Professor Attributes: A Comparison Study of U.S. And Jordanian Business Student Perceptions

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[Abstract] This study investigates the perceptions of students regarding 10 attributes of business professors, categorized into primary and secondary attributes. A survey was completed by 969 business students in both the United States (U.S.) and Jordan, where they provided ratings for these attributes. The sample included graduate and undergraduate students from various types of universities, including public, private, and proprietary institutions. Overall, the findings indicate a preference among students for primary attributes. Specifically, effective communication, practical application of knowledge, extensive business experience, and mastery of the subject matter were identified as the most important attributes in assessing a professor's effectiveness. However, although students from both the U.S. and Jordan assigned similar mean rankings to the 10 attributes, significant differences were observed in their ratings of 6 attributes. Further analysis through exploratory factor analysis revealed that U.S. students largely agreed with the two-component conceptual model, whereas Jordanian students exhibited somewhat less agreement.

[Keywords] attributes, teaching, experience, research, service, business students' preference

Introduction

Webster, Hammond, and Harmon (2006) examined the market orientation of business schools through reports from business school deans and academic vice presidents. Their results indicated that market orientation was significantly higher in business organizations compared to schools of business. Webster and Hammond (2008), as well as Webster, Hammond, and Rothwell (2010), compared the marketing orientation of three levels of AACSB business school administrators (marketing chairs, business school deans, and academic vice presidents) with that of business managers. Both studies found that business school administrators at each level assigned less importance to market orientation than business managers did.

In a study by Hammond, Webster, and Harmon (2006) of 225 deans at AACSB and ACBSP accredited business schools, research questions were designed to identify the market orientation of AACSB and ACBSP business schools towards students, parents, and employers. They found empirical support for marketing theory suggesting that management emphasis on market orientation positively affects overall performance. Furthermore, another study by Hammond, Webster, and Harmon (2009) of the market orientation of 141 AACSB-International member schools discovered a relationship between market orientation and performance. The responses indicated that the highest performers had the lowest levels of market orientation, particularly towards students, competitors, and customer orientation, as well as the coordination component. Based on these results, the investigators concluded that AACSB member schools should place a greater emphasis on market orientation toward students.

Market orientation involves providing a product or service aimed at satisfying the customer. While there is some debate about the ordering of higher education stakeholders, it is generally accepted that students are the primary customers of a business education. If, as recommended by the AACSB (2023), business schools are to become more oriented towards the needs of students, research is needed regarding students' perceptions of professor attributes. That is, what professor attributes are desired by business students?
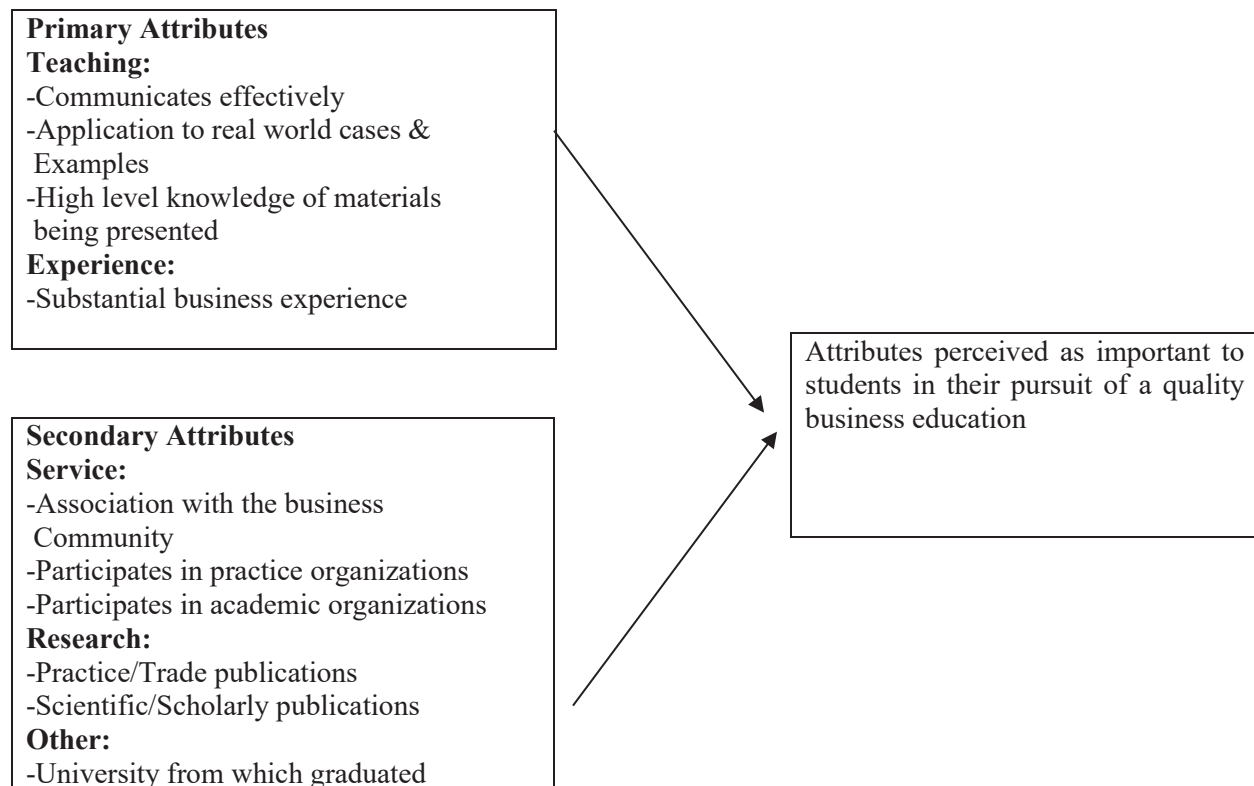
This study builds upon previous research on desirable professor attributes conducted by Ariail, Sosa-Fey, Destoor (2009), Harris (2022), and Duff (2017). It utilizes their survey instrument of 10 professor attributes with slight variation. These attributes group into five categories: teaching, experience, research, service, and other. In making faculty decisions regarding hiring, retention, promotion, and tenure at business colleges, some or all of these categories of professor attributes may be considered. Moreover, several of these attribute categories are directly or indirectly addressed by AACSB (2023) International Standards. For example, faculty research is specifically addressed by Standard 2, Intellectual Contribution, while research, experience, and service are given as examples of Faculty Qualifications in Standard 10.

Conceptualized Research Model

The research model illustrated in Figure 1 is a modified version of the research model used by Ariail, Sosa-Fey and Dastoor (2009): the title of primary attributes is used instead of in-class attributes and the title of secondary attributes is used instead of external attributes. These changes were made to reduce ambiguity in the classification of specific attributes. In addition, the primary attributes are subdivided into the categories of teaching and experience and the secondary attributes are subdivided into the categories of service, research and other.

Figure 1

Research Model

Primary Attributes
Teaching:
-Communicates effectively
-Application to real world cases &
 Examples
-High level knowledge of materials
 being presented
Experience:
-Substantial business experience

Attributes perceived as important to students in their pursuit of a quality business education

Secondary Attributes
Service:
-Association with the business
 Community
-Participates in practice organizations
-Participates in academic organizations
Research:
-Practice/Trade publications
-Scientific/Scholarly publications
Other:
-University from which graduated

Research Question

What are the most important professor attributes perceived by college students?

Hypotheses

Based on prior research results, the following hypotheses are investigated:

- H0: Business students prioritize primary professor attributes over secondary ones in their pursuit of a quality education.
- H1: Business students in the U.S. and Jordan agree on the importance they assign to both primary and secondary professor attributes in their pursuit of a quality education.

Methodology

Survey Questionnaire

The survey instrument (Appendix A) consists of ten questions related to attributes of business school professors. These attributes include publications in scientific, scholarly, and trade journals, extensive business experience in the field being taught, association with the business community, active participation in practice or academic organizations, effective communication, knowledge of the material being taught, the ability to apply knowledge to real-world cases and examples, and the particular college or university from which the professor earned his or her master's or doctoral degree. Subjects are instructed as follows: "In your pursuit of a quality business education, please indicate the importance that you place on each of these attributes." They rate the importance of each attribute on a 5-point Likert-like scale ranging from extremely important (5) to not important (1) - ratings are coded during data entry. A questionnaire collects demographic information such as age, gender, undergraduate or graduate status, and the type and focus of the college attended.

Sample and Data Collection

The sample comprised 969 subjects selected from business students attending four-year higher education institutions in Georgia and Texas in the United States, as well as in Jordan. Of these, 619 U.S. student subjects attended one of four institutions: two teaching and research-oriented state universities, a private college, and a proprietary university primarily focused on teaching. The remaining 350 student subjects in Jordan attended one of four higher learning institutions, including two private and one public university, all offering at least four years of higher education. Selected students were enrolled in classes taught by the investigators or their colleagues, and surveys were completed voluntarily during class time. To incentivize participation, a small number of extra credit points were awarded by one of the investigators.

Results

As shown in Table 1 below, the 969 business student respondents attended colleges or universities primarily in the U.S. and Jordan. The respondents were mostly under the age of 35 (87%), with roughly equal numbers of males (38%) and females (61.0%). The majority were at the undergraduate level of study (81%) and primarily attended public institutions (89%). Out of the 969 surveys returned, 12 respondents either didn't answer one or more demographic questions or failed to rate one or more of the professor's attributes.

Table 1

Sample Demographics

	Number	Percentage
Student Location		
U.S.	619	64.0
Jordan	350	36.0
Total	969	100.0
Age		
Under 25	670	63.0
25-34	256	24.0
Over 35	134	19.0
Missing	*2	0.10
Total	1062	100.0
Gender		
Male	402	38.0
Female	650	61.0
Missing	*14	0.10
Total	1066	100.0
Education level		
Undergraduate	863	81
Graduate	192	18
Missing	*6	1
Total	1061	100.0
Type of Institution		
Public	945	89.0
Private	66	0.06
Proprietary	47	0.04
Missing	*3	.003
Total	1061	100.0

   No entry on questionnaire

The means of the ratings given to each of the 10 questions were calculated for the entire sample of business students. These means were then ranked in order, with rank 1 assigned to the highest rating, rank 2 to the next highest, and so forth. The results are presented in Table 2 below. The four primary attributes of the conceptualized model received ratings ranging from very important to extremely important, corresponding to rankings 1 through 4. In contrast, the secondary attributes of the conceptualized model received ratings ranging from not important to somewhat important, corresponding to rankings 6 through 10.

Table 2

Means and Rankings- All Business Students

Questions	Question No.	Rank	Mean
Communicates Effectively	8	3	4.46
Application of Cases/Examples	10	2	4.51
Business Experience	3	5	4.25
Knowledge of Materials	9	4	4.42
Association with Business Community	4	6	3.84
Practice Organizations	5	7	3.62
Academic Organizations	6	8	3.49
Practice/Trade Journals	2	10	3.29
Scientific/Scholarly Journals	1	1	6.28
College of Degree	7	9	3.33

In order to further explore the perceived importance of the 10 professor attributes, exploratory factor analysis, using varimax rotation was conducted. The results appear in Table 3.

Table 3

Entire Sample-- Rotated Component Matrix[a]

Business Professor Primary and Secondary Attributes	Components	
Communicates information.	.743	-.017
Knowledge of materials	.729	-.014
Knowledge and application to real world cases & examples	.706	.096
Business experience	.702	.175
Publications in scientific/scholarly publications	-.120	.728
Actively Participates in academic organizations.	.120	.715
Publications in practice/trade journals	.033	.713
Actively participates in practice related organizations.	.214	.598
College from which professor earned degree	.175	.349
Association with the business community		

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Table 3 shows that the first four variables load highly on factor 1, comprising primary attributes related to teaching and experience. Meanwhile, the last six factors load highly on factor 2, encompassing secondary attributes related to research, service, and other. A cutoff point of 0.300 is utilized in this analysis, which is a common standard for factor analysis loading (Institute for Digital Research and Education). Thus, H1 is accepted. In their pursuit of a quality business education, the students in this sample prioritize primary professor attributes such as teaching and experience over secondary attributes like service, research, and others. To determine whether business students in the U.S. and Jordan agree on the importance of the ten selected professor attributes, the mean ratings for both student groups were computed, rank ordered, and compared using ANOVA. The results are presented in Table 4.

Table 4
Means, Ranks and ANOVA- U.S. and Jordan Business Students

Questions	U.S. Mean	U.S. Rank	Jordan Mean	Jordan. Rank	ANOVA
Communicates Effectively	4.60	1	9.37	2	.3021
Application of Cases/Examples	4.55	2	3.30	1	.000**
Business Experience	4.50	3	4.07	4	.000**
Knowledge of Materials	4.47	4	3.74	5	.000**
Association with Bus. Community	3.91	5	3.67	3	.671
Practice Organizations	3.57	6	3.52	6	.989
Academic Organizations	3.44	7	3.60	7	.296
Practice Journals	3.24	8	4.37	8	.010*
Scientific/Scholarly Journals	3.15	9	4.44	9	.022*
College of Degree	3.02	10	4.52	10	.065

** = $p < .01$, * = $p < .05$

The ANOVA results reveal a significant difference in the ratings of the 10 professor attributes. Business students in Jordan rated each primary attribute related to teaching and experience significantly lower ($p < .01$) than U.S. business students did. Additionally, Jordanian students rated two secondary attributes (publications in practice or trade-related journals and the college from which the business professor earned their master's or doctoral degree) significantly higher ($p < .05$) than U.S. students did. However, the rankings of mean ratings by both groups show some similarities in the importance given to attribute groups. Both U.S. and Jordanian business students rank the top five and bottom five attributes similarly. While the top five attributes for each group are the same, they have different rank placements, whereas the bottom five attributes are ranked identically by both groups.

Furthermore, the top four and bottom six mean rankings of U.S. business students align with the conceptualized model of professor attributes. In contrast, the mean rankings of Jordanian students present a somewhat more complex pattern. For example, the professor attribute of association with the business

community is ranked fifth and aligns with the conceptual model as a secondary attribute by U.S. students, but it is ranked third and does not align with the conceptual model by Jordanian students. To further explore the perceived differences in the importance of the 10 professor attributes between groups, exploratory factor analysis using varimax rotation was separately conducted for the two groups of students. The results for U.S. students are presented in Table 5, and the results for Jordanian students are presented in Table 6.

Table 5

U.S Business Students--Rotated Component Matrix[a]

Business Professor Primary and Secondary Attributes	Components	
	1	2
Communicates information effectively.	.751	-.038
Knowledge of materials	.689	-.031
Knowledge and application to real world cases & examples		
Business experience	.703	.122
Publications in scientific/scholarly publications	.672	.216
Actively Participates in academic organizations.	-.072	.757
Publications in practice/trade journals	.115	.714
Actively participates in practice related organizations.	.055	.704
College from which professor earned degree	.245	.621
Association with the business Community	-.079	.572
	.323	.526

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
A Rotation converged in 3 iterations.

The rotated components matric results (Table 5) for U.S. business students indicate that the first four variables are loaded highly on factor 1 while the last six factors are loaded highly (greater than 0.300) on factor 2. Thus, the iterations exposed by this analysis agree with the conceptualized model. important, they do not agree that there is one set of secondary attributes as posited in the conceptual model.

Table 6

Jordanian Business Students--Rotated Component Matrix[a]

Business Professor Primary and Secondary Attributes	Components			
	1	2	3	4
Knowledge and application to real world cases/examples	.788	.030	-.174	-.047
Knowledge of the materials being presented	.774	.104	-.080	.035
Business experience	.683	.001	.374	.092
Communicates information effectively	.419	.219	.173	.398
Participates in academic organizations	.092	.750	.188	-.041
Publications in practice/trade journals	.037	.733	.057	-.135
Participates in practice related organizations	.074	.671	-.409	.070
Association with business community	-.015	.067	.862	.059
Publications in scientific journals	-.063	.127	.192	-.721
College from which professor earned degree	-.029	-.057	.210	.690

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Therefore, H1 is partially accepted. Business students in the U.S. and Jordanian agree on their mean ratings of the 10 professor attributes. However, they significantly differ in the ratings of 6 out of the 10 attributes. Moreover, they agree that the primary attributes are important. The results of the rotated components matrix analysis (Table 6) for the Jordanian business students show that the first four variables load highly (greater than 0.300) on factor 1, three on factor 2, two on factor 3, and two on factor 4. This analysis presents a four-component model, differing from the two-component conceptualized model. Nevertheless, one of the four components of the Jordanian student model aligns with the U.S. student model: both business student groups perceive the professor attributes identified in this study as primary attributes - those related to teaching and experience - as important in their pursuit of a quality business education.

Discussion And Conclusion

The 969 business student subjects in this study rated highest the primary professor attributes related to teaching and experience, and they rated lowest the secondary professor attributes related to service, research, and other. This finding aligns with prior research results (Ariail, Sosa-Fey & Dastoor, 2009; Khayati, 2020). These results suggest that market-driven institutions of higher learning should prioritize hiring and promoting professors who are highly knowledgeable in their field, effective communicators, able to bring practical examples into the classroom, and possess substantial business experience. Conversely, less emphasis should be placed on hiring and promoting professors based on secondary attributes such as professional service and publication in peer-reviewed journals. Despite publications often being considered crucial in tenure and promotion decisions, these business students perceived secondary attributes as less important in their pursuit of a quality business education.

While the overall sample results align with prior research findings, notable differences between groups were observed. Jordanian and U.S. business students significantly differed in the importance they placed on six of the ten professor attributes: effective communication, knowledge of materials, business experience, publication in practice journals, and publication in scholarly journals. Compared to U.S. students' ratings, Jordanian students rated the first four attributes significantly lower in importance and the last two significantly higher. Interestingly, Jordanian students ranked association with the business community third, while U.S. students ranked it fifth. Similarly, knowledge of materials was ranked fifth by Jordanian students and fourth by U.S. students. Both groups ranked publication attributes toward the bottom (eighth for practice journals and ninth for scholarly journals). Another noteworthy difference was the attribute of the college from which the professor earned their degree (ranked tenth by both groups). While the difference in ratings for this attribute did not quite reach statistical significance (p = .065), Jordanian students perceived it as more important than their U.S. counterparts did.

The authors propose that the differences in the ratings and rankings of these seven attributes may be explained by economic and/or cultural differences. Perhaps the roles played by professors and student perceptions of the importance of various professor attributes differ between less developed and more developed countries. Additionally, perhaps the perception of the importance of professor attributes is related to cultural factors such as the deference accorded to individuals in positions of authority. This difference, in this instance, may be driven by the fairly recent colonial status of Jordan. These proposed causes raise questions for future research: Do student perceptions of the importance of business professor attributes differ based on the economic conditions of the country in which they study? Do student perceptions of the importance of business professor attributes differ by culture? Do international business students studying in the US agree with the perceptions of the importance of professor attributes held by US-born students? Additional potential research questions include the following: Do perceptions of the importance of professor attributes change during the course of students obtaining a four-year degree? Do undergraduate students and graduate students differ in the importance given to various professor attributes? Do perceptions of the importance of professor attributes differ between business students studying at research-focused institutions and business students studying at teaching-focused institutions?

Study limitations include the use of convenience samples drawn from the US and Jordanian populations and the regional nature of the samples of US students. Additionally, only US students studying at teaching or teaching/research institutions were sampled. Thus, the results of this study cannot be

generalized to all business students or separately to business students in the US or Jordan.

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Appendix A

Survey Of Perceptions of Business School Professors

Business Professors bring a mix of attributes to the classroom. The following is a partial list of these attributes. In **your pursuit** of a quality business education, please indicate the importance that **you place** on each of these attributes. That is, how important is it that your professor has each of these attributes? Please indicate the level of importance that you place on each attribute by checking **only one** of the following choices: **Extremely Important**, **Very Important**, **Somewhat Important**, Of **Little Importance**, **Not Important**.

1) The Business Professor has extensively published business research in **scientific/scholarly journals.** That is, business research focused on dissemination to fellow academics.

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
     Important   Important   Important   Importance   Important

2) The Business Professor has extensively published business articles in **practice or trade oriented journals.** That is, business research focused on helping business practitioners.

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
     Important   Important   Important   Importance   Important

3) The Business Professor has substantial **business experience** in the business area/field being taught.

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
     Important   Important   Important   Importance   Important

4) The Business Professor maintains a continuing **association with the business community** through ongoing consulting work.

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
     Important   Important   Important   Importance   Important

5) The Business Professor actively participates in **practice related organizations**: For example, through participation in various practice related business association committees, seminars/workshops given to business practitioners, assistance provided to start-up businesses, etc.

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
     Important   Important   Important   Importance   Important

6) The Business Professor actively participates in **academic organizations**: For example, serves on

committees, attends national or regional meetings, and/or presents academic business research papers at regional or national meetings.

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
  Important   Important   Important   Importance   Important

7) The **particular college/university** from which the Business Professor earned his or her Masters or Doctoral Degree.

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
  Important   Important   Important   Importance   Important

8) The Business Professor has demonstrated an ability to **communicate information effectively.**

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
  Important   Important   Important   Importance   Important

9) The Business Professor has demonstrated a high level of **knowledge of the materials** being presented.

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
  Important   Important   Important   Importance   Important

10) The Business Professor combines **knowledge and application to real world cases and examples.**

___ Extremely   ___ Very   ___ Somewhat   ___ Little   ___ Not
  Important   Important   Important   Importance   Important