

Forensics as a Correlate of Graduate School Success

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Forensics is an extremely popular extracurricular activity in the communication discipline and often provides competitors with skills required for success in graduate school. This exploratory study examines the relationships between forensics competition and success in graduate school. Through a survey of 169 graduate students, we compare graduate students with a forensics background (n = 35) and those without a forensics background (n = 134). The study generates several important findings. First, graduate students who competed in forensics report higher levels success in graduate school and are more likely to present conference papers and publish in academic journals. Second, the level of participation and level of success in forensics plays a major role in determining graduate student success. Students who participated more in forensics and reported higher levels of success in forensics reported even higher levels of success in graduate school and participation in conferences and publications than their counterparts without a forensics background. The implications of this study as well as how this study can be used by faculty and coaches to help forensics students transition to graduate school are discussed.

Keywords: forensics, graduate school, academic success

Every year, graduate faculty wade through the process of selecting candidates for their respective graduate programs. Graduate admissions committees may examine a host of graduate school success indicators, including undergraduate and graduate coursework, verbal and quantitative Graduate Record Exam (GRE) scores, grade point averages (GPA), research experience, letters of recommendation, and personal statements (Huss, Randall, Davis, & Hansen, 2002). Each piece of application data figures into a complex equation to determine which candidates are the optimal choices. Despite the best efforts of the selection committee and the best of intentions of the graduate school applicants, of those chosen, only 40-60% will earn their degrees (Malone, Nelson, & Nelson, 2004).

Along with test scores and grades, admission committees also consider extra and co-curricular activities, internships, and relevant work experience. Communication students engage in a variety of extra and co-curricular activities which allow them to actively engage in refining their communication skills. One of the most popular is competitive intercollegiate speech and debate (forensics). Rogers (2002, 2005), in his longitudinal study of forensics participants and the impact of forensics on their critical thinking skills, found that students involved in intercollegiate forensics were more likely to be accepted into graduate school than students without a forensics background. Other researchers have found that forensics involvement develops or increases some of the skills often seen as critical to graduate school success, such as adaptability (DeLancey, 1984), teamwork (Derryberry, 1994), increased communication competence (Jensen & Jensen, 2006), ability to foster different ways of knowing (Sellnow, 1994), and understanding of multiple organizational cultures (team, departmental, university, and disciplinary) (Carmack & Holm, 2004; Croucher, Long, Meredith, Oommen, & Steele, 2009; Croucher, Thornton, & Eckstein, 2006).

As a co-curricular or extra-curricular activity (depending on its integration into its department), forensics seems to be particularly suited to fostering the kinds of intellectual and

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personal growth that result in ideal candidates for graduate study in communication (Millsap, 1998). As important as the intellectual, critical thinking, and writing skills developed through forensics participation are to graduate school success, emotional and personal skills are equally important as students navigate graduate education. Rogers (2002) for instance found that undergraduate students who competed in intercollegiate forensics reported significantly less depression, anxiety and feelings of being overwhelmed. They reported higher confidence and a positive outlook and were significantly more flexible in their outlook on life. Combined, these intellectual and social skills are invaluable for a successful graduate school experience.

Researchers have looked at the issue of graduate school success and attrition (Leverett-Main, 2004; Malone, Nelson & Nelson, 2004), focusing on correlations between success and admission indicators such as GRE scores (Feeley, Williams, & Wise, 2005; Holt, Bleckmann & Zitzmann, 2006; House & Johnson, 1993), undergraduate GPA (Huss, et al., 2002; Ragothaman, Carpenter, & Davies, 2009), letters of recommendation (Nicklin & Roch, 2009), and personal narratives (Powers & Fowels, 1997). Of note here is past researchers' emphasis on pre-graduate school indicators to define success. The emphasis on these types of indicators is problematic as they do not account for the different personal and social elements associated with academic success (Al-Emadi, 2001). A small number of education scholars have called for the consideration of other definitions and measures of success that emphasize students' feelings of preparedness and confidence as key factors to completing educational programs (Dowson & McInerney, 2004; Ethington & Smart, 1986; Santiago & Einarson, 1998; Smith & Naylor, 2001); however, communication scholars have been relatively silent about these issues. Moreover, communication researchers have yet to explore the impact that forensics participation, which past research suggests fosters issues of confidence and preparedness (Rogers, 2002), has on this reconceptualization of success. This study begins this exploration by examining the role of forensics as a factor in communication graduate program success.

Literature Review

The decision to attend graduate school is a significant one. Despite the importance of the decision and the time and energy that goes into making the commitment to pursue a graduate degree, 40 years of studies suggest the long-term attrition rate for graduate programs nationwide is about 50 percent (Johnson, Green, & Kluever, 2000; Lovitts & Nelson, 2000; Smallwood, 2004, January 16). Smallwood (2004, January 16) contends "a larger portion of the dropout total can be attributed to grad schools having made bad admissions selections" (p. A10). Despite the standardized test scores, high grade point averages, stellar letters of recommendation and personal statements that indicate they have a deep desire to pursue the graduate degree, committees still select students that drop out. Nearly a third of all doctoral student attrition occurs in the first year (Bowen & Rudenstine, 1992) and another "third drop out before candidacy and a final third post candidacy, although this varies considerably by department and discipline" (Golde, 1998, p. 55).

Traditional Indicators of Graduate School Success

The Graduate Record Examination (GRE). The GRE is the standardized test most commonly used by selection committees as an indicator of graduate student success (Holt, Bleckmann, & Zitzmann, 2006), with "more than 600,000 students tak[ing] the GRE each year" (Lewin, 2009, p. 38). Not only are they widely used, but GRE scores are privileged by some programs as an almost definitive test for admissions. Freely, Williams, and Wise (2005) go so far as to say, "Many schools rank students by GRE or weight the GRE in linear combination with UGPA" (p. 230). But the GRE is not without its flaws and shortfalls.

Freely, Williams, and Wise (2005) report that there are inconsistent data on the GRE as a predictor of graduate student performance. House and Johnson (1993) found mixed results on the correlation between GRE scores and the completion rate and success of psychology graduate students. Sampson and Boyer (2001) found that the quantitative and verbal components of the GRE have minimal predictive validity. And Leverett-Main (2004) reported that it has “been difficult for researchers to find a relationship between GRE scores and any of the measures of successful performance in graduate education” (pp. 208-209). In fact, Sampson and Boyer (2001) reported that higher GRE scores actually predicated a longer time to graduation. As Sacks (2003) pointed out, “We find cases of institutions simply assuming that test scores are good predictors of future performance, without doing the hard work of demonstrating the validity of that assumption” (p. 13). Sampson and Boyer (2001) further advised caution, explaining that “the bottom line is that if the tests do not meaningfully predict success, their use should be limited” (p. 270).

Undergraduate grade point average (UGPA). Prior academic performance would also seem to be a valid predictor of graduate school success. Most, if not all, selection committees ask for undergraduate transcripts so they can evaluate the coursework the student has taken as well as look at the student’s UGPA. Ragothaman, Carpenter, and Davies (2009) point out that the most commonly used measure of past academic performance (and thus potential for graduate school success) is the UGPA. Although Freely, Williams, and Wise (2005) found that “GPA in one’s B.A./B.S. program was a better predictor of GGPA than GRE” (p. 239), overall, it has not been shown to be a good predictor of graduate school success. Huss et al. (2002) found a negative relationship between undergraduate GPA and perceived preparedness; students with higher UGPAs actually felt less prepared for graduate school than those with lower UGPAs. Because there are some data to support the connection between self-reported feeling of preparedness and graduate school success (Huss, et al., 2002), it is not surprising that the UGPA has not proven to be a predictor of graduate school success either.

Kyllonen, Walters, and Kaufman (2005) explain that UGPA, “despite being the most widely used, lacks standardization across schools, degree programs, and individual faculty members” (p. 156). What is an A from Dr. Smith at University X might be a B- from Dr. Jones at University Z or even down the hall from another professor at University X. But the lack of standardization is not the only complicating factor for UGPAs. Sampson and Boyer (2001) add that a 20-year longitudinal study on UGPAs found that grades were inflated and less trustworthy than the GRE standardized test.

The problem of grade inflation is widespread and one that, despite attempts to curtail it, is persistent. Grade inflation has a direct impact on preparedness for graduate school because, as Lippmann, Bulanda, and Wagenaar (2009) argue, grade inflations fosters “expectations among students about the quality of their work and about the amount of work expected of students” (p. 199). When these students enter a graduate program with rigorous standards, they may doubt their ability and may consider leaving the program.

Written forms of evaluation. Graduate admission programs consider more than just numerical scores. Many programs require students to submit narrative documents to evaluate potential student success. The three primary narrative documents are personal statements, letters of recommendation, and demonstrations of research experience. Many graduate programs ask applicants to write a personal statement, discussing why the applicant feels he or she is a good fit with the program, what areas he or she plans to study, and/or why he or she chose a particular program. The personal statement’s secondary purpose is to “sell” the student as a candidate in a competitive pool of applicants. But these are not always reflective of the individual’s work. Personal statements are often an amalgam of the applicant’s ideas and words and those of others

who reviewed and edited the letter before it was sent to the committee. Powers and Fowles (1997) found that “a majority of study participants admitted receiving help in drafting or revisiting their statements” (p. 85). Combine these factors with the fact that some applicants will simply tell the committee what they think it wants to hear. The document may offer little insight into who the applicant is, his or her research interests, and how well he or she will fit with the graduate program.

Like personal statements, letters of recommendations, by definition, are meant to be positive reflections of student ability (Schall, 2006). By and large, letters of recommendation frame people in the most positive light possible. This phenomenon, known as “letter inflation,” becomes problematic, because, “if every applicant is described as exceptional, letters cannot discriminate among applicants and are useless” (Nicklin & Roch, 2009, p. 28).

Graduate programs are also looking at students’ abilities to conduct disciplinary research. Previous publication experience is an indicator of academic success for undergraduate students (Dvorak, 1989). As such, because a majority of graduate programs are research-based programs, students who can demonstrate they have conducted research (especially in the program’s disciplinary field), would have additional skills required for graduate school success. Although examples of prior research are generally solid indicators of a candidate’s ability to conduct research and write in a scholarly manner, they may also skew the data available to committees. For example, a co-authored paper may not reflect the candidate’s real research or writing ability (especially if the work was the result of a class project). Additionally, requiring a research project be submitted may disadvantage certain populations since not all institutions encourage undergraduates to conduct research and publish or present at conferences. Consequently, their files may be viewed as incomplete or the candidates may simply self-select out of the process because they do not have a writing sample to submit.

As this critique of the traditional indicators underscores, there is a great deal of inconsistency in using *only* these scores to determine graduate school success. The traditional indicators serve as markers to entrance to communication graduate programs, but as the research suggests, these indicators do not consistently help to determine completion of a program. What these scores do not account for is the confidence (Santiago & Einarson, 1998), persistence (Ethington & Smart, 1986), preparedness (Smith & Naylor, 2001), and ability to master and perform the academic norms (Dowson & McInerney, 2004) required to complete a graduate program. These are attributes often fostered by involvement in competition speech activities.

Forensics as a Correlate to Educational Success

Intercollegiate forensics would seem to foster and encourage many of the traits, characteristics, and opportunities that researchers have found predict or correlate to graduate school success. Members of intercollegiate forensics teams learn valuable speech and debate skills, as well as develop better overall cognitive learning skills (Aden, 2002; Allen, Berkowitz, Hunt, & Loudon, 1999) and critical thinking skills, producing better Graduate Teaching Assistants (GTAs) (Benton, 2002; Hughes, 1994). Colbert and Biggers (1985) said that forensics experience provided a competitor with “excellent pre-professional preparation” (p. 237) and others have talked about the role of the forensics coach as a mentor for undergraduate students that can span their entire undergraduate years and how that positively impacts students’ graduate school preparation (White, 2005; Yaremchuk, Brownlee, Beasley, & Woodard, 2002).

Rogers (2005) has, to some extent, researched the correlation between forensics participation and graduate school success. Comparing forensics participation to the traditional indicators of graduate school success, he found that those with forensics experience scored an average of 1270 on the combined verbal and quantitative portions of the GRE as compared to the combined 1204 average reported by those without forensics experience. More importantly, an even greater

difference was found on the writing portion of the GRE, where scores ranged from 0 to 6; forensics participants averaged a 5.1 whereas those without forensics experience averaged a 3.7. His five-year longitudinal study went on to show that of the 51 (of the 68, or roughly 75%) forensics students involved in the study who went on to graduate school, law school, or a professional school, 46 completed their post-graduate program. The remaining five included three who were still enrolled in a program and two who had dropped out— 90% successfully completed a graduate degree and less than 4% dropped out. This compares to the rates of the 51 non-forensics students who participated in the study, of whom 26 (roughly 50%) went on to a graduate, professional, or medical school; of the non-forensics students, fewer than 77% successfully completed their programs and 11.5% dropped out.

Rogers' (2002, 2005) research focused primarily on comparing numeric scores and forensics participation. However, as Rogers himself pointed out, GPA and GRE scores are not enough to evaluate student success. What his studies did not explore was how graduate students report feelings of success. Because of this, our study examines the potential correlations between forensics participation and reported level of success. Research on other extracurricular activities suggests that academic success is not solely based on participation in the activity; level of participation and success in an activity are also important (Goidel & Hamilton, 2006; Peck, Roeser, Zarrett, & Eccles, 2008; Troutman & Dufur, 2007). With that in mind, we posed the following research questions:

- RQ₁: What is the relationship between graduate students' participation in forensics and reported first year academic success?
- RQ₂: What is the relationship between graduate students' participation in forensics and reported success in scholarly pursuits?

Method

Participants

The sample for this study consisted of graduate students from top ranked communication programs across the United States. Graduate programs (Master's and doctoral) were selected if they were identified as one of the top-10 programs in a particular field by the National Communication Association (2004). This list was chosen because they are recognized by the national communication organization as outstanding programs, leveling the playing field because all of were similar caliber schools. Additionally, this list was used because the two major criteria used to determine program ranking was quality of faculty and effectiveness in educating researchers, both of which are elements of our conceptualization of success. It also pulled participants from a more homogenous sample and prevented a distortion of responses from a "big fish in a small pond." Because some schools were listed under multiple fields, we removed duplicate programs from the list, leaving a total of 35 programs. The graduate directors of those programs were contacted about the study and they supplied e-mail addresses for qualifying graduate students. Via e-mail, graduate students were directed to one of two online questionnaires depending on their stage in the graduate program. A total of 169 graduate students participated in the study.

The 169 graduate students were separated into two groups: first-year graduate students and graduate students who had completed, or were in the final semester of completing, their graduate coursework. Fifty-four first year graduate students from approximately 10 different graduate programs responded to the questionnaire. The 54 first-year students were a combination of Masters students ($n = 20$), doctoral students ($n = 32$), and other ($n = 2$). Of the 54 students, 14 students (25.9 %) reported participating in forensics.

One-hundred-thirteen graduate students responded to the second questionnaire designed for students who had completed, or were in the final semester of completing, graduate coursework. Of

the 113 respondents, 84% were doctoral students ($n = 95$) and 16% were Masters students ($n = 18$). Twenty-one students (18.5%) in this group reported participating in forensics.

Measures

Demographic information. Each group received and completed different on-line questionnaires. All participants were asked about participation in forensics, level of participation in forensics, level of success in forensics, and other extracurricular activities in which each participant may have engaged (e.g. theatre, public relations club, newspaper). We decided to expand forensics participation to include level of participation and success because, logically, students who participate in forensics for more than one year hone writing, reasoning, and presentation skills beyond the level achieved in their first year. Individual events and debate require forensics students to craft well constructed and tight arguments (as speeches are limited to 7 or 10 minutes) and, in order to be successful, competitors must be confident in their presentation. As discussed previously, these are all skills present in forensics competition and desired in graduate students. Level of participation was determined based on number of tournaments attended in a year (less than 4 tournaments per year to more than 15 tournaments per year). Success in forensics was defined by number of breaks and specific tournament successes (rarely, if ever, making a final round to being in the top 20 in individual sweepstakes at the National Forensics Association or American Forensics Association national tournaments).

Survey questions. First year graduate students were asked a series of questions about self-confidence, self-perceptions of their preparedness for graduate school, perceptions of others in the graduate program, and their co-curricular and extracurricular activity involvement. Students who had completed, or were in the process of completing, their coursework were asked questions about their scholarly pursuits and their co-curricular and extracurricular activity involvement.

Operationalizing “success” is difficult, as individuals define the term differently. We relied on previous literature as well as experience in graduate programs (having been students and currently faculty at programs with graduate students) to develop our definition. The current literature on success is problematic as it frames success solely as an outcome, ignoring the elements of the process. Additionally, the previous research uses pre-graduate school indicators to determine success, primarily undergraduate GPA and GRE scores. Instead of focusing on external scores, we decided to focus this study on a process-oriented definition of success that asked current graduate students to evaluate their feeling of success. For first-year students, we focused on two primary areas: confidence and participation. These variables were combined into a ten question survey that gauged participants’ positioning of self and others in graduate programs. The reliability of the survey questions was weak ($\alpha = .550$).

The confidence variable, comprised of four questions, focused on overall general confidence and confidence in writing ability, a key indicator of success in graduate school. Previous research has explored students’ sense of confidence in graduate programs as a determinate of completion (Santiago & Einarson, 1998). “Coming into the program, how confident were you in your writing skills?” and “At the *end* of your first term of the graduate program, how confident did you feel about your undergraduate preparation for graduate level work?” are two examples of the questions asked to evaluate confidence. Confidence was reported on a 4-point scale from “Very Confident” (1) to “Very Insecure” (4).

The participation variable, containing six questions, included a wider variety of ideas, including class participation, how well participants thought they were prepared for graduate school, likelihood of program completion, and how participants felt they compared to others in their program. Classroom participation has been identified as a factor in undergraduate success

(Dallimore, Hertenstein, & Platt, 2004), and we believe that it is also a factor in graduate school success. Preparedness is an important part of success (Smith & Naylor, 2001), as this can help students judge what they need to do to be successful (e.g., familiarization with communication research, understanding of the research process) and can be a key reason for deciding to complete a graduate program. Identifying graduate students' level of preparedness can be used to determine feelings of self-efficacy regarding graduate school completion (Huss et al., 2002). As such, we asked students to report their level of preparedness and the likelihood of completing their program.

Likewise, comparing self to other students in a program is a way for graduate students to evaluate preparedness and likelihood of completion. Questions ranged from "Did your undergraduate program adequately prepare you for the type of research you need to do in this graduate program?" to "How likely do you believe you are to complete your graduate program?" These questions either use a 5-point scale ("Yes, I was very well prepared and had nearly all of the skills and experience I needed" to "My research skills were really quite poor") or a 6-point scale ("I am in the top 10% of students in my incoming class" to "I am in the bottom 10% of students in my incoming class").

Participants who had completed, or were in the process of completing, graduate coursework were asked exclusively about scholarly writing pursuits. For more senior graduate students, conference presentations and publications are key indicators of success, and in some cases, requirements of graduate programs. Moreover, participating in conferences and publishing in academic journals showcase students' ability to participate in the communication discipline. Participants were asked about the number of competitive conference papers and/or competitive panels they had submitted and had been accepted, as well as the number of journal manuscripts submitted and accepted. For this study, we did not distinguish between a paper or a panel. There is a difference between submitting a competitive paper and panel; however, this exploratory study is focused only on *submissions* to conferences, regardless of type of submission. We also asked participants to identify the kind of communication conferences and journals to which they submitted (international/national, regional, state, or field specific journal). We did not ask students to distinguish between single-authored or co-authored manuscripts as we are concerned, at this time, with where and how many manuscripts students have submitted.

Statistical Analysis

Data were collected to explore the connections between reported levels of graduate school confidence, writing skills, participation in graduate school, conference presentation and publication success, and participation in forensics, including level of participation and level of forensics success. Table 1 reports the means and standard deviations for first-year graduate students' participation in forensics and reported levels of confidence and participation in graduate school. Table 2 reports the means and standard deviations for participants' participation in forensics and scholarly pursuits. To examine the multiple relationships between forensics participation and graduate school success, Pearson product-moment correlations were calculated to determine relationships between pairwise combinations of variables.

Table 1
Means for First Year Students' Reported Graduate School Confidence and Participation

	<i>N</i>	<i>M</i> of students who participated in forensics*	<i>SD</i>	<i>M</i> of students who did not participate in forensics*	<i>SD</i>
Level of confidence at beginning of program	54	2.36	.633	2.78	.768
Confidence at end of first term	54	1.29	.611	2.08	.730
Level of in class participation	54	1.36	.497	2.10	1.194
Confidence of writing skills at beginning of program	54	1.86	.535	1.82	.675
Confidence of writing skills at end of first term	54	1.29	.469	2.25	.870
Undergraduate prep for graduate school	54	1.93	1.269	2.45	1.011
Preparedness compared to others	54	1.50	.650	2.15	1.051
General comparison to others	54	2.00	.877	2.83	1.059
Likelihood to complete	54	1.00	.000	1.42	.781
Perception of others' likelihood to complete	54	2.14	.663	1.73	.716

* Scores based on a scale from (1) Very Confident/Prepared to (4) Very Insecure/Unprepared

Results

Research Question 1

Research Question 1 examined whether there were any significant relationships between forensics participation and reported confidence and participation in graduate school by first year graduate students (see Table 3). Participation in forensics was significantly positively correlated with confidence in graduate school at the beginning of the first term ($r[54] = .246, p < .05$), confidence in graduate school at the end of the first term ($r[54] = .449, p < .01$), and confidence in writing skills at the end of the first term ($r[54] = .479, p < .01$). Significant positive correlations associated with forensics participation were also observed with level of class participation ($r[54] = .298, p < .05$), preparedness to other students in the graduate program ($r[54] = .288, p < .05$), comparison to others in the graduate program ($r[54] = .341, p < .01$), and likeliness to complete graduate program and forensics participation ($r[54] = .270, p < .05$). These positive correlations suggest that individuals who participated in forensics were more likely to report higher levels of confidence and participation in graduate school than non-forensics students.

Probing the relationship between forensics participation and academic success further, we examined whether there were any significant relationships between graduate school confidence, graduate school participation, and level of participation in forensics. Level of participation in forensics was significantly positively correlated with confidence at the beginning of graduate school ($r[54] = .246, p < .05$), confidence in graduate school at the end of the first term ($r[54] = .475, p < .01$), and confidence in writing skills at the end of the first term ($r[54] = .521, p < .01$). Level of participation in forensics was also significantly positively correlated with level of class participation ($r[54] = .283, p < .05$), perception of how undergraduate education prepared the student for

Table 2
Means for Scholarly Pursuits

	N	M for students who participated in forensics	SD	M for students who did not participate in forensics	SD
Submitted to state/ regional conference	113	1.24	1.221	.76	.954
Accepted to state/ regional conference	113	1.19	1.123	.71	.896
Submitted to national/ international conference	113	3.10	1.513	2.50	1.530
Accepted to national/ international conference	113	2.86	1.352	2.20	1.612
Submitted to state journal	113	.29	.561	.03	.179
Accepted to state journal	113	.29	.561	.02	.147
Submitted to regional journal	113	.24	.436	.14	.482
Accepted to regional journal	113	.14	.359	.04	.253
Submitted to field specific journal	113	1.33	1.623	.52	.966
Accepted to field specific journal	113	1.14	1.424	.32	.811
Submitted to national/ international journal	113	1.00	1.517	.89	1.402
Accepted to national/ international journal	113	.71	1.271	.49	1.00

graduate school ($r[54] = .327, p < .01$), preparedness compared to other students in the graduate program ($r[54] = .325, p < .01$), comparison to other students in the graduate program ($r[54] = .363, p < .01$), and likelihood of completing graduate program and level of participation in forensics ($r[54] = .259, p < .05$) (see Table 3). These positive correlations suggest that individuals who reported a high level of participation in forensics were more likely to report higher levels of confidence and participation in graduate school than students who did reporting competing in college forensics or reported lower levels of forensics participation.

We were also interested in relationships between graduate school confidence, graduate school participation, and reported level of success in forensics. Reported level of success in forensics was significantly positively correlated with confidence at the beginning of graduate school ($r[54] = .327, p < .01$), confidence in graduate school at the end of the first term ($r[54] = .479, p < .01$), and confidence in writing skills at the end of the term ($r[54] = .528, p < .01$). Level of forensics success was also significantly positively correlated with level of class participation ($r[54] = .251, p < .05$), perception of how undergraduate education prepared the student for graduate school ($r[54] = .397, p < .01$), preparedness compared to other students in the graduate program ($r[54] = .345, p < .01$), comparison to other students in the graduate program ($r[54] = .364, p < .01$), and likelihood of completing graduate program ($r[54] = .239, p < .05$) (see Table 3). These positive correlations

suggest that individuals who reported a high level of success in forensics were more likely to report higher levels of confidence and participation in graduate school than students who did not compete or reported lower levels of forensics success.

Table 3

Correlations Coefficients for Graduate School Confidence and Participation and Participation in Forensics, Level of Participation in Forensics, and Reported Level of Forensics Success

	Participation in Forensics	Participation Level in Forensics	Level of Forensics Success
Confidence at beginning of graduate school	.246*	.310*	.327**
Confidence at end of first term	.449**	.475**	.479**
Level of class participation	.298*	.283*	.251*
Confidence in writing skills at beginning of graduate school	-.022	.036	.073
Confidence in writing skills at end of first term	.479**	.521**	.528**
Undergraduate preparedness for graduate school	.210	.327**	.397**
Preparedness to others	.288*	.325**	.345**
Comparison to others in program	.341**	.363**	.364**
Likelihood to complete graduate program	.270*	.259*	.239*

* Correlation significant at .05 level (1-tailed)

** Correlation significant at .01 level (1-tailed)

Research Question 2

Research Question 2 investigated the relationships between participation in forensics and scholarly pursuits as an indicator of academic success (see Table 4). Participation in forensics was significantly positively correlated with papers submitted to state or regional conferences ($r[113] = .183, p < .05$), papers accepted to state or regional conferences ($r[113] = .198, p < .05$), and papers accepted to national or international conferences ($r[113] = .163, p < .05$). The positive correlations suggest that individuals who participated in forensics were more likely to report higher levels of papers submission and acceptance to state or regional conferences and papers accepted to national or international conferences than non-forensics students.

Table 4

Correlations Coefficients for Submissions and Acceptances to Conferences and Participation in Forensics, Level of Forensics Participation, and Reported Level of Forensics Success

	Participation in Forensics	Participation Level in Forensics	Level of Forensics Success
Papers submitted to state or regional conferences	.183*	.162*	.133
Papers accepted to state or regional conferences	.198*	.168*	.151
Papers submitted to national or international conferences	.151	.172*	.232**
Papers accepted to national or international conferences	.163*	.178*	.226**

* Correlation significant at .05 level (1-tailed)

** Correlation significant at .01 level (1-tailed)

We also examined potential relationships between submissions and acceptances to conferences and level of participation in forensics. Level of forensics participation was significantly

positively correlated with papers submitted to state or regional conferences ($r[113] = .162, p < .05$), papers accepted to state or regional conferences ($r[113] = .168, p < .05$), papers submitted to national or international conferences ($r[113] = .172, p < .05$), and papers accepted to national or international conferences ($r[113] = .178, p < .05$) (see Table 4). These positive correlations suggest that individuals who reported high levels of participation in forensics reported higher paper submission and acceptance to state, regional, national, and international conferences than students who did not compete or reported lower levels of forensics participation.

Digging deeper, we explored potential relationships between submissions and acceptances to conferences and reported level of success in forensics. Level of forensics success was significantly positively correlated with papers submitted to national or international conferences ($r[113] = .232, p < .01$) and papers accepted to national or international conferences ($r[113] = .226, p < .01$) (see Table 4). The positive correlations suggests that individuals who reported high level of success in forensics were more likely to submit papers to national and international conferences and get papers accepted to national and international conferences than non-forensics students or students who reported lower levels of forensics success.

Submissions and acceptances to publications are also important elements of success. As indicated in Table 5, participation in forensics was significantly positively correlated with manuscripts submitted to a state journal ($r[113] = .326, p < .01$), manuscripts accepted to a state journal ($r[113] = .355, p < .01$), manuscripts submitted to a field specific journal ($r[113] = .275, p < .01$), and manuscripts accepted to a field specific journal ($r[113] = .323, p < .01$). The positive correlations suggest that, similar to conference presentations, individuals who participated in forensics were more likely to submit manuscripts for publication and have those manuscripts accepted than students who did not compete in forensics.

Table 5

Correlations Coefficients for Submissions and Acceptances of Publications and Forensics Participation, Level of Participation in Forensics, and Reported Level of Forensics Success

	Participation in Forensics	Participation Level in Forensics	Level of Forensics Success
Submitted to a state journal	.326**	.451**	.421**
Accepted to a state journal	.355**	.446**	.453**
Submitted to a regional journal	.080	.063	.057
Accepted to a regional journal	.140	.062	.059
Submitted to a national/ international journal	.030	.031	.050
Accepted to a national/ international journal	.084	.048	.073
Submitted to a field specific journal	.275**	.321**	.365**
Accepted to a field specific journal	.323**	.348**	.394**

** Correlation significant at .01 level (1-tailed)

We also explored if there are any significant relationships between submission and acceptance of publications and level of participation in forensics. As indicated in Table 5, significant positive correlations were observed between level of participation in forensics and manuscripts submitted to a state journal ($r[113] = .451, p < .01$), manuscripts accepted to a state journal ($r[113] = .446, p < .01$), manuscripts submitted to a field specific journal ($r[113] = .321, p < .01$), and manuscripts accepted to a field specific journal ($r[113] = .348, p < .01$). These positive correlations suggest that individuals who reported high levels of participation in forensics reported higher rates of journal submission and acceptance to state and field specific journals than non-forensics students or students who reported lower levels of forensics participation.

Finally, we looked at potential relationships between submissions and acceptances to publications and self reported level of success in forensics. Table 5 shows significant positive correlations observed between level of forensics success and manuscripts submitted to a state journal ($r[113] = .421, p < .01$), manuscripts accepted to a state journal ($r[113] = .453, p < .01$), manuscripts submitted to a field specific journal ($r[113] = .365, p < .01$), and manuscripts accepted to a field specific journal ($r[113] = .394, p < .01$). The positive correlations suggest that individuals who reported high levels of participation in forensics reported higher levels of journal submission and acceptance to state and field specific journals than non-forensics students or forensics students who reported lower levels of forensics success.

Discussion

This study examined the role of forensics as an indicator of graduate school success. Two research questions focused on whether participation and success in forensics were correlated with reported levels of confidence and participation in graduate school by first year graduate students. Additionally, this study explored correlations between forensics participation and forensics success and success in conference presentations and publications amongst senior level graduate students. The results are extremely encouraging for forensics programs. Participation in forensics was *positively* correlated with reported confidence and participation in communication graduate programs. The more a graduate student participated in forensics, the more confident and prepared the graduate student felt and the more he or she participated in class discussions. These rates were higher still among students who were more successful in forensic competition. Moreover, increased levels of forensics participation and forensics success were positively correlated with submissions and acceptances of conference presentations and journal submission and acceptance success.

Some of the more surprising correlations appeared between forensics participation, level of participation, and success and conference presentations and publications. It is not surprising that participants who competed in forensics reported higher instances of submitting and presenting papers and panels at conferences. Certain individual events, such as impromptu and communication analysis, require competitors to be familiar with communication theories and research. Forensics competitors are sometimes able to convert speech analyses into conference papers. Moreover, forensics competitors, as members of a unique organizational culture (Croucher et al., 2009), are often able to translate the experiences of competing into conference papers and panels. Perhaps more interesting, level of forensics success only significantly correlated with paper submissions and acceptances to international or national conferences. National conferences, like the National Communication Association conference, often have a large contingent of forensics competitors and coaches in attendance. This may be the result of having multiple forensics divisions at the conference. Individuals who are extremely active in forensics and who are thinking about graduate school are likely to submit and attend these conferences.

One of the reasons behind this increased level of submission and publication could be the level of mentorship fostered in forensics programs (Holm & Foote, 2011; White, 2005). Graduate student mentorship is an important part of the graduate school process as graduate students use these relationships to learn the norms of the academy, develop a professional identity, and make disciplinary connections through presentations and publications (Buell, 2004; Bullis & Bach, 1989; Phillips, 1979). Forensics students have an advantage as they have an opportunity to develop mentorship relationships with coaches when they are undergraduate students. Mentoring undergraduate and graduate forensics students is part of the forensics coach's job (White, 2005; Miller & Hunt, 2009) and this often includes presenting at conferences and publishing research. It is not uncommon to see graduate students present and publish research articles with current and former forensics coaches; in fact, the first author was the second author's forensics coach. Even

faculty who are no longer involved in forensics have strong mentorship connections with students (Carver, 1993).

Practical Application

The practical application of these data is most relevant in two arenas: undergraduate programs with a focus on sending students onto graduate school and graduate school selection committees. Both undergraduate and graduate programs can use these data to shape their programs and increase the reputation of their institutions.

The significant positive correlation between forensics participation and self-reported feelings of preparedness for graduate school serves as a call for undergraduate programs with a focus on sending students on to graduate programs to invest in and cultivate an active and successful forensics program. These results indicate that forensics may be an activity that prepares students to not only meet the challenges of graduate school, but to feel confident that they can succeed in completing their programs. Additionally, graduate students with a forensics background in this study also reported that their undergraduate institution did a better job of preparing them for graduate school. It is, therefore, likely that they would have more positive feelings toward their undergraduate institution, be more likely to recommend it, and even contribute as alumni. This aspect of a forensics program should not be overlooked.

Communication departments, however, need to weigh the advantages and disadvantages of creating and/or maintaining a forensics program. Running a forensics program can be a costly activity, so departments need to be mindful of budgets. However, there are multiple ways in which forensics programs can exist; communication administrators should pursue opportunities that work with the department. Different programs with different scopes and different goals are widely accepted. Moreover, funding does not have to come from the department alone. Many colleges and universities charge students a student activity fee, which is used to fund student organizations, such as forensics programs. Administrators beyond the department level are also financial resources to be tapped for funding forensics programs. If a Communication department has a goal of preparing students for graduate study in communication, a forensics program is a solid investment of both human resources and financial resources.

Communication department graduate student selection committees could also benefit from this research. This study's findings suggest that students with high levels of forensics participation and high levels of forensics success believe they are more likely to complete a graduate program. They also report participating in class more, presenting more papers and panels at conferences, and submitting and publishing more articles than their peers without a forensics background. Combine those factors with the previous research that showed GTAs with a forensics background were better classroom instructors (Benton, 2002; Hughes, 1994), have better critical thinking skills (Allen et al. 1999; Hunt, 1994; Rogers, 2002, 2005; Whalen, 1991), and Roger's (2005) data showing forensics students are less likely to drop out of graduate programs, it is clear that a forensics background can be a strong correlate to graduate school success. Selection committees should consider students' participation in forensics when evaluating applications and determining assistantships.

Limitations and Areas for Future Research

No research project is without limitations. First, the data collected for this study were all self-report data and, as such, are fallible. Surveys that ask participants to self-report are extremely common in communication research (Oetzel, 1998); however, self-reporting also opens the door for participants to report in ways to make themselves appear to be better students. While some of the data collected were objective (e.g. number of submissions and publications), the data were largely subjective (e.g., how well did your undergraduate program prepare you) and less tangible than

objective data. Collecting data from graduate faculty could also provide valuable insight into the correlation between forensics experience and graduate school success and offer confirmation or negation of the self-report data. Additionally, the reliability of the survey questions was low ($\alpha = .550$). This may be because of a small sample size. However, low scale reliability does not negate the findings of a study; instead, finding significant results with an unreliable scale means that there is a strong effect present (DeCoster, 2004, p. 45).

Another limitation was the sample population. One hundred sixty-nine students participated in the study; of which, only 35 students identified as having competed in collegiate forensics. This small sample number is tempered by the fact that the forensics community is small, so this number is proportional to the community. College forensics competitors make up a small portion of an average undergraduate student body (a handful of students per team compared to thousands of students at one university) and not all of those individuals go on to pursue graduate degrees in communication. A third limitation is that this study did not separate and compare M.A. to Ph.D. students as the purpose of the study was to get a preliminary understanding of forensics participation's impact on success. Future research is needed to explore how place and progress in these programs impact students' self-reporting of confidence, preparedness, and participation. Additional research should also explore the relationship between specific forensics skills (e.g., critical thinking, writing) and graduate student success.

This study focused specifically on graduate students in programs in the communication discipline; however, forensics students represent a cross section of academia. Forensics participants go on to seek graduate and professional degrees in a variety of academic disciplines and professional programs, such as law and medical school. Future researchers should examine forensics students in these programs to see if the skill sets developed through forensics participation transcend the communication discipline.

Based on the results of this study, it is clear that a forensics education positively impacts success in graduate school on a number of levels. This research serves as a call for the discipline as a whole to recognize and support forensics activities as an important indicator of graduate school success and the future of our discipline. As graduate programs look for candidates who are likely to not just complete but excel in their programs, they should never underestimate the value of a forensics education.

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