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**The Attitudes and Behaviors of Current Medical Students towards Business
Education and Training**

An Honor Thesis submitted in partial fulfillment of the requirements for Honors in
Management

By
Alea Simmons

Under the mentorship of *Dr. Steven Charlier*

ABSTRACT

Medical students often look into owning their own practice as an option for their career. However, many of them do not acquire the proper training for owning and operating a business, and ultimately end up making costly mistakes. Thus, the purpose of this study is to gauge how medical students perceive the importance of business education and training. Based on survey data from 137 current medical students from across the United States, our study found that the vast majority of medical students believe that business education and training is valuable. However, today's MD/MBA programs do not appear to meet the current needs of medical students, as a broad MBA degree may not be the best fit for most medical students.

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I dedicate this thesis to my mother as she is one of the strongest people I know and an inspiration to those around her. Thank you, mom, for always encouraging me and telling me to push myself even further. You taught me the sky is not the limit, but only the beginning.

Additionally, I want to thank my father and sister for helping me over the many years of my academic career. My mom encouraged me, but my dad and sister always volunteered (more like voluntold) to read over every paper and assignment for me. They always gave their constructive criticism, and helped shape my once horrendous writing into the tolerable, not quite poetic, work it is today.

Finally, I want to thank my mentor, Dr. Steven Charlier, for taking me under his wing and constantly being the voice of reason during this long and arduous process. I could not have asked for a better mentor and I am forever grateful he took a chance on me, and taught me how to be a true researcher.

From the bottom of my heart, thank you all for your love and support. Had it not been for you all, this thesis would not exist.

Introduction

Healthcare and health spending is a huge part of the United States economy as it is a large business with lots of money involved. Today, it is not uncommon to see physicians opening their own practices. At some point during medical school, medical students are exposed to private practices, hospitals, HMOs (Health Maintenance Organizations), clinics, etc. and learn which environment they like to work in. Many students will graduate and move back home to work in their hometown. They have seen doctors in their hometown open a practice and think it is something simple to do. Unfortunately, they are mistaken. Doctors are trained on taking care of patients, not running a business. Sadly, some will go into private practice and will struggle or go bankrupt because they did not know how to manage an office or the people within that office.

The purpose of this study was to gauge the attitudes and behaviors of medical students towards business education and training. Did the students think business education is something worth having, or did they think it was useless information? Many medical students have no hope or desire of ever owning a practice and would not see the value in getting business training if they were not going to use it during their career. This makes sense, but what about the students who are thinking about owning a private practice or running an office within a hospital? As researchers, this is something we have to consider in order to gauge how students feel about business education.

Over the past twenty years, more medical schools have started to adapt to the ever-growing number of medical students opening their own practices by offering MD/MBA (Medical Doctor/ Masters of Business Administration) programs. According

to Windsor Westbrook Sherrill, Ph.D., MBA, as the development of health care systems has combined clinical and administrative functions, the role of physician executives has increased as well as the demand for related training of physician leaders. In 1999, there were only eight medical schools which offered students the dual degrees. By 2004, there were forty-one programs. Currently, there are sixty-one MD/MBA programs offered in the USA.

In July of 1998, Herbert M. Swick, MD, wrote an article for the *Academic Medicine Journal* entitled “Academic Medicine Must Deal with the Clash of Business and Professional Values.” In this article, Dr. Swick says that “only maintaining a practice grounded in the longstanding values of the profession will the health care needs of patients be truly served in an efficient and cost-effective manner” (Swick, 1998). Swick was not a fan of medical schools adopting business education as he believed the two practices should stay separate. Because of this narrow-minded thinking, only eight medical schools offered MD/MBA programs.

Swick also stated that major capitalistic values emphasized “profit” and “services driven by the market” whereas medical professionals placed value on “service, advocacy, humanism, and meeting society’s needs (Swick, 1998). Essentially, Swick placed an extremely negative connotation on business professionals and did not see value in medical professionals adopting business practices. In fact, he said in his article “a singular challenge to academic medicine is to ensure the preservation and strengthening of professional values” (Swick, 1998). Many doctors around the country agreed with Swick which is possibly one of the reasons why there was stunted progress of MD/MBA programs across the United States.

Fortunately, in 1997, the MD/MBA programs association was founded by Maria Young Chandler, MD, MBA. Chandler has been pushing for all U.S. medical schools to offer the dual degree program in order to give students the “opportunity to get the dual degree if they want it.” Growth is fueled by individuals who want to use their MD degree to do something other than direct patient care and by those who want to improve patient care through good management of the system (Butcher, 2011).

Peter Slavin, MD, MBA, president of the Massachusetts General Hospital, said the skills needed to succeed in business management are similar to those needed to succeed as a physician. Such skills include, but are not limited to, the ability to listen and treating others with respect. MD/MBA students learn that successful leadership requires team building, the ability to listen, and the willingness to share power (Butcher, 2011).

Joshua T. Goldman, MD, MBA, conducted a survey of MD/MBA graduates in 2008 of ninety-two students at twelve universities. His study found that many students wished the business curriculum was better integrated into the medical curriculum (Butcher, 2011). Students reported how the dual degree programs were too different meaning it was four years of medical school and one year of business school. There was no overlap between the two programs. Fortunately, Goldman says there are programs that are evolving into more integrated MD/MBA where the business side is emphasizing more healthcare and medicine-oriented business training, as opposed to generic business training.

Even though medical schools have started to adapt their programs to fit students’ needs, the MD/MBA programs are all optional. Again, not every medical student has the desire to run their own business. For those who do, they will need to go to a medical

school which offers an MD/MBA program or get their MBA at another time. These sixty-one schools which offer the program make up less than half of the one hundred thirty-three medical schools in the US. This means not everyone will have such access to an MD/MBA degree.

Because every medical school in the US does not offer such a program, there is no definitive value of how important business knowledge is to medical students. There is a perceived demand, but only half of the medical schools are answering that demand. Additionally, because of this lack of research, it is hard to gauge the actual value of business education or any other sort of higher level education.

Our research aimed to answer five main questions. First, what are the attitudes and behaviors of medical students towards business education and training? This is more or less our main question as it is the foundation for the purpose of the study. Because of this research question, we are able to gauge exactly what value medical students find in business education and training.

Second, are there different opinions between students whose school offers MD/MBA program versus just an MD program? We surveyed students from across the United States, but were particularly interested in seeing if there was a major difference of opinion between students who had the MD/MBA program offered at their institution versus the ones who were only offered the MD program.

Third, do demographics and stage of medical schooling influence medical student's attitudes towards business education? This question looked at the men, women, ages, year in medical school, etc. of the medical students. We wanted to see if medical

student's stage of medical schooling changed their opinion of the importance of business education. For example, did fourth year medical students see greater value in business education and training in comparison to first year students or were their opinions about the same? The results from the demographics section would help us determine the answer to this question.

Fourth, does prior undergraduate experience in business education influence medical student attitudes towards business education? We wanted to see if students who took business courses in their undergrad were more accepting of business training as medical students versus those who did not take any business courses. One would hypothesize that students with business education and training would see the value of business education in comparison to those who have no prior business education experience.

Our final research question is: are there facets of business education that are deemed more important than others to current medical students? We were trying to see if there was one specific area of business education such as administration, economics, finance, accounting, etc. that students found more important than other areas of business education.

Methods

Sample and Data Collection Procedures

Dr. Charlier and I created and distributed a survey via Qualtrics. Our survey was reviewed by Georgia Southern University's Internal Review Board before it was sent out to participants. Participants were recruited from various institutions including Creighton

University, the Mercer School of Medicine, the Medical College of Georgia, and Florida State University.

There was no identifiable information asked in our survey in order to keep anonymity. Coordinate points from IP (Internet Protocol) addresses were used in order to determine which state participants were in. This information was important in determining whether or not the students attended a medical school with the MD/MBA program (Creighton) or did not (Georgia schools).

We had a total of 153 people start the survey, but only had usable data from 137 participants. There were sixty-two respondents from Georgia schools; sixty-two from Creighton University in Nebraska; and thirteen from unknown universities. Using personal contacts, we asked individuals who were in medical school to fill out the survey. Additionally, respondents were asked to forward the survey along to other current medical students who would be willing to participate. The responses began to snowball, bringing in additional responses from California, Missouri, Maryland, and Wisconsin.

In the interest of time, the survey was kept at a short length so that participants could easily respond in five minutes or less. No incentives or tangible benefits were provided to participants.

Measures

Demographics. Participants were asked to provide their gender, age, and year in medical school (first year through residency). These basic demographic questions helped us, the researchers, determine if there were any overarching trends of how individuals at different stages of life felt about business education and training. We were also interested

in knowing which medical school participants attended and what year of medical school they were in.

Prior business education. Participants were asked if they had taken any business courses during their undergraduate studies. If so, participants were asked to indicate the number of courses taken in traditional business school functional areas (e.g., management, finance, marketing).

Importance of business education. Two questions were asked regarding participant opinions of the importance of business education. The first question asked “How important do you believe that business education and training is for today’s physicians?” Participants responded on a 5-point Likert scale, ranging from 1 (“Not at all important”) to 5 (“Extremely important”). The second question asked respondents to rate the importance of six areas of “business knowledge”; these areas included finance, purchasing goods and services for the organization, negotiating with leaders and investors, evaluating risks associated with acquisitions of new businesses, ethical decision making, and human resource management/organizational behavior (Sherrill, 2004). Participants rated each of these business areas on a 7-point Likert scale, ranging from 1 (“Not at all important”) to 7 (“Extremely important”).

Results

We extracted the data from Qualtrics and conducted our analysis using SPSS and Excel. After reviewing all 157 responses, there were only 137 completed and valid survey responses. In our final sample, there were a relatively equal number of male and female respondents - 52% female and 48% male. The ages of the respondents ranged

from 22 to 40 years old with a mean of 25 and a standard deviation of 2.50. Fifty-two participants were in their first year of medical school, forty-nine were in their second year, seventeen in their third year, twenty-nine in their fourth year, and one in residency. This trend was expected as first and second year medical students are not quite as busy and involved with rotations as third and fourth year medical students.

<< Insert Figures 1 and 2 about here >>

Referencing our first research question (What are the attitudes and behaviors of medical students towards business education and training?), we asked students to rate the overall importance of business education on a scale ranging from “not at all important” (1) to “extremely important” (5). The mean score on this item in our sample was 3.8, which places it in between “moderately important” and “very important.” Additionally, the most frequent response from our sample to this question was “very important” (39%), and there were no students who marked business education as “not at all important.” In total, these results suggest that a strong majority of medical students in our sample value business education as important or valuable information.

<< Insert Figure 3 about here >>

Our second research question was “Are there different opinions between students whose school offers MD/MBA program versus just MD program?” For this question, we compared results from respondents in Nebraska (where a MD/MBA program is offered) to respondents in Georgia/Florida (where a MD/MBA program is not offered). We were interested to see if students in Nebraska found the value of an MD/MBA program higher or lower than those students who did not attend a school with an MD/MBA program.

There were sixty-two students who responded from Nebraska and rated the value of business education (per the question and results outlined for research question #1) at a mean of 3.68 (SD = .90). The sixty-two students from Georgia/Florida who do not attend a medical school with an MD/MBA program had a mean rating of 3.81 (SD = .90) on the same question. Results from an independent samples t-test show that the difference in means on this question was not statistically significant [$t(122) = .797, p > .10$].

Our third research question was “Do demographics and stage of medical schooling influence medical student attitudes towards business education?” For the analysis of this question, we used a correlation matrix. Within this matrix, the independent variables are gender, age, and year of medical school, and the dependent variable was importance of business education. As students progress through their medical training, there is a positive relationship ($r = .16, p < .05$) between how they rated business education and its importance, as shown in Figure 4. One explanation of this finding is that third year, fourth year, or even residency students are more future driven in comparison to first or second year medical students. This is because the third and fourth year students have passed their United States Medical Licensing Examination’s (USMLE) and are thinking about whether or not they want to own their own practice or work for a hospital or Health Maintenance Organization (HMO). In other words, third and fourth year students are perhaps mentally preparing themselves for their futures more so than first or second year students, thus influencing their perceptions of the value of business education as it relates to their post-graduate professional lives.

<< Insert Figure 4 about here >>

Our fourth research question was “Does prior undergraduate experience in business education influence medical student attitudes towards business education?” For this question’s results, we again used a correlation matrix which is shown Figure 5. In particular, individuals who took Finance had a marginal statistical significance. We found that students who took Finance in their undergraduate degree rated business education more important in comparison to students who did not take a Finance course during their undergraduate studies ($r = .15, p < .10$). When looking at the two groups of students (those who took undergrad business courses vs. those who did not), there really is not much of a difference in the medical students’ attitudes towards business education and training.

<< Insert Figure 5 about here >>

Our fifth and final research question was “Are there facets of business education that are deemed more important than others to current medical students?” For this question, we identified six areas of business education: purchasing, risk, negotiations, finance, human resource management/organizational behavior (HRM/OB), and ethics. Respondents ranked these six areas on a scale of one to seven, with one being not at all important and seven being extremely important. We found that ethics (mean = 5.80) was significantly higher ($p < .05$) than purchasing (4.92), risk (5.04), and negotiations (5.33); additionally, HRM/OB (5.46) and Finance (5.42) were also ranked significantly higher than purchasing. Results can be found in Figure 6.

<< Insert Figure 6 about here >>

Discussion and Conclusion

Major Findings

More than ninety percent of our sample rated business education as “moderately important” or higher. This means over ninety percent of our participants think business education and training is somewhat important to medical students. There are not really any statistically significant differences between medical students at schools that offer an MD/MBA program versus schools that do not offer an MD/MBA program. Because our data shows no statistical difference in the two groups, we can conclude that a majority of medical students believe business education and training is important for medical students, regardless of whether their university offers a joint MD/MBA program or not.

Additionally, the importance of business education increases as students move further into their medical school training. Furthermore, there was minimal impact of undergraduate business education on medical student’s attitudes towards business education in general with the exception being finance ($p < .10$). The marginal finding for prior coursework in finance does makes sense, as students who have taken finance as an elective are likely to be more interested in business in general.

Lastly, ethics was ranked very highly along with HRM/OB. This result makes sense as physicians are understood to be ethical and should have some sense of how to manage those around them. “Hard skills” such as purchasing and negotiations- which were ranked among the lowest on our business education scale- are not deemed as important by future medical practitioners because they are more concerned with caring for their patients, not the pricing of the materials they use to treat their patients. Yet,

today's MBA programs tend to focus primarily on "hard skill" development, like accounting and corporate finance.

Implications

There is a clear need for business education of medical students. However, MD/MBA programs may not be the best option for medical students because they do not best fit the needs of the students. MD/MBA programs offer a wide variety of business education, as they should, but the education a medical student wants or needs is not the same business training a typical MBA student wants or needs. In other words, MD/MBA programs are taking umbrella programs and offering them to medical students who may not need to learn every aspect of business administration. These programs are forcing students to learn information that will not be pertinent to them in their future careers, and they are making the programs nearly impossible for medical students to complete. For example, Michigan State University offers a MD/MBA program which has students on a five-year track. In the first year, students enrolled in this program will take solely MBA classes such as Accounting, Finance, etc. Again, these are all "hard skills" which were ranked lowest on our scale. In the second and third years, students will spend their time focusing on their MD degree. In years four and five, students will not only be doing MD coursework, but they will also be doing MBA online concentration coursework.

A typical dual degree program will have the medical students take off one year from medical school- typically third year, but programs vary- and have them pursue their second degree in order to complete both degrees in five years. Penn State College of Medicine and Boston University School of Medicine have students take off year four of medical school to complete their MBA and come back in year five to complete their

medical school training. This set-up is logical because it removes a bit of pressure from medical students so they can solely focus on their second degree. Michigan State University has a different philosophy. They expect MD/MBA students to not only focus on passing their boards, but also completing MD coursework, MBA concentration coursework, do clinical rotations, and apply to residencies.

A medical student's busiest years are their last two and to add additional work on top of their busy schedules would not have much appeal to many students, if any at all. Needless to say there is a disconnect between the student's wants and needs versus the academic offerings.

The time of training influences how high business education is ranked. Specifically, students have a higher perceived need for business education as they progress through their medical school program. There is a preferred emphasis on soft skills, such as ethics and HRM/OB, as well.

Ethics is hugely important to doctors, but there are different types of ethics taught by a business school in comparison to a medical school. For example, business ethics and training involves being truthful with book keeping, inventory, sales, etc. Medical ethics involves being truthful to patients, keeping doctor-patient confidentiality, etc. Both forms of ethics are very important, but very different in their respective fields.

MD/MBA programs may not be meeting the need of students wanting to develop soft business skills. As the demand for MD/MBA programs has increased nationwide, estimates show that between six and fifteen students per program enroll in most MD/MBA programs per year (Butcher, 2011). For the 2016-2017 academic year, the

AAMC (Association of American Medical Colleges, 2016) reported 88,304 students enrolled in medical schools across the United States. In turn, the number of students enrolling in MD/MBA programs is minuscule in comparison to the total number of medical students.

Limitations

We had a relatively small sample size across our various locations. Additionally, our geocoding may be invalid as IP addresses are not one hundred percent accurate. There is a low base rate for undergraduate business education experience in the sample (less than fifteen percent of participants), which means we may not be able to detect true effects via significance testing.

Despite these limitations, our data suggests that there is a need for change in the MD/MBA programs being offered by medical schools. Over ninety percent of our responders thought business education and training was somewhat important. However, only about half of the medical schools in the United States offer MD/MBA dual degree programs and these programs have extremely low enrollment rates.

There is disconnect between what MD/MBA programs are offering students and what medical students want/need to learn in order to meet their definition of success in their respective field. In other words, it may not be in the student's best interest to enroll in a program that will teach them skills they will not use. As a doctor, time is precious, as a moment can mean the difference between a patient living or dying. It is in the patient's best interest that their physician is knowledgeable, ethical, and can manage his or her team efficiently and effectively. We believe that such skills should be the focus of

business education offerings to medical students, in order to help doctors be successful at helping their patients.

All in all, students who want to further their education by obtaining a dual degree should be getting the necessary skills. Maybe a dual degree is not the right answer for every student, but different programs which focus and build student's skills could be a possible solution.

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FIGURE 1. Age of Participants

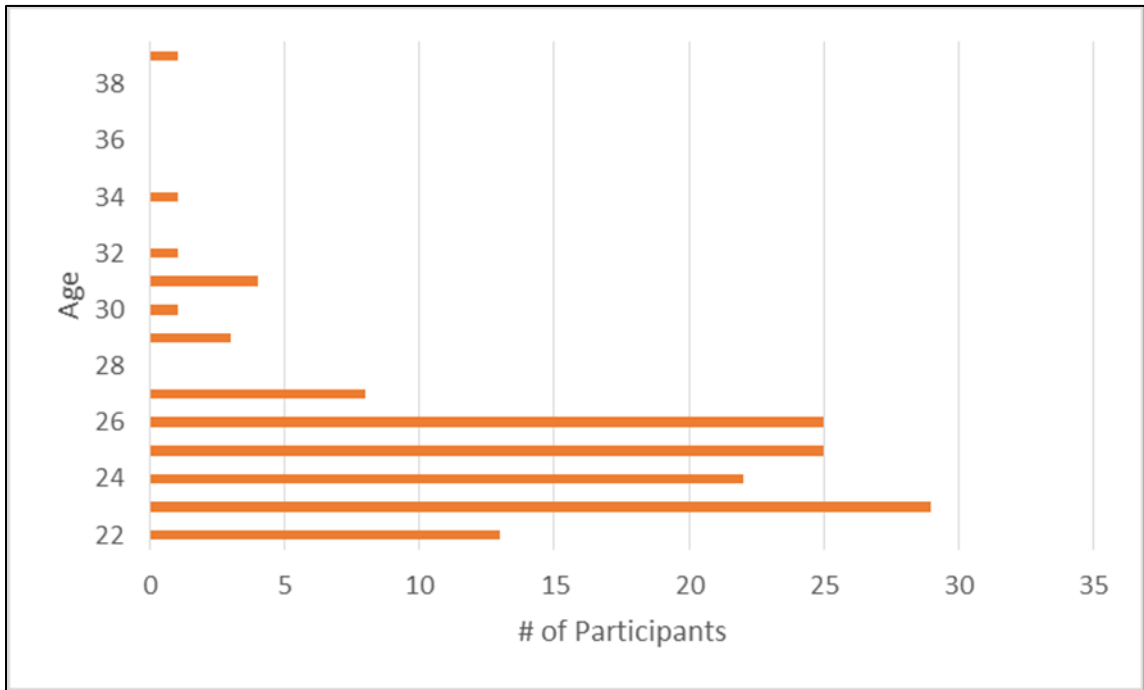


FIGURE 2. Participants' Year of Study

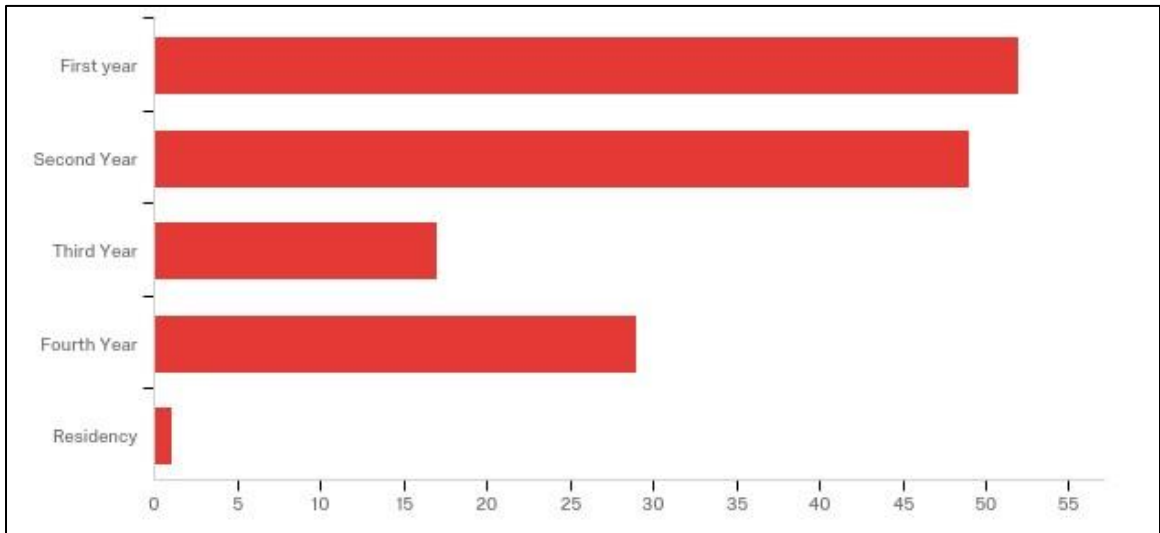


FIGURE 3. Attitudes and Behaviors of Medical Students

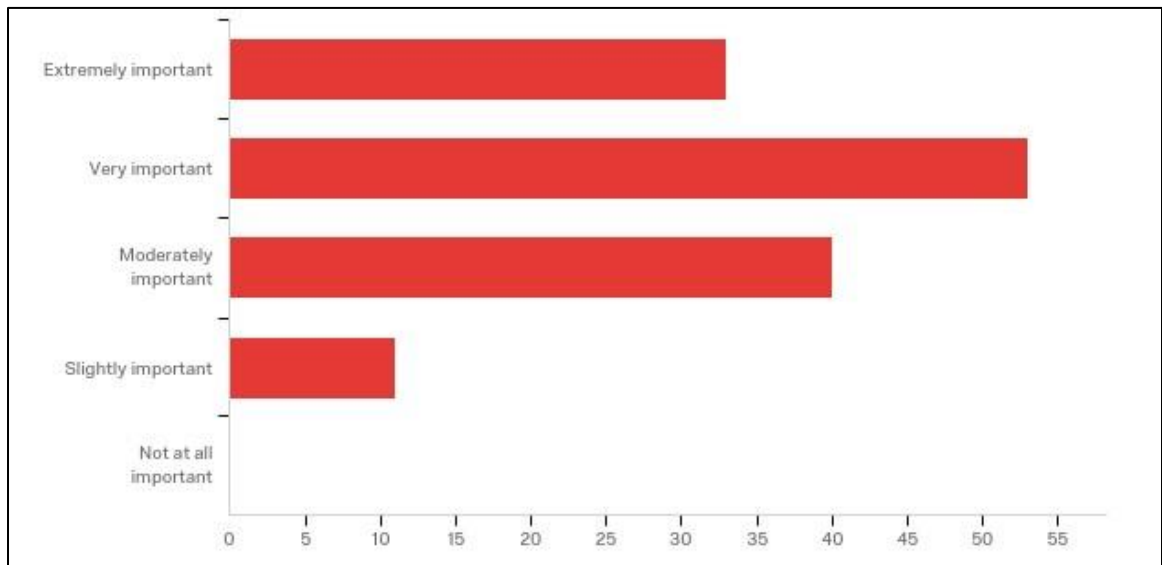


FIGURE 4. Business Education Importance

VARIABLE	GENDER	AGE	YR OF SCHOOL
GENDER			
AGE	-0.14		
YEAR OF SCHOOL	-0.07	.35**	
BUS ED IMPORTANCE	-0.06	.12	.16*

FIGURE 5. Prior Undergraduate Experience in Business Education

VARIABLE	UG BUS ED	UG – ACCTG	UG – FIN	UG – MKTG	UG – MGNT	UG – ECON	UG – MIS
UG BUS ED							
UG – ACCTG	.44**						
UG – FIN	.41**	.31**					
UG – MKTG	.49**	.90**	.54**				
UG – MGNT	.38**	.14	.23**	.16†			
UG – ECON	.77**	.57**	.46**	.51**	.35**		
UG – MIS	.36**	.51**	.30**	.37**	.19*	.38**	
BUS ED IMPORTANCE	.07	.07	.15†	.08	.07	.11	.09

FIGURE 6. Facets of Business Education

