

## **HIGH-IMPACT PRACTICES: AN ANALYSIS OF SELECT UNIVERSITY AND BUSINESS SCHOOL PROGRAMS**

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### **ABSTRACT**

*Colleges and universities are finding new ways to enhance the academic environment with high-impact programs such as student-based research, internships and international study abroad programs. Research has shown that students learn most when they are more engaged in the experience rather than passive participants. This exploratory study examines high-impact opportunities for undergraduate university students in the U.S. Web sites and other materials from 90 randomly selected AACSB and ACBSP member schools were reviewed to determine how each incorporates high-impact educational practices into their overall university programs and in their business school programs. Three high-impact programs were examined: undergraduate research, internships and global learning opportunities. Recommendations for future high-impact educational practices are discussed. High Impact (HI) programs are prevalent in U.S. colleges and universities. There is a significant positive relationship between high-impact activities and graduation rates. Institutions that have healthier high impact practices have better graduation rates. Larger schools and schools with AACSB accreditation also have stronger high impact practices devoted specifically to business schools. Doctoral granting institutions scored higher in all three practices analyzed in this study. Undergraduate research is the area in which high-impact ratings were the lowest.*

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**KEYWORDS:** High Impact Programs, Undergraduate Research, Internships, Global Learning

### **INTRODUCTION**

University education has become more complex than the lecture and test format from years past. In today's highly competitive higher education marketplace, the administration and faculty in colleges and universities are looking for ways to enhance student success and to improve retention and graduation rates. Student success and retention are important to the financial and reputational well-being of the university. Institutions continue to seek new ways to enhance the academic environment with programs such as student-based research, internships and international study abroad programs. Research has shown that students learn most when they are more engaged in the experience rather than as passive participants. High-impact activities that foster deep learning, general gains, personal gains and/or practical gains have been outlined by George Kuh (2008), the founding director of the National Survey of Student Engagement (NSSE). He recommends that all institutions should seek to have all students participate in at least two high-impact activities over the course of their undergraduate experience, ideally with one in the student's first year and another in the context of their major (NSSE, 2007). His findings identify ten high-impact educational practices for undergraduate college students' success. They are: 1.) First-year seminars and experiences, 2.) Common intellectual experiences, 3.) Learning communities, 4.) Writing intensive courses, 5.) Collaborative assignments and projects, 6.) Undergraduate research, 7.) Diversity and global learning, 8.) Service learning, community-based learning, 9.) Internships, and 10.) Capstone courses and projects.

In order for a high impact experience (HIP) to be effective, Kuh (2008) identifies six key elements that must be present during the activity. First, the experience should be effortful. Students should devote considerable time to purposeful tasks. Second, the high impact activity should help the student build substantive relationships over extended periods of time. Third, students must experience diversity in some form during the high impact activity. Fourth, the experience should provide students with rich feedback. Fifth, a high impact experience should help students apply what they are learning in the classroom in new situations. Finally, sixth, the experience should build in time for students to reflect on who they are becoming as individuals. High-Impact practices (HIP) are becoming commonplace across university programs. Through its Liberal Education and America's Promise (LEAP) initiative, the Association of American Colleges and Universities (AAC&U) has sought to work with faculty in a variety of institutions and disciplines to bring HIPs more broadly and intentionally into the undergraduate experience. Further, colleges and universities must be both intentional and innovative in their design of these programs (McNair & Albertine, 2012). The authors have identified three high impact practices that are particularly important for business students' success and with which the authors have had first-hand experience: internships, undergraduate research opportunities and international experiences. Through these experiences, undergraduate business students will be better equipped to handle the challenges of their first post-graduate career opportunities. Further, compared to other high-impact programs such as living/learning communities, writing intensive, or first year seminars, business school faculty and administration tend to have more in-house autonomy over the selected HIP experiences. Furthermore, the authors have had first-hand experience with faculty-led study abroad, student research, and supervision of internship programs. The paper is organized as follows. It will review literature concerning the three high impact practices highlighted in this paper. It will also provide an overview of how high impact practices are incorporated into accreditation standards for AACSB and ACBSP. Next, it will present the methodology, including data collection and results. Finally, it will provide a discussion of results and conclusions.

## LITERATURE REVIEW

### Internships

An important consideration for higher education is transfer of knowledge between academia and practice. Internships provide this opportunity for students. An internship can be broadly defined as a “term length placement of a student in an organization (with or without pay) with a faculty supervisor, a company supervisor and some academic credit earned toward a degree” (Narayanan, Olk, & Fukami, 2010). Based on Kuh's (2008) six elements described earlier, O'Neill (2010) posits that an internship is more likely be “high-impact” for students when it is intentionally organized as an activity that leads to particular learning outcomes; when students apply what they have learned in courses to work experiences, reflect on these experiences, and receive feedback that helps them to improve; when students build mentoring relationships with supervisors, faculty, and peers; when students are exposed to differences across people and in ways of thinking; and when students are asked to use their experiences to clarify their values, interests, and personal goals—including, in this case, their values, interests, and goals related to careers. Ward and Yates (2013) found that recruiters value internships more than a student's participation in either athletics or leadership in campus clubs. Projects demonstrating application of content knowledge were also preferred to leadership roles in clubs and ongoing volunteer activities. Further, Updike (2013) describes how a four year business education incorporating career events, mentoring and multiple internships leads to a high placement rate in the job market. Additional issues to consider are whether the school handles placement, whether the school has an internship coordinator, whether internships are for academic credit and/or whether internships are paid (Maskooki, Rama & Raghunandan, 1998).

While internships for undergraduate business students don't follow a “one size fits all” model, most researchers agree that students benefit from their experiences. Students who participate in internships perform better in future courses on cases and projects than students who have not completed an internship

(Green & Farazmand, 2012). Internships are more likely to be successful when both students and employers actively participate in the process, when there are clear expectations, when prerequisites are appropriate and when mentoring is part of the program (Knouse & Fontenot, 2008). Reding and O'Bryan (2013) note that internships are most impactful when employers treat interns as entry level employees, rather than just observers in their organizations. Students also come back into the classroom with valuable experiences that make their education more meaningful (Reding & O'Bryan, p.47). Narayanan, Olk, and Fukami (2010) proposed an internship model with antecedents, processes, and outcomes where three primary actors contribute to the success of internship programs: the student, the university, and the company. In their study of 130 students in a Portuguese business school internship program, it was found that student satisfaction was the result of three process constructs: project progress feedback from the employer, the faculty advisor role, and the students' learning (Narayanan et al., p. 74). A subsequent study of an internship program's effectiveness supports this model as well. In a survey of 209 participating interns and 110 participating employers over three years, it was found that the style of supervision (faculty–students–employers) that was followed during the entire internship program placement demonstrated that a close, working oversight by faculty was beneficial to students (Papadimitriou & Mardas, 2012).

Finally, Rothman (2007) suggests that internships work best when the university and employer work closely together to provide the richest experience possible for interns. In a study of 345 interns participating in a for-credit business school internship class that requested specific suggestions for how their employer could improve the experience for future interns, the significant additions that students suggested were respectful treatment, mentoring, ongoing feedback, clarification of tasks, clear expectations surrounding challenging assignments, exposure to other parts of the business and communication. Internships provide the type of high impact experiences to students that have the impact that Kuh (2008) identifies as paramount to their success. Through internships students will build substantive relationships, apply their classroom learning in real-life situations and gain rich feedback for their personal growth.

### Undergraduate Research

Undergraduate research gives students the opportunity to produce innovative work that can be published or become part of a job portfolio. The Boyer Commission brought undergraduate research into the spotlight, urging faculty to make research-based learning the standard (1998, p 15-18). Hakim (1998) outlined four key elements: mentorship, originality, acceptability and dissemination. This high-impact practice provides students a 1:1 working relationship with a faculty member, in which the student plays a key role in conducting original research, using current practices in the discipline. The work is then put forth for critique by others, perhaps through public presentation or by submitting a final paper for peer review and publication. The undergraduate research experience gets at the heart of improving desired workforce skills such as communication, collaboration, critical thinking, and problem solving. With careful guidance by a mentor faculty member into the inquiry methods of a discipline, undergraduate research is acknowledged as one way for students to feel more connected to their educational experience (Kinkead, 2003). After completing a project, students have higher ratings of their own skills in understanding contemporary concepts, orally communicating results, relating results to the “bigger picture,” statistically analyzing data, and the like (Kardash, 2000). Fechheimer, Webber, and Kleiber (2011) found that participation is positively correlated with cumulative GPA, holding constant student SAT scores. Another benefit is that undergraduate research programs improve retention, especially among racial and ethnic groups that otherwise have lower retention rates (Nadga, Gregerman, Jonides, von Hippel, & Lerner, 1998).

Mabrouk and Peters (2000), Spronken-Smith, Miroso, and Darrou (2014) and Salsman, Dulaney, Chinta, Zascavage, and Joshi (2013) all surveyed students on undergraduate research experiences. They find students report positive experiences with research. They also find that the research experience is affected by the interaction and commitment of the faculty research mentor. Undergraduate research programs go beyond the work students do as part of normally required courses, offering extended opportunities during

an academic year or summer term. However, even at research universities, only around 10 percent of students have the opportunity to assist faculty in research for pay and just 12 percent of students have assisted faculty in research as a volunteer (Douglass & Zhao, 2013). Many of the students who work on a research project fail to finish a “capstone” activity, such as presenting at a symposium (Fechheimer et al., 2011). Hu, Kuh, and Gayles (2007) find that research activities at all types of institutions has increased from the mid 1990’s to 2004; however, students at research universities were not more likely to participate in research activities than students at other types of institutions. Selective liberal arts colleges provided more research experiences than research universities.

Undergraduate research seems more prominent among the sciences and humanities than in business schools. For example, the Council on Undergraduate Research lists twelve divisions with which individual faculty members may affiliate. Business disciplines fall into the at-large group (Council on Undergraduate Research, 2014). Results from the 2014 National Survey of Student Engagement (NSSE) show that senior business majors are the least likely of all majors to have participated in undergraduate research with a faculty member. Only 13 percent of business majors surveyed reported working on a research project, compared to a high of 47 percent of seniors in biological science (NSSE, 2015). While business students aren’t reaping the full benefits of participating in undergraduate research, their classmates in the humanities and sciences are gaining important outcomes from their undergraduate research projects. The impact that participating in a research project has for students fulfills Kuh’s (2008) suggestions that experiences must be effortful with considerable time spent doing the high impact activity. Clearly completing a research project provides this opportunity for students.

### Global Learning

Today’s students who aspire to become tomorrow’s institutional leaders must increase their awareness of cultural differences and understanding of global affairs if they hope to work *within*, let alone to manage *across*, multiple cultures. Trompenaars and Hampden-Turner (2012) laid out a pedagogical path to bring students toward this cultural self-understanding by 1) helping students reach “a better understanding of cultural differences, in general,” and 2) dispelling “the notion that there is ‘one best way’ of managing and organizing” that is applicable world-wide. To this end, students can participate in a variety of global learning opportunities to increase their global awareness.

Kuh (2008) has identified Diversity and Global Learning as one of ten high-impact learning experiences. Accreditation agencies such as AACSB and ACBSP emphasize global learning throughout their standards for business school accreditation. These experiences can be both curricular and co-curricular. Kuh (2008) suggests that intercultural studies can be supplemented by experiential learning which might include service in a local diverse community or participation in a long or short term study abroad program. According to the Institute of International Education (IIE)’s *Open Doors* report (2013), over 283,000 U.S. students studied abroad for credit in 2011-2012; that is a 3.4% increase over that prior year. Study abroad participation by U.S. students has more than tripled in the past decade. There is a growing trend toward short term study abroad opportunities, international internships and global service. The American Council on Education (ACE)’s *At Home in the World* asserts,

*addressing the commonalities between multicultural education and internationalization strengthens instruction and student learning by enabling students to undertake more complex thinking and analysis (Olson, Evans, & Shoenberg, 2007).*

According to Orahood, Kruze & Pearson (2004), business students who have studied abroad are more open to internationalizing their careers. After acquiring new and unique skill sets abroad that they would not have had an opportunity to develop domestically, these students are highly sought after by employers who have international assignments, or domestic assignments that require a degree of cross-cultural competency.

Clearly a global learning experience provides students with the opportunity to experience diverse and changing situations over a considerable period of time. Students who study abroad must increase their awareness of the world around them thereby spending important time reflecting on their experiences. According to Kuh (2008) these are indications that high impact activities are meaningful for students.

### Accreditation Standards—High-Impact Learning

Both AACSB and ACBSP business school accreditation standards emphasize the importance of “active” and “experiential” learning. Collaborative faculty and student opportunities can include faculty-led study abroad and faculty-student research. Each of the accreditation standards documents place emphasis on student internships and/or co-op experiences. In addition, the National Survey of Student Engagement (NSSE), measures high-impact undergraduate opportunities due to their “positive associations with student learning and retention” (NSSE, 2014). Each year, NSSE collects student participation data from hundreds of four-year colleges and universities that identify educational programs and activities that foster student learning and personal development. Senior undergraduates are asked about their experiences with high-impact programs such as learning communities, service learning, research with faculty, internships, study abroad and culminating experiences.

In the 2013 standards preamble, AACSB emphasizes that “quality business education cannot be achieved when either academic or professional engagement is absent, or when they do not intersect in meaningful ways” (AACSB, p. 3). The standards identify how business schools must provide evidence of how they are “making a difference and having impact.” (AACSB, p. 5). Showing “impact” for AACSB accreditation includes the following: 1.) Hiring/placement of students, 2.) Career success of graduates beyond initial placement, 3.) Placement of students in research-based graduate programs and 4.) Research-based learning projects with companies, institutions, and/or non-profit organizations.

AACSB Standard 10 highlights the importance of student-faculty interactions in curricula and extracurricular situations for instruction. This can include faculty-student research and faculty-led study abroad experiences (AACSB, p. 32). In addition, Standard 13 emphasizes student academic and professional engagement where students are actively involved in both academic and professional settings. Experiential learning activities, including study abroad and internships, can be curricular or co-curricular and should provide exposure to the student in both local and global settings (AACSB, p. 36). Based on their standards, it can be posited that AACSB is aligned with the idea of business schools providing what we define as “high-impact” practices which set students up for achieving this kind of success after their college experience is complete (AACSB, p. 48).

In their 2014 accreditation standards, ACBSP emphasizes “active learning.” They define active learning as, “interactive instructional techniques that engage students in such higher-order thinking tasks as analysis, synthesis, and evaluation” (ACBSP, pg. 62). Examples of active learning are “projects, presentations, experiments, simulations, internships, practicums, independent study projects, peer teaching, role playing, or written documents.” Active learning includes high-impact opportunities such as internships, co-op and faculty-student research. Evidence must show how the business curriculum focuses on students’ active learning and how active learning enables the “development of problem solving skills, intellectual curiosity, and capacity for creative and independent thought and action” (ACBSP, pg. 51). Standard #6 emphasizes global learning in the context of a global workplace and the student’s place in a global society. The standard reveals that students “must be encouraged to study global topics” to enable them to adapt to societal changes (ACBSP, pg. 43). While ACBSP standards do not explicitly recommend study abroad, they clearly underscore the necessity of global learning, be it embedded inside or outside of the formal classroom curriculum. For example, students can participate in local international festivals or a professor could partner with an international colleague for team teaching and student research opportunities. Both AACSB and ACBSP value high-impact and active learning such that the standards require member Schools and Colleges

to both incorporate these concepts into the business school curriculum and demonstrate positive learning outcomes. Each agency explicitly included global learning, internships and independent study (student research) within the Standards documents. This study focuses on the use of three specific high impact practices: internships, study abroad and undergraduate research in institutions of higher education. It will specifically identify how these three high impact practices are integrated at a variety of institutions and business schools. It will look at the difference in high impact practices across these institutions and it will identify the relationship between high impact practices and graduation rates.

## METHODOLOGY

### The Sample

Ninety institutions were included in the study, 44 accredited by ACBSP and 46 accredited by AACSB. To further delineate variations in business schools, the Carnegie Classification system provides categories that can help compare like institutions. By using the Carnegie Classification system, researchers have a way to represent and control for institutional differences, and a way to design research studies to ensure adequate representation of sampled institutions, students, or faculty (n.d., Retrieved March 6, 2015 from Carnegie Classification of Institutions of Higher Learning). As such, we sampled 30 doctoral institutions, 30 master’s institutions, and 30 baccalaureate institutions. The institutions were randomly selected from lists of accredited schools, as posted on each agency’s website. Member institutions without accreditation were excluded; community colleges accredited by ACBSP were also excluded. An Excel macro was written to randomly order the schools; the first 30 in each Carnegie category were selected. The selection of 30 institutions for each category was to ensure a sufficient data pool for statistical testing. Multiple web sites were reviewed during mid-2014 and early 2015 to collect basic information about each institution and to evaluate high-impact practices. To collect demographic information and graduation rates for each institution, the National Center for Education Statistics was used (www.nces.ed.gov). To gather institution specific data, each institution’s website was accessed both at the university level and the business school level. Characteristics of the overall sample can be seen in Table 1. A wide range of institutions are represented. The median number of undergraduates is 4,384 with faculty size of 465.

Table 1: Characteristics of Sample Institutions

	Mean	Standard Deviation	Minimum	Maximum	Median
6 Year Graduation Rate	53	19	10	98	54
Number of Faculty at Institution	670	591	80	2,630	465
Adjuncts as a Percent of Faculty	39	20	1	92	39
Number of Undergraduate Students	8,541	9,283	744	51,269	4,384
SAT Math Score of Incoming Students	546	71	375	716	539
SAT Reading Score of Incoming Students	533	62	363	662	536

*Note: A wide range of institutions are represented. The median number of undergraduates is 4,384 with faculty size of 465. N= 90 total. However, not all data (namely SAT scores) were reported for all schools.*

Characteristics of the sub-samples are reported in Table 2. In general, AACSB schools have a larger number of students and faculty than the ACBSP schools, and doctoral institutions also have more students and faculty than the other classifications of institutions. In addition, the AACSB and doctoral schools have higher SAT scores than the other sub-samples.

Table 2: Means by Institution Categories

	All	AACSB Institutions	ACBSP Institutions	Doctoral Institutions	Master's Institutions	Baccalaureate Institutions
6 Year Graduation Rate	53	62	45	66	47	48
Number of Faculty	670	1,000	357	1,224	544	237
Adjuncts as a Percent of Faculty	39	30%	50%	32%	45%	43%
Number of Undergraduate Students	8,541	13,549	3,702	15,598	7,760	2,726
SAT Math Score of Incoming Students	546	575	512	583	509	534
SAT Reading Score of Incoming Students	533	553	511	564	503	525
Number of Institutions	90	44	46	30	30	30

Notes: *N* = 90 institutions total. AACSB schools tend to have larger numbers of faculty and students. AACSB schools also have students with higher incoming SAT scores.

### High Impact Practices

To assess high-impact practices, rating scores from 1 to 4 were given based on the information found on the university and school of business web pages. The ratings were assigned by the researchers using the descriptions (developed by the authors) provided as a guideline. See Table 3 for descriptions of the rating system used in the paper. The high-impact activities were rated for both the institution as a whole and for the school of business. A total high-impact score was calculated by adding the individual high-impact scores.

Table 3: The Rating System

Numeric Rating	Academic Institution	School of Business
<b>Undergraduate Research</b>		
1	No information available on institution's website	No information available on Business School's website
2	Some majors offer undergraduate research programs.	Business School has informal undergraduate research opportunities.
3	Institution has formal programs for undergraduate research such as symposium, conference, journal or paid stipends for research.	Business School has formal programs for undergraduate research such as symposium, conference, journal or paid stipends for research.
4	Required individual research or senior thesis for all students.	Required individual research or senior thesis for Business students.
<b>Internships</b>		
1	No information available on institution's website	No information available on Business School's website
2	Institution has Career Services office; Primary resource for students are website links to internship sites	Shared Career Services office; Primary resource for students, including business students, are website links to internship sites
3	Institution has specific co-op opportunities available, internships strongly encouraged, credit offered for internships across majors.	Business School has specific co-op opportunities available, internships strongly encouraged, credit offered for internships for Business students.
4	Required internship for all students.	Required internship for Business students.
<b>International Study</b>		
1	No information available on institution's website	No information available on Business School's website
2	Institution has Study Abroad office; Study programs offered through 3rd party partnerships.	Institution has Study Abroad office; Study programs offered through 3rd party partnerships.
3	International/study abroad programs offered for a variety of majors. University offers faculty led short programs and semester study-abroad programs.	International/study abroad programs targeted toward business. Business School offers faculty led short programs and semester study-abroad programs.
4	Required study abroad for all students.	Required study abroad for Business students.

Note: Each institution and school of business was assigned a numerical score for undergraduate research, internships and international study using the rating system described here.

A summary of the scores can be seen in Table 4. The highest average impact score for the overall institution is international study programs and for business schools is internships. Undergraduate research has the lowest average impact score for both the overall institution and business schools.

Table 4: Descriptive Statistics for Ratings

Institutional Rating	Mean	Standard Deviation	Minimum	Maximum
Institution Total	6.9	1.9	0	10
Institution Undergraduate Research	2.2	0.8	1	4
Institution Internship	2.3	0.6	1	3
Institution Study Abroad	2.5	0.7	1	4
School of Business Rating				
School of Business Total	6.0	1.6	3	9
School of Business Undergraduate Research	1.6	0.8	1	4
School of Business Internship	2.3	0.8	1	4
School of Business Study Abroad	2.1	0.9	1	3

Note: N = 90 institutions. The maximum possible total rating is 12.

## RESULTS

A more detailed distribution of scores can be found in Table 5. Seventy-four percent of institutions have some level of undergraduate research mentioned on their web page. When looking specifically at schools of business, 45 percent mention undergraduate research. Internships are mentioned on 94 percent of institutional web pages and 89 percent of school of business web pages. Most institutions have internship offices and encourage internships; however, few require internships to graduate. Study abroad programs are mentioned on 87 percent of institution web pages. Most (58 percent) have a variety of study abroad opportunities, including faculty led programs. Schools of business are not as good at promoting study abroad, as 32 percent of them do not mention study abroad on the school web pages.

Table 5: Frequency of Ratings

High Impact Practice	Rating	Institution Level, Percentage of Sample	School of Business Level, Percentage of Sample
Undergraduate Research	1	23%	56%
	2	33%	27%
	3	40%	17%
	4	1%	1%
Internships	1	6%	11%
	2	54%	54%
	3	38%	28%
	4	0%	7%
Study Abroad	1	13%	32%
	2	24%	22%
	3	59%	46%
	4	1%	0%

Notes: 74% of institutions mention undergraduate research, but only 45% of business schools do. Internships are discussed on almost all websites. Student abroad programs are mentioned more often on institution level websites than by schools of business

To understand the relationship between high-impact (HI) activities and characteristics of the institutions, correlations were computed using the Total HI score, which sums the scores of all HI activities, and HI scores for the three individual areas: faculty-student research, internship experiences, and study abroad (Table 6). There is a significant ( $p < .01$ ,  $r = 0.27$ ) and positive correlation between total HI score and six year graduation rate of the institution. When looking at individual HI activities, institutions with higher internship ( $p < .05$ ,  $r = 0.240$ ) and international study scores ( $p < .01$ ,  $r = 0.454$ ) have significantly higher six year graduation rates. These results support the hypothesis that HI activities improve student success, as measured by graduation rates.

Table 6: Correlations between High Impact Practices and Institution Characteristics

	Total High Impact Score	Undergraduate Research	Internships	International Study
Correlations at Institution Level				
6 year Graduation Rate	0.271***	0.181	0.240**	0.454***
Undergraduate Enrollment	0.273**	0.024	0.326***	0.253**
Number of Faculty	0.257**	-0.022	0.323***	0.258**
Adjuncts as Percentage of Faculty	-0.190	-0.073	-0.019	-0.128
Correlations at School of Business Level				
6 year Graduation Rate	0.341***	0.257**	0.029	0.401***
Undergraduate Enrollment	0.153	0.247**	-0.165	0.321***
Number of Faculty	0.282***	0.293***	-0.128	0.412***
Adjuncts as Percentage of Faculty	-0.051	-0.187	0.302***	-0.189

Notes: At the institution level, total HI score is positively correlated with undergraduate enrollment and number of faculty. Internships and International study are also positively correlated with undergraduate enrollment for some, indicating that larger schools utilize more resources to support HI activities. At the school of business level, the institution's 6 year graduation rate is significantly related to total HI score, undergraduate research and international study. The significant positive correlation between adjunct faculty and internships is perhaps due to use of professionally qualified faculty. \*\*\* Correlation is significant at the 1% level; \*\* Correlation is significant at the 5% level.

At the institution level, total HI score is positively correlated with undergraduate enrollment ( $p < 0.05$ ,  $r = 0.273$ ) and number of faculty ( $p < 0.05$ ,  $r = 0.257$ ). Internships and international study are also positively correlated with undergraduate enrollment ( $p < 0.01$ ,  $r = 0.326$  for internships;  $p < 0.05$ ,  $r = 0.253$  for international study) and number of faculty ( $p < 0.01$ ,  $r = 0.323$  for internships;  $p < 0.05$ ,  $r = 0.258$  for international study). This indicates that larger schools utilize more resources to support these activities. At the school of business level, the institution's six year graduation rate is significantly related to total HI score ( $p < 0.01$ ,  $r = 0.341$ ), undergraduate research ( $p < 0.05$ ,  $r = 0.257$ ) and international study ( $p < 0.01$ ,  $r = 0.401$ ). The significant positive correlation between adjunct faculty and internships ( $p < 0.01$ ,  $r = 0.302$ ) is unexpected. Perhaps business schools that hire a large number of part-time faculty, based on professional qualifications, are focused on their students obtaining professional experience. Adjuncts who are employed or retired professionals are valued for the practical experience and networking opportunities that they can bring to the table. One question is whether there are differences in high impact practices connected to accreditation type or Carnegie class.

Differences in ratings are investigated for AACSB schools compared to ACBSP schools, and investigated for doctoral institutions compared to masters and baccalaureate ones. As reported in Table 7, ACBSP schools tend to have higher institution level ratings for internship and study abroad, while AACSB business schools have higher ratings for total HI score and undergraduate research. Perhaps ACBSP schools rely on campus-wide resources while AACSB business schools use their own resources. Doctoral institutions have significantly higher total HI scores ( $p < 0.05$ ) and study abroad scores ( $p < 0.05$ ) than baccalaureate institutions (see Table 8). When comparing business schools, doctoral granting institutions have significantly higher total HI scores than both master's ( $p < 0.05$ ) and baccalaureate institutions ( $p < 0.01$ ). They also have significantly higher international study program scores than do both other types of institutions ( $p < 0.01$  for doctoral v. master's;  $p < 0.01$  for doctoral v. baccalaureate). Additionally, doctoral institutions have significantly higher undergraduate scores than baccalaureate schools ( $p < 0.01$ ). Overall, the larger doctoral institutions are doing better with high impact practices than the smaller schools, especially baccalaureate schools.

Table 7: Differences in High Impact Practices between AACSB & ACBSP Schools

<b>Panel A: Differences in Institutions by Accreditation Type</b>			
	<i>Accreditation Type</i>	<i>Mean Rating</i>	<i>Standard Deviation</i>
Institution Total HI Score	ACBSP	6.5	1.9
	AACSB	7.2	1.8
Institution Undergraduate Research	ACBSP	2.2	0.8
	AACSB	2.2	0.9
Institution Internship	ACBSP	2.2**	0.6
	AACSB	2.5	0.6
Institution Study Abroad	ACBSP	2.3***	0.8
	AACSB	2.7	0.6

  

<b>Panel B: Differences in Business Schools By Accreditation Type</b>			
	<i>Accreditation Type</i>	<i>Mean Rating</i>	<i>Standard Deviation</i>
Business School Total HI Score	ACBSP	5.6***	1.6
	AACSB	6.6	1.5
Business School Undergraduate Research	ACBSP	1.4***	0.7
	AACSB	1.9	0.8
Business School Internship	ACBSP	2.4	0.9
	AACSB	2.2	0.6
Business School Study Abroad	ACBSP	1.8***	0.9
	AACSB	2.5	0.8

Notes: ACBSP institutions tend to have higher institution ratings, while AACSB ones have higher business school ratings. N = 90 schools; \*\* indicates mean ratings have significance difference at the 5% level; \*\*\* at 1% level. Standard t-tests were used to assess differences.

Table 8: Differences in High Impact Practices across Carnegie Classifications

<b>Panel A: Differences in Institutions by Carnegie Class</b>						
	<i>Carnegie Classification</i>	<i>Mean Rating</i>	<i>Standard Deviation</i>	<i>Doctoral Vs Master's</i>	<i>Master's Vs Bacc.</i>	<i>Doctoral Vs Bacc</i>
Institution Total HI Score	Doctoral	7.3	1.4			**
	Master's	7.2	1.7			
	Baccalaureate	6.1	2.3			
Institution Undergraduate Research	Doctoral	2.1	0.9			
	Master's	2.4	0.8			
	Baccalaureate	2.1	0.7			
Institution Internship	Doctoral	2.5	0.5			**
	Master's	2.3	0.6			
	Baccalaureate	2.2	0.6			
Institution Study Abroad	Doctoral	2.6	0.6			
	Master's	2.5	0.8			
	Baccalaureate	2.3	0.9			

  

<b>Panel B: Differences in Business Schools by Carnegie Class</b>						
	<i>Carnegie Classification</i>	<i>Mean Rating</i>	<i>Standard Deviation</i>	<i>Doctoral Vs Master's</i>	<i>Master's Vs Bacc.</i>	<i>Doctoral Vs Bacc</i>
Business School Total HI Score	Doctoral	6.8	1.5	**		***
	Master's	5.8	1.8			
	Baccalaureate	5.6	1.4			
Business School Undergraduate Research	Doctoral	1.9	0.8			***
	Master's	1.7	0.9			
	Baccalaureate	1.3	0.5			
Business School Internship	Doctoral	2.3	0.7			
	Master's	2.2	0.9			
	Baccalaureate	2.4	0.8			
Business School Study Abroad	Doctoral	2.6	0.7	***		***
	Master's	1.9	0.9			
	Baccalaureate	1.9	0.8			

Notes: Overall, the larger doctoral institutions are doing better with high impact practices than the smaller schools, especially baccalaureate schools. N = 90 schools; \*\* indicates mean ratings have significance difference at the 5% level; \*\*\* at 1% level. Standard t-tests were used to assess differences.

## DISCUSSION

There are a number of significant findings in this study. First and foremost, there is a significant positive relationship between high-impact activities and graduation rates. Institutions that have healthier high impact

practices have better graduation rates. While high-impact programs may not cause higher graduation rates, institutions with strong high-impact programs also have higher graduation rates. Additionally, stronger high-impact practices are significantly (positively) related to undergraduate enrollment and number of faculty. This may indicate that larger schools have more resources to devote to these types of programs. It is interesting to note that larger schools and schools with AACSB accreditation have stronger high impact practices devoted specifically to business schools. Programs at the business school level are positively correlated with graduation rates for the whole institution. This implies that these programs should be continually funded and expanded. We note that smaller schools should find ways to provide more targeted high impact programs tailored specifically for business students. This might help increase graduation rates.

As institutions consider expanding their degree offerings, it is interesting to note that doctoral granting institutions scored higher in all three practices analyzed in this study. It is possible that doctoral granting institutions are more aware of the positive impact of high impact practices. It may also be possible that doctoral granting institutions are better funded. Undergraduate research is the area in which the high-impact ratings were the lowest. Institutions and business schools (of all sizes and degree granting status) alike are more invested in internships and international study. Colleges and universities should consider expanding undergraduate research programs as this is an area that may generate positive returns from additional resources. The McNair Scholars Program, a funding program for undergraduate research opportunities for underrepresented students, could serve as a resource for universities that want to enhance their undergraduate research programs. Limitations and Future Research Based on the results, institutions and business schools alike are providing high-impact opportunities for their undergraduate students. While experiences vary significantly by institution, these opportunities have tangible benefits as evidenced by increased graduation rates. There are several opportunities for future research.

First, the measure of graduation rates comes into question. While the six year graduation rate is commonly used and considered the “gold standard” by university analysts, there might be a better measure of student success. Based on the 1990 Student Right to Know Act, the six-year graduation rate is required to be reported by all institutions of higher education. The six year graduation rate, however, does not take into account students who may have started as part time and transfer students. A better measure that tracks students individually (a unit-record system) has been suggested but has been met with political opposition (Glenn, 2010). Researchers doing this type of research should monitor progress in this area and use a better measure if one becomes available. Second, while high-impact practices are correlated positively to the six-year graduation rate, it would be beneficial to test other factors through multiple linear regression or factor modeling to determine what other factors explain institution’s variation in six-year graduation rates. Future research could also be conducted to determine which factors best predict the HI score.

Additional information to collect might include staff support for high-impact programs, budget allocations, availability of other high-impact programs, availability of internships and entry level jobs in the surrounding community, etc. Third, the scales used to rate each program could be updated and possibly modified. At both the institution and the business school level, only a small percentage of schools had the highest rating (see Table 4). Additionally, for the purposes of this study, we reviewed each selected college’s websites, which might not contain information about all of the high-impact programs offered. A questionnaire could be developed and sent to both AACSP and ACBSP to create a more accurate accounting of each program. Fourth, while it is beyond the scope of our study, all of Kuh’s (2008) high impact practices should be analyzed for their success in increasing graduation rates and other indicators of student success. Each of the seven practices not included in this study (first year seminars and experiences, common intellectual experiences, writing intensive courses, learning communities, collaborative assignments and projects, service learning/community based learning, and capstone courses and projects) could be researched and analyzed using similar methods that were employed in this study. Finally, future studies should also include feedback from students who have participated in one or more experiential learning opportunities to analyze effectiveness of each practice. While institutional measures are good indicators of overall program success,

hearing directly from participants in high-impact practices would add another richer dimension that would benefit researchers and schools in the assessment and planning of future high-impact practices.

## CONCLUDING COMMENTS

This study was designed to research how universities incorporate high impact practices into their curriculum. High-impact activities provide ways for students to better engage in their academic pursuits. Past research has shown the benefits of participating in these activities. Three of these high-impact practices are especially important to business students: internships, study abroad programs and undergraduate research. This study explores how universities and schools of business are utilizing these three specific high-impact practices. Data was collected from randomly selected university web pages. The results show that institutions as a whole are creating these HIP opportunities for their students. The majority of institutions studied show at least some level of participation. When looking at the school of business level, there is still active involvement in these practices, but the level of engagement drops. International studies have the highest average level of engagement for institutions with 87 percent having at least some type of international study program available for students. Internships are strongest high impact activity for business schools with 89 percent of schools having at least an internship office or coordinator available for students. The data analyzed in this paper indicate a significant, positive relationship between the use of three high-impact activities and an institution's six-year graduation rate.

However, not all institutions and schools of business are equally engaged. Small institutions seem to allocate resources for HIPs campus-wide, while at larger institutions the schools of business are more actively providing high-impact practices. Both AACSB and ACBSP indicate in their accreditation standards that various forms of high-impact programs are necessary to achieve or retain accreditation. Both place value on "experiential" or "active" learning. The value of internships/co-ops and global/multicultural learning were also emphasized by both organizations. Faculty-student research was also valued as experiential/active learning, but was not explicitly outlined in the accreditation standards as were the other two HIPs that were evaluated in this study. While HIPs such as study abroad, faculty-student research and external business experience such as internship and co-op opportunities require more human and financial resources, this study shows that there is a direct correlation between institutions that provide HIP opportunities to their students and positive graduation rates. Institutions of higher learning, particularly Schools of Business, should be mindful of the importance of HIPs to student success and persistence when it comes time to evaluate their resource utilization. If the institution is not committed to providing HIP experience to their students, Schools of Business need to find a way to provide those opportunities separate from the larger institution in which they reside.

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