \end{gathered}$ | $\begin{aligned} & -1.358 \\ & (0.908) \end{aligned}$ |
| South Dakota State University | $\begin{aligned} & -2.827 \\ & (2.098) \end{aligned}$ | $\begin{aligned} & -19.800 * \\ & (10.278) \end{aligned}$ | $\begin{gathered} -1.068^{* *} \\ (0.514) \end{gathered}$ |
| Southwest Minnesota State University | -4.947 | -23.186 | -1.022 |


|  | (3.095) | (15.156) | (0.758) |
| :---: | :---: | :---: | :---: |
| Speech at Berkeley | $\begin{gathered} -5.343^{* * *} \\ (1.824) \end{gathered}$ | (8.935) | $\begin{aligned} & -0.828^{*} \\ & (0.447) \end{aligned}$ |
| St. Cloud State University | $\begin{aligned} & -2.436 \\ & (3.710) \end{aligned}$ | $\begin{gathered} -23.502 \\ (18.172) \end{gathered}$ | $\begin{gathered} -2.854 * * * \\ (0.908) \end{gathered}$ |
| Sterling College | $\begin{aligned} & -6.436 \\ & (5.121) \end{aligned}$ | $\begin{aligned} & -27.502 \\ & (25.081) \end{aligned}$ | $\begin{gathered} -2.854 * * \\ (1.254) \end{gathered}$ |
| Texas A\&M University | $\begin{aligned} & -1.777 \\ & (3.096) \end{aligned}$ | $\begin{gathered} -15.639 \\ (15.165) \end{gathered}$ | $\begin{gathered} -1.606_{* *}^{*} \\ (0.758) \end{gathered}$ |
| Texas Christian University | $\begin{aligned} & -4.789 \\ & (3.707) \end{aligned}$ | $\begin{aligned} & -23.562 \\ & (18.155) \end{aligned}$ | $\begin{aligned} & -0.039 \\ & (0.907) \end{aligned}$ |
| Texas State University | $\begin{aligned} & -1.873 \\ & (1.716) \end{aligned}$ | $\begin{gathered} -14.462 * \\ (8.403) \end{gathered}$ | $\begin{aligned} & -0.772 * \\ & (0.420) \end{aligned}$ |
| The Colorado College | $\begin{gathered} -5.225 * * \\ (2.500) \end{gathered}$ | $\begin{gathered} -25.792^{* *} \\ (12.243) \end{gathered}$ | $\begin{aligned} & -1.066^{*} \\ & (0.612) \end{aligned}$ |
| The University of Oklahoma | $\begin{gathered} -8.173 \\ (5.116) \end{gathered}$ | $\begin{gathered} -39.561 \\ (25.058) \end{gathered}$ | $\begin{aligned} & -2.277 * \\ & (1.252) \end{aligned}$ |
| Tyler Junior College | $\begin{aligned} & -2.180 \\ & (2.332) \end{aligned}$ | $\begin{aligned} & -18.833 * \\ & (11.421) \end{aligned}$ | $\begin{gathered} -1.584 * * * \\ (0.571) \end{gathered}$ |
| University of Akron | $\begin{aligned} & -2.495 \\ & (1.884) \end{aligned}$ | $\begin{gathered} -13.082 \\ (9.226) \end{gathered}$ | $\begin{aligned} & -0.063 \\ & (0.461) \end{aligned}$ |
| University of Alabama | $\begin{gathered} 0.907 \\ (1.280) \end{gathered}$ | $\begin{aligned} & -4.850 \\ & (6.270) \end{aligned}$ | $\begin{gathered} -0.823 * * * \\ (0.313) \end{gathered}$ |
| University of Central Florida | $\begin{aligned} & -5.808 \\ & (5.119) \end{aligned}$ | $\begin{gathered} -28.622 \\ (25.069) \end{gathered}$ | $\begin{aligned} & -0.224 \\ & (1.253) \end{aligned}$ |
| University of Florida | $\begin{aligned} & -0.531 \\ & (1.683) \end{aligned}$ | $\begin{aligned} & -0.636 \\ & (8.243) \end{aligned}$ | $\begin{gathered} 0.613 \\ (0.412) \end{gathered}$ |
| University of Louisiana at Lafayette | $\begin{gathered} -5.583 * * \\ (2.498) \end{gathered}$ | $\begin{gathered} -32.625_{* * *} \\ (12.235) \end{gathered}$ | $\begin{gathered} -2.338^{* *} \\ (0.612) \end{gathered}$ |
| University of Mary Hardin-Baylor | $\begin{aligned} & -4.285 \\ & (3.097) \end{aligned}$ | $\begin{aligned} & -26.518 * \\ & (15.167) \end{aligned}$ | $\begin{gathered} -2.319 * * * \\ (0.758) \end{gathered}$ |
| University of Minnesota | $\begin{aligned} & -1.810 \\ & (3.097) \end{aligned}$ | $\begin{gathered} -5.975 \\ (15.168) \end{gathered}$ | $\begin{gathered} 0.784 \\ (0.758) \end{gathered}$ |
| University of Nebraska - Kearney | $\begin{aligned} & -0.408 \\ & (2.508) \end{aligned}$ | $\begin{aligned} & -15.107 \\ & (12.281) \end{aligned}$ | $\begin{gathered} -1.859 * * * \\ (0.614) \end{gathered}$ |


| University of Nebraska Omaha | $\begin{aligned} & 2.459 * \\ & (1.371) \end{aligned}$ | $\begin{aligned} & \text { 11.230* } \\ & \text { (6.714) } \end{aligned}$ | $\begin{gathered} 0.339 \\ (0.336) \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| University of Nebraska-Lincoln | $\begin{gathered} 0.221 \\ (1.304) \end{gathered}$ | $\begin{aligned} & -1.773 \\ & (6.384) \end{aligned}$ | $\begin{aligned} & -0.141 \\ & (0.319) \end{aligned}$ |
| University of Northern Iowa | $\begin{aligned} & -0.259 \\ & (1.520) \end{aligned}$ | $\begin{aligned} & -1.957 \\ & (7.444) \end{aligned}$ | $\begin{aligned} & -0.117 \\ & (0.372) \end{aligned}$ |
| University of Portland | $\begin{aligned} & -6.436 \\ & (5.121) \end{aligned}$ | $\begin{aligned} & -27.502 \\ & (25.081) \end{aligned}$ | $\begin{aligned} & -0.854 \\ & (1.254) \end{aligned}$ |
| University of South Dakota | $\begin{aligned} & -2.086 \\ & (3.098) \end{aligned}$ | $\begin{gathered} -21.457 \\ (15.173) \end{gathered}$ | $\begin{aligned} & -1.178 \\ & (0.758) \end{aligned}$ |
| University of Texas at Austin | $\begin{aligned} & 7.752^{* * *} \\ & (1.245) \end{aligned}$ | $\begin{gathered} 16.166 * * * \\ (6.100) \end{gathered}$ | $\begin{gathered} -1.185 * * * \\ (0.305) \end{gathered}$ |
| University of Texas at El Paso | $\begin{aligned} & -3.471 * \\ & (2.007) \end{aligned}$ | $\begin{gathered} -16.296^{*} \\ (9.829) \end{gathered}$ | $\begin{aligned} & -0.427 \\ & (0.491) \end{aligned}$ |
| University of Utah | $\begin{gathered} -4.227 * * * \\ (1.549) \end{gathered}$ | $\begin{gathered} -25.791^{* * *} \\ (7.587) \end{gathered}$ | $\begin{gathered} -1.699 * * * \\ (0.379) \end{gathered}$ |
| University of Wisconsin-Eau Claire | $\begin{aligned} & -1.997 \\ & (1.495) \end{aligned}$ | $\begin{aligned} & -9.677 \\ & (7.323) \end{aligned}$ | $\begin{gathered} 0.348 \\ (0.366) \end{gathered}$ |
| Wartburg College | $\begin{aligned} & -2.436 \\ & (5.121) \end{aligned}$ | $\begin{aligned} & -19.502 \\ & (25.081) \end{aligned}$ | $\begin{aligned} & -1.854 \\ & (1.254) \end{aligned}$ |
| Wayland Baptist University | $\begin{aligned} & -5.103 \\ & (5.121) \end{aligned}$ | $\begin{aligned} & -23.502 \\ & (25.081) \end{aligned}$ | $\begin{aligned} & -0.854 \\ & (1.254) \end{aligned}$ |
| Wayne State University | $\begin{gathered} 0.458 \\ (2.332) \end{gathered}$ | $\begin{gathered} 0.552 \\ (11.420) \end{gathered}$ | $\begin{gathered} 0.297 \\ (0.571) \end{gathered}$ |
| Webster University | $\begin{aligned} & -5.436 \\ & (5.121) \end{aligned}$ | $\begin{aligned} & -25.502 \\ & (25.081) \end{aligned}$ | $\begin{aligned} & -1.854 \\ & (1.254) \end{aligned}$ |
| West Texas A\&M | $\begin{aligned} & -3.236 * \\ & (1.680) \end{aligned}$ | $\begin{gathered} -18.712^{* *} \\ (8.230) \end{gathered}$ | $\begin{aligned} & -0.765^{*} \\ & (0.411) \end{aligned}$ |
| Western Kentucky University | $\begin{gathered} 10.008^{* * *} \\ (1.247) \end{gathered}$ | $\begin{gathered} 14.114 * * \\ (6.108) \end{gathered}$ | $\begin{gathered} -1.415 * * * \\ (0.305) \end{gathered}$ |
| Western Wyoming Community College | $\begin{aligned} & -5.394 * \\ & (3.094) \end{aligned}$ | $\begin{aligned} & -26.027 * \\ & (15.153) \end{aligned}$ | $\begin{aligned} & -0.798 \\ & (0.757) \end{aligned}$ |
| Wiley College | $\begin{aligned} & 2.966 * * \\ & (1.500) \end{aligned}$ | $\begin{aligned} & -0.138 \\ & (7.346) \end{aligned}$ | $\begin{gathered} -1.029 * * * \\ (0.367) \end{gathered}$ |


| William Carey University | 2.002 | -2.261 | $-0.909^{* *}$ |
| :--- | :---: | :---: | :---: |
|  | $(1.512)$ | $(7.404)$ | $(0.370)$ |
| Constant | $4.563 * * *$ | $16.382^{* * *}$ | $3.483^{* * *}$ |
|  | $(1.193)$ | $(5.845)$ | $(0.292)$ |
| Observations | 1,226 | 1,226 | 1,226 |
| R2 | 0.496 | 0.337 | 0.265 |
| Adjusted R2 | 0.458 | 0.288 | 0.210 |
| Residual Std. Error $(\mathrm{df}=1140)$ | 4.992 | 24.449 | 1.222 |
| F Statistic $(\mathrm{df}=85 ; 1140)$ | $13.188^{* * *}$ | $6.821 * * *$ | $4.838^{* * *}$ |
| Note: |  | ${ }^{* \mathrm{p}<0.1 ; * * \mathrm{p}<0.05 ;}{ }^{* * * \mathrm{p}<0.01}$ |  |

Table 13: Event-by-Event Results

|  | Event |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ADS <br> (1) | CA <br> (2) | DI <br> (3) | EXT <br> (4) | IMP <br> (5) | INFO <br> (6) | PERS <br> (7) | POE <br> (8) | POI <br> (9) | $\begin{gathered} \hline \text { PRO } \\ (10) \end{gathered}$ |
| NSDA <br> Points <br> (Standard <br> Deviation) | $\begin{aligned} & 0.616 * * * \\ & (0.169) \end{aligned}$ | $\begin{aligned} & 0.688^{* * *} \\ & (0.168) \end{aligned}$ | $\begin{aligned} & 0.696^{* * *} \\ & (0.165) \end{aligned}$ | $\begin{aligned} & 0.998^{* * *} \\ & (0.131) \end{aligned}$ | $\begin{aligned} & 0.927_{* * *} \\ & (0.126) \end{aligned}$ | $\begin{aligned} & 0.686 * * * \\ & (0.145) \end{aligned}$ | $\begin{aligned} & 0.509^{* * *} \\ & (0.149) \end{aligned}$ | $\begin{aligned} & 1.039^{* * *} \\ & (0.188) \end{aligned}$ | $\begin{aligned} & 1.241^{* * *} \\ & (0.176) \end{aligned}$ | $\begin{aligned} & 0.822^{* * *} \\ & (0.156) \end{aligned}$ |
| AFA-NIET Experience | $\begin{aligned} & 1.573^{* * *} \\ & (0.308) \end{aligned}$ | $\begin{gathered} 2.039^{* * *} \\ (0.321) \end{gathered}$ | $\begin{gathered} 2.137 * * * \\ (0.290) \end{gathered}$ | $\begin{gathered} 2.280 * * * \\ (0.311) \end{gathered}$ | $\begin{gathered} 2.197 * * * \\ (0.264) \end{gathered}$ | $\begin{aligned} & 1.845 * * * \\ & (0.271) \end{aligned}$ | $\begin{gathered} 2.357 * * * \\ (0.293) \end{gathered}$ | $\begin{gathered} 2.405^{* * *} \\ (0.306) \end{gathered}$ | $\begin{gathered} 2.013^{* * *} \\ (0.308) \end{gathered}$ | $\begin{aligned} & 1.335 * * * \\ & (0.266) \end{aligned}$ |
| Constant | $\begin{aligned} & 5.624^{* * *} \\ & (0.422) \end{aligned}$ | $\begin{aligned} & 5.429^{* * *} \\ & (0.423) \end{aligned}$ | $\begin{gathered} 5.197 * * * \\ (0.375) \end{gathered}$ | $\begin{gathered} 4.601^{* * *} \\ (0.412) \end{gathered}$ | $\begin{gathered} 4.589^{* * *} \\ (0.359) \end{gathered}$ | $\begin{gathered} 5.178_{* * *}^{* *} \\ (0.376) \end{gathered}$ | $\begin{gathered} 5.097 * * * \\ (0.385) \end{gathered}$ | $\begin{gathered} 5.056^{* * *} \\ (0.383) \end{gathered}$ | $\begin{gathered} 4.944_{* * *}^{*} \\ (0.400) \end{gathered}$ | $\begin{gathered} 5.541 * * * \\ (0.351) \end{gathered}$ |
| Observatio ns | 788 | 686 | 845 | 763 | 850 | 843 | 795 | 805 | 796 | 928 |
| R2 | 0.056 | 0.095 | 0.087 | 0.141 | 0.145 | 0.091 | 0.105 | 0.119 | 0.111 | 0.064 |
| Adjusted $\mathrm{R}_{2}$ | 0.053 | 0.093 | 0.085 | 0.139 | 0.143 | 0.089 | 0.103 | 0.116 | 0.108 | 0.062 |
| Residual <br> Std. Error | $\begin{gathered} 8.133(\mathrm{df}= \\ 785) \end{gathered}$ | $\begin{gathered} 7.801(\mathrm{df}= \\ 683) \end{gathered}$ | $\begin{aligned} & 7.750(\mathrm{df}= \\ & 842) \end{aligned}$ | $\begin{gathered} 8.035(\mathrm{df}= \\ 760) \end{gathered}$ | $\begin{gathered} 7.360(\mathrm{df}= \\ 847) \end{gathered}$ | $\begin{gathered} 7.521(\mathrm{df}= \\ 840) \end{gathered}$ | $\begin{aligned} & 7.832(\mathrm{df}= \\ & 792) \end{aligned}$ | $\begin{aligned} & 7.908(\mathrm{df}= \\ & 802) \end{aligned}$ | $\begin{gathered} 7.957(\mathrm{df}= \\ 793) \end{gathered}$ | $\begin{gathered} 7.473(\mathrm{df}= \\ 925) \end{gathered}$ |
| F Statistic | $\begin{gathered} 23.167 * * * \\ \mathrm{df}=2 \\ 785) \end{gathered}$ | $\begin{gathered} 36.019^{* * *} \\ \mathrm{df}=2 \\ 683) \end{gathered}$ | $\begin{gathered} 40.268 * * * \\ \mathrm{df}=2 \\ 842) \end{gathered}$ | $\begin{gathered} 62.297 * * * \\ \mathrm{df}=2 \\ 760) \end{gathered}$ | $\begin{gathered} 71.719 * * * \\ \mathrm{df}=2 \\ 847) \end{gathered}$ | $\begin{gathered} 41.956^{* * *} \\ \mathrm{df}=2 \\ 840) \end{gathered}$ | $\begin{gathered} 46.465^{* * *} \\ \mathrm{df}=2 \\ 792) \end{gathered}$ | $\begin{gathered} 53.996^{* * *} \\ \mathrm{df}=2 \\ 802) \end{gathered}$ | $\begin{gathered} 49.267_{* * *} \\ \mathrm{df}=2 \\ 793) \end{gathered}$ | $\begin{gathered} 31.410 * * * \\ \mathrm{df}=2 \\ 925) \end{gathered}$ |

Note:

* $\mathrm{p}<0.1 ; ~ * * p<0.05 ; * * * p<0.01$

Table 14: Event-by-Event Results First-Years Only

|  | Event |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ADS <br> (1) | CA <br> (2) | $\begin{aligned} & \text { DI } \\ & (3) \end{aligned}$ | EXT <br> (4) | $\begin{gathered} \text { IMP } \\ (5) \end{gathered}$ | INFO <br> (6) | PERS <br> (7) | $\begin{gathered} \text { POE } \\ (8) \end{gathered}$ | POI <br> (9) | $\begin{gathered} \hline \text { PRO } \\ (10) \end{gathered}$ |
| NSDA <br> Points (SD) | $\begin{gathered} 0.435 \\ (0.282) \end{gathered}$ | $\begin{aligned} & 0.502^{* *} \\ & (0.252) \end{aligned}$ | $\begin{gathered} 0.543^{* * *} \\ (0.205) \end{gathered}$ | $\begin{aligned} & 1.089^{* * *} \\ & (0.171) \end{aligned}$ | $\begin{aligned} & 0.700^{* * *} \\ & (0.198) \end{aligned}$ | $\begin{aligned} & 0.453^{* *} \\ & (0.213) \end{aligned}$ | $\begin{aligned} & 0.429 * \\ & (0.219) \end{aligned}$ | $\begin{gathered} 0.714^{* * *} \\ (0.228) \end{gathered}$ | $\begin{gathered} 0.996^{* * *} \\ (0.247) \end{gathered}$ | $\begin{aligned} & 0.459^{* *} \\ & (0.232) \end{aligned}$ |
| Constant | $\begin{gathered} 5.801 * * * \\ (0.484) \end{gathered}$ | $\begin{gathered} 5.788^{* * *} \\ (0.441) \end{gathered}$ | $\begin{gathered} 5.401 * * * \\ (0.357) \end{gathered}$ | $\begin{gathered} 4.548_{* * *} \\ (0.412) \end{gathered}$ | $\begin{gathered} 4.964^{* * *} \\ (0.385) \end{gathered}$ | $\begin{gathered} 5.470 * * * \\ (0.374) \end{gathered}$ | $\begin{gathered} 5.189 * * * \\ (0.364) \end{gathered}$ | $\begin{gathered} 5.209^{* * *} \\ (0.353) \end{gathered}$ | $\begin{gathered} 5.315 * * * \\ (0.435) \end{gathered}$ | $\begin{gathered} 5.617 * * * \\ (0.375) \end{gathered}$ |
| Observations | 349 | 301 | 426 | 391 | 400 | 354 | 378 | 415 | 384 | 422 |
| R2 | 0.007 | 0.013 | 0.016 | 0.094 | 0.030 | 0.013 | 0.010 | 0.023 | 0.041 | 0.009 |
| Adjusted R2 | 0.004 | 0.010 | 0.014 | 0.092 | 0.028 | 0.010 | 0.007 | 0.021 | 0.038 | 0.007 |
| Residual <br> Std. Error | $\begin{aligned} & 7.836 \\ & (\mathrm{df}= \\ & 347) \end{aligned}$ | $\begin{gathered} 6.928(\mathrm{df} \\ =299) \end{gathered}$ | $\begin{gathered} 6.394(\mathrm{df}= \\ 424) \end{gathered}$ | $\begin{gathered} 6.896(\mathrm{df}= \\ 389) \end{gathered}$ | $\begin{gathered} 6.663(\mathrm{df}= \\ 398) \end{gathered}$ | $\begin{gathered} 6.176(\mathrm{df} \\ =352) \end{gathered}$ | $\begin{gathered} 6.364(\mathrm{df} \\ =376) \end{gathered}$ | $\begin{gathered} 6.361(\mathrm{df}= \\ 413) \end{gathered}$ | $\begin{gathered} 7.489(\mathrm{df}= \\ 382) \end{gathered}$ | $\begin{gathered} 6.812(\mathrm{df} \\ =420) \end{gathered}$ |
| F Statistic | $\begin{gathered} 2.382 \\ (\mathrm{df}=1 ; \\ 347) \end{gathered}$ | $\begin{gathered} 3.970 * *(\mathrm{df} \\ =1 ; 299) \end{gathered}$ | $\begin{aligned} & 7.006_{* * *}(\mathrm{df} \\ & =1 ; 424) \end{aligned}$ | $\begin{gathered} 40.343^{* * *}(\mathrm{df} \\ =1 ; 389) \end{gathered}$ | $\begin{gathered} 12.498^{* * *}(\mathrm{df} \\ =1 ; 398) \end{gathered}$ | $\begin{gathered} 4.526 * *(\mathrm{df} \\ =1 ; 352) \end{gathered}$ | $\begin{aligned} & 3.846 *(\mathrm{df} \\ & =1 ; 376) \end{aligned}$ | $\begin{gathered} 9.822 * * *(\mathrm{df} \\ =1 ; 413) \end{gathered}$ | $\begin{gathered} 16.249 * * *(\mathrm{df} \\ =1 ; 382) \end{gathered}$ | $\begin{gathered} 3.915 * *(\mathrm{df} \\ =1 ; 420) \end{gathered}$ |

Note:

$$
{ }^{*} \mathrm{p}<0.1 ; * * \mathrm{p}<0.05 ; * * * \mathrm{p}<0.01
$$

Table 15: Event-by-Event Results Non-First-Years

|  | Event |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ADS <br> (1) | CA <br> (2) | DI <br> (3) | EXT <br> (4) | IMP <br> (5) | INFO (6) | PERS <br> (7) | $\begin{gathered} \text { POE } \\ (8) \end{gathered}$ | $\begin{gathered} \hline \text { POI } \\ (9) \end{gathered}$ | $\begin{gathered} \hline \text { PRO } \\ (10) \end{gathered}$ |
| NSDA | $\begin{gathered} 0.708^{* * *} \\ (0.214) \end{gathered}$ | $\begin{gathered} 0.774 * * * \\ (0.225) \end{gathered}$ | $\begin{gathered} 0.817 * * * \\ (0.256) \end{gathered}$ | $\begin{gathered} 0.928 * * * \\ (0.196) \end{gathered}$ | $\begin{aligned} & 1.041 * * * \\ & (0.165) \end{aligned}$ | $\begin{gathered} 0.785^{* * *} \\ (0.195) \end{gathered}$ | $\begin{gathered} 0.544 * * * \\ (0.206) \end{gathered}$ | $\begin{aligned} & 1.304 * * * \\ & (0.296) \end{aligned}$ | $\begin{aligned} & 1.439 * * * \\ & (0.249) \end{aligned}$ | $\begin{aligned} & 1.042 * * * \\ & (0.210) \end{aligned}$ |
| AFA-NIET | $\begin{aligned} & 1.600^{* * *} \\ & (0.562) \end{aligned}$ | $\begin{gathered} 2.519^{* * *} \\ (0.608) \end{gathered}$ | $\begin{gathered} 2.332 * * * \\ (0.621) \end{gathered}$ | $\begin{gathered} 2.506_{* * *}^{*} \\ (0.659) \end{gathered}$ | $\begin{gathered} 2.579 * * * \\ (0.510) \end{gathered}$ | $\begin{aligned} & 1.999_{* * *} \\ & (0.522) \end{aligned}$ | $\begin{gathered} 2.431^{* * *} \\ (0.606) \end{gathered}$ | $\begin{gathered} 2.049_{* * *}^{*} \\ (0.670) \end{gathered}$ | $\begin{gathered} 2.456 * * * \\ (0.582) \end{gathered}$ | $\begin{gathered} 0.753 \\ (0.504) \end{gathered}$ |
| Constant | $\begin{aligned} & 5.443^{* *} * \\ & (0.993) \end{aligned}$ | $\begin{gathered} 4.384_{* * *}^{* *} \\ (1.038) \end{gathered}$ | $\begin{gathered} 4.680 * * * \\ (1.075) \end{gathered}$ | $\begin{gathered} 4.289^{* * *} \\ (1.167) \end{gathered}$ | $\begin{gathered} 3.670^{* * *} \\ (0.917) \end{gathered}$ | $\begin{gathered} 4.735_{* * *}^{*} \\ (0.912) \end{gathered}$ | $\begin{gathered} 4.898^{* * *} \\ (1.077) \end{gathered}$ | $\begin{aligned} & 5.418^{* * *} \\ & (1.144) \end{aligned}$ | $\begin{gathered} 3.916^{* * *} \\ (1.001) \end{gathered}$ | $\begin{gathered} 6.361 * * * \\ (0.870) \end{gathered}$ |
| Observatio ns | 439 | 385 | 419 | 372 | 450 | 489 | 417 | 390 | 412 | 506 |
| R2 | 0.047 | 0.087 | 0.061 | 0.099 | 0.137 | 0.073 | 0.062 | 0.080 | 0.116 | 0.055 |
| Adjusted <br> R2 | 0.042 | 0.082 | 0.057 | 0.094 | 0.133 | 0.069 | 0.057 | 0.075 | 0.112 | 0.051 |
| Residual <br> Std. Error | $\begin{gathered} 8.374(\mathrm{df}= \\ 436) \end{gathered}$ | $\begin{gathered} 8.422(\mathrm{df}= \\ 382) \end{gathered}$ | $\begin{gathered} 8.930(\mathrm{df}= \\ 416) \end{gathered}$ | $\begin{gathered} 9.096(\mathrm{df}= \\ 369) \end{gathered}$ | $\begin{gathered} 7.924(\mathrm{df}= \\ 447) \end{gathered}$ | $\begin{gathered} 8.365(\mathrm{df}= \\ 486) \end{gathered}$ | $\begin{gathered} 8.974(\mathrm{df}= \\ 414) \end{gathered}$ | $\begin{gathered} 9.273(\mathrm{df}= \\ 387) \end{gathered}$ | $\begin{gathered} 8.365(\mathrm{df}= \\ 409) \end{gathered}$ | $\begin{gathered} 7.963(\mathrm{df}= \\ 503) \end{gathered}$ |
| F Statistic | $\begin{gathered} 10.637 * * * \\ \mathrm{df}=2 \\ 436) \end{gathered}$ | $\begin{gathered} 18.112 * * * \\ \mathrm{df}=2 \\ 382) \end{gathered}$ | $\begin{gathered} 13.601 * * * \\ \mathrm{df}=2 \\ 416) \end{gathered}$ | $\begin{gathered} 20.205 * * * \\ \mathrm{df}=2 \\ 369) \end{gathered}$ | $\begin{gathered} 35.579 * * * \\ \mathrm{df}=2 \\ 447) \end{gathered}$ | $\begin{gathered} 19.082 * * * \\ \mathrm{df}=2 \\ 486) \end{gathered}$ | $\begin{gathered} 13.632 * * * \\ \mathrm{df}=2 \\ 414) \end{gathered}$ | $\begin{gathered} 16.774 * * * \\ \text { df }=2 \\ 387) \end{gathered}$ | $\begin{gathered} 26.876 * * * \\ \mathrm{df}=2 \\ 409) \end{gathered}$ | $\begin{gathered} 14.519 * * * \\ \mathrm{df}=2 \\ 503) \end{gathered}$ |

Note:
${ }^{*} \mathrm{p}<0.1 ; * * \mathrm{p}<0.05 ; * * * \mathrm{p}<0.01$

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