

The Influence of University Academic Factors on Student Retention in the College of Business at a U.S. Research University (RU/VH)

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The primary purpose of this study was to determine the influencing university academic factors on the student retention in the College of Business at a Research University (RU/VH) in the United States. Student records of 786 in the entering class in the College of Business in the southern region of the United States were studied. The researchers examined the five university academic factors including number of credit hours earned, GPA achieved, whether or not students changed major or college, whether or not students resided in the Business Content Based Residential College (CBRC), and whether or not students were retained in their third semester in the College of Business. The findings suggest that some factors were more influential than others with participation in the Business Content-Based Residential College (CBRC) being unexpectedly less influential on retention of business students into their fifth semester in Business at a Re-search University.

Keywords: student retention, college of business, higher education, content based residential college, student success

INTRODUCTION

Importance of Business

The economy of any free enterprise system is largely predicated on the success of the business enterprises that exist in that system. In a totally free enterprise system no governmental control would ever exist, however, this system is virtually nonexistent in today's world. The American system is probably the closest to a free enterprise system in existence today, but even here there are occasions when the government must get involved for the good of the country as a whole. For example, in some instances, the government supports a specific enterprise (e.g., dairy farms) to avoid a drastic reduction in milk production because it is judged that this support is for the country's greater good. In a completely free enterprise system, the dairy farmers would have been permitted to simply sell their animals and close their dairy; however, this would have created a shortage of milk (a very important commodity) for many years into the future. It would have

also meant that the United States (U.S.) would have been forced to import milk, probably at a much higher price and perhaps at a lower level of quality.

Therefore, one cannot claim that the U.S. as a pure free enterprise system, does not exist, but the United States is probably the closest to it in the world. This is predominately because of the role of business in the republic we call the U.S. In any system that has minimal government control (such as the U.S.) businesses make numerous contributions such as:

1. Providing jobs for citizens,
2. Paying taxes that contribute to the government's revenues that can be used to invest in infrastructures such as improvement of public services.
3. Creating values through goods and services to fulfil human needs and wants, such as access to quality foods as well as education for young people and non-traditional students seeking to improve their lives, and
4. Improving quality of goods and services through competition.

This competition in turn stimulates economic growth. When businesses are faced with an atmosphere that encourages competition, they have little choice but to improve their products and/or service if they want to survive (Twijukye, Norze, & Burnett, 2023).

However, none of these are likely to occur if the businesses are not successful across numerous years. If a business fails, all the jobs it was providing to citizens go away. Numerous factors are identified in the literature that influence the success of businesses. Since businesses are so important to the economy, it is critical to understand the factors that influence business success (Zemke, 2000).

Some of these factors include:

1. Experience – Gaining experience in business is often a “Catch – 22” (Nichols, 1970) where you can't get the job without experience, but you can't experience without the job.
2. Instinct – The problem with this as a factor in hiring the right person for a managerial position is that it is very difficult to assess and often is not transferable from one venue to another (Twijukye et al., 2023).
3. Education - Many different types of business experiences can be derived through educational and internship activities. Knowledge and skills learned can be designed to occur in real world settings. These planned life experiences have been consistently shown to assist with making effective decisions when faced in a real-world situation.

Education in business is another factor that is widely held to be associated with business success. According to Kara & DeShields, (2004) education is a vital precursor for success in business. It provides a very important strategic knowledge for future entrepreneurs (Phan, Wong, & Wang, 2002). Individuals with direct education and planned internships in business have an increased level of knowledge in various business areas, and they are more likely to succeed, especially in larger and more diversified companies (Hernandez, 2011). These authors further state that individuals with more and direct education in business are better able to assess risks and deal with complex decisions. It has been suggested in studies that have focused on business start-ups that an individual's level of education plays an important role in the success of a new business (Phan et al., 2002). The authors further suggest that there is a clear connection between completion of a degree in higher education among business owners and managers and the survivability of the business (Jiménez, A., Palmero-Cámara, C., González-Santos, M. J., González-Bernal, J., & Jiménez-Eguizábal, J. A., 2015).

Some of the skills that are often connected with the acquisition of college degrees in business include:

1. Oral communication skills,
2. Problem-solving skills,
3. Willingness to learn,
4. Importance of a positive attitude,
5. Need for and value of cultural and diversity, and
6. Importance of skills in new technologies.

All of these skills are significant for the development and productivity of business organizations (Hodge & Burchell, 2003). Individuals with a higher education level often have a greater chance of business success

both as the owners of new and continuing business ventures and employees (Jiménez et al., 2015). The authors further state that certain individuals with a higher level of education are more capable of discovering and taking advantage of new opportunities.

Today, people can acquire business education through different avenues such as high schools and colleges that offer business courses (Wagner & Nettles, 1998). High school business programs typically focus on technical business skills while universities usually place a greater emphasis on professional knowledge and skills. High school students who attend such classes have a strong appearance in the job market, whereas those who attend postsecondary business programs gain knowledge in areas such as marketing, finance, operations, policy, information technology, leadership and communication survive (Twijukye, Norze, & Burnett, 2023).

With every passing year, a college education is increasingly more important for an individual to succeed in business. Therefore, for students to complete their degree, they must perform well (at least well enough to maintain enrollment) throughout their program. Otherwise, they might be forced to leave before their education is complete. Without a college degree, they may not have the requisite knowledge, skills, and attitudes to perform successfully in the modern field of business to survive (Twijukye, Norze, & Burnett, 2023).

Not only must students perform well enough academically to stay enrolled, but they must also choose to persist in their program. Students cannot complete their degree unless they persist. There are several strategies for improving persistence of college student such as academic factors, other cognitive factors, social factors, institutional factors and residential factors. The focus of this article is on university academic factors. According to Chonko & Roberts (1996), cognitive factors relate to students' the knowledge and their academic ability reflected in academic performance in college.

Purpose and Objectives

Therefore, the primary purpose of this study was to determine the influence of selected university academic factors on the retention into the third semester of enrollment in the College of Business at a Research University (RU/VH) in the southern region of the United States.

The researcher developed the following specific objectives to guide this study:

1. To describe College of Business students at a research university on the following select-ed academic characteristics:
 - a. Credit hours earned in their first two semesters of enrollment.
 - b. GPA achieved at the end of the first two semesters and at the end of the first year of college enrollment.
 - c. Whether or not the student changed major and if so, whether or not the changed major was within the College of Business,
 - d. Whether or not the student resided in the Business Content-Based Residential College during their first year of enrollment; and
 - e. Whether or not the student was retained in a major in the College of Business in their third semester enrollment.
2. To determine if relationships exist between whether or not the students were retained in a major in the College of Business in their third semester of college enrollment and the fol-lowing selected academic characteristics:
 - a. Credit hours earned in their first two semesters of enrollment.
 - b. GPA achieved at the end of the first two semesters and at the end of the first year of college enrollment.
 - c. Whether or not the students changed major and if so, whether or not the changed major was within the College of Business, and
 - d. Whether or not the students resided in the Business Content-Based Residential College during their first year of enrollment.
3. To determine if a model exists that significantly increases the researcher's ability to correctly classify College of Business students at a research university (RU/VH) on whether or not they

were retained into their third semester of enrollment from the following selected academic characteristics:

- a. Credit hours earned in their first two semesters of enrollment.
- b. GPA achieved at the end of the first two semesters and at the end of the first year of college enrollment.
- c. Whether or not the student changed major and if so, whether or not the changed major was within the College of Business, and
- d. Whether or not the student resided in the Business Content-Based Residential College during their first year of enrollment another (Twijukye et al., 2023).

METHODOLOGY

The target population for this study was students enrolled in College of Business programs in re-search universities. The accessible population was the first-time college freshman enrolled in College of Business programs at one selected research university (RU/VH). The study sample consisted of 100% of the defined accessible population.

A computerized recording form was designed to collect data from the Office of the University Registrar. The following variables were retrieved:

- a. Credit hours earned in their first two semesters of enrollment.
- b. GPA achieved at the end of the first two semesters and at the end of the first year of college enrollment.
- c. Whether or not the students changed major and if so, whether or not the changed major was within the College of Business,
- d. Whether or not the students resided in the Business Content-Based Residential College during their first year of enrollment; and
- e. Whether or not the students were retained in a major in the College of Business in their third semester enrollment another (Twijukye et al., 2023).

Objective One Results

The first objective of the study was to describe College of Business students at a research university on the following selected academic characteristics:

- a. Credit hours earned in their first two semesters of enrollment.
- b. GPA achieved at the end of the first two semesters and at the end of the first year of college enrollment.
- c. Whether or not the students changed major and if so, whether or not the changed major was within the College of Business,
- d. Whether or not the students resided in the Business Content-Based Residential College during their first year of enrollment; and
- e. Whether or not the students were retained in a major in the College of Business in their third semester enrollment another (Twijukye et al., 2023).

Credit Hours Earned

Credit hours earned the first semester of college enrollment was a variable on which the students were described. There were 786 students in their first semester of enrollment in the College of Business in the entering class being studied. The mean number of credit hours earned was 12.68 (SD = 3.10), with the lowest number of credit hours earned being zero and the highest number of credit hours earned being 19.

Regarding credit hours earned in the second semester of college enrollment, 754 students were still enrolled in their second semester of enrollment in the College of Business in the entering class being studied. The mean number of credit hours earned by these students was 12.74 (SD = 3.18), with the lowest number of credit hours earned being zero and the highest number of credit hours earned being 19.

GPA Achieved

At the study institution, for the end of their first semester of study Grades of “A,” “B,” and “C” were assigned for satisfactory work. A grade of “D” indicated minimally acceptable achievement for credit, and in some colleges, a grade of “D” in certain courses did not allow that credit to be applied to a degree. A grade of “F” was failing. An undergraduate student’s grade point average (GPA) was determined by the ratio of quality points earned to semester hours attempted and were assigned to letter grades using the following scale:

- “A” = 4 quality points,
- “B” = 3 quality points,
- “C” = 2 quality points,
- “D” = 1 quality point, and
- “F” = 0 quality points.

In the first semester of enrollment, among the 786 students the mean GPA was 2.83 (SD = 0.874), with the lowest GPA of .000 and the highest GPA of 4.00. In the second semester of enrollment, among the 754 students the mean GPA was 2.82 (SD = 0.868), with the lowest GPA of .000 and the highest GPA of 4.00.

At the end of the first year of college enrollment, among the 786 students the mean GPA was 2.88 (SD = 0.779), with the lowest GPA of .000 and the highest GPA of 4.00.

Changed Major/College

Another factor that is sometimes associated with retention is changing majors. Students in their second semester of enrollment (no changes occurred in the first semester of enrollment) at a Research Extensive University in the Southern portion of the United States, were also described on this measure another (Twijukye et al., 2023).

Of the 762 students for whom data was available at the study institution (24 students had already exited the university), 77 (10.1%) had changed their curriculum to one outside of the College of Business. Additionally, 130 (17.1%) students had changed majors, but to programs still within the College of Business. Of the 685 students who had not changed from the College of Business, 555 had not changed their curriculum.

Resided in Business CBRC

Another variable on which subjects were described was whether or not they resided in the College of Business Content Based Residential College (CBRC) during their freshman year. A total of 174 (22.1%) did reside in the CBRC and 612 (77.9%) of the Business majors did not re-side in the CBRC.

Retained Into the Third Semester

When the College of Business majors were examined at the point of entry into their third semester of enrollment, 355 (52.1%) had not changed their majors and 326 had changed their major (47.9%). Of the original subjects, data was no longer available for 105 which typically indicates that they had already exited the university. When those still enrolled in the College of Business were examined, 410 (60.3%) of those still enrolled in the university were also still enrolled in the College of Business while 270 (39.7%) were enrolled in another college.

Objective Two Results

To determine if relationships exist between whether or not the students was retained in a major in the College of Business in their third semester of college enrollment and the following selected demographic and academic characteristics:

- a. Credit hours the student earned in their first two semesters of enrollment.
- b. The GPA achieved at the end of each of the first two semesters of college enrollment and at the end of the first year of college enrollment.
- c. Whether or not the students changed major and if so, whether or not they were retained within the College of Business, and

- d. Whether or not the students resided in the Business Content-Based Residential College during their first year of enrollment.

The findings for this objective were achieved by analyzing the data with the chi-square test of independence and the independent t-test procedure. For the variables measured on a categorical scale of measurement, the researcher used the chi-square test of independence to determine if each of the variables was independent of the variable, whether or not the students were retained in their third semester of enrollment in the College of Business (COB) another (Twijukye et al., 2023).

Using an a' priori significance level of .05, all the categorical variables were found to be independent of the variable, whether or not students were retained into their third semester of enrollment. (see Table 1).

TABLE 1
COMPARISON OF SELECTED PERSONAL AND ACADEMIC DEMOGRAPHICS
CHARACTERISTICS BY WHETHER OR NOT COLLEGE OF BUSINESS
STUDENTS WERE RETAINED INTO THEIR THIRD SEMESTER OF
COLLEGE ENROLLMENT AT A RESEARCH UNIVERSITY-
VERY HIGH RESEARCH (RU/VH)

Variable	df	χ^2	p
Whether or not the Student Lived in the College of Business Content Based Residence College	1	.272	.602
Whether or not the student changed College	1	.051	.822
Whether or not the student changed major during their first Year of enrollment	1	.001	.981

The independent t-test procedure was used to compare the COB students retained into their third semester of enrollment in the College of Business with those not retained. Students in these groups were compared on five variables that were continuously measured. The groups were found to be significantly different on all of these measures. Students who were retained in their third semester of enrollment had higher scores on all five of these continuous measures (see Table 2).

TABLE 2
COMPARISON OF SELECTED ACADEMIC CHARACTERISTICS BY WHETHER OR NOT
STUDENTS AT A RE-SEARCH UNIVERSITY-VERY HIGH RESEARCH (RU/VH) WERE
RETAINED INTO THEIR THIRD SEMESTER OF ENROLLMENT IN
THE COLLEGE OF BUSINESS

Variable	Retained in Third Semes		Not Retained		t	p
	<u>n</u>	<u>m</u> <u>SD</u>	<u>n</u>	<u>m</u> <u>SD</u>		
First Semester GPA	678		108		13.651	<.001
	2.984		1.873			
	.712		1.151			
Second Semester GPA	674		80		14.072	<.001
	2.951		1.666			
	.719		1.130			
Second Semester Earned Hours	674		80		12.105	<.001
	13.18		9.01			
	2.602		4.788			
First Year GPA	678		108		15.544	<.001
	3.027		1.929			
	.6100		1.026			
First Semester Earned Hours	678		108		11.652	<.001
	13.15		9.69			
	2.51		4.50			

COB students who were retained in their third semester of enrollment were compared with those who were not retained in their third semester of enrollment using *t*-tests. Students in these two groups were compared on a total of 13 variables that were measured on a continuous measurement scale. The groups were significantly different on all five of these variables (see Table 3). The greatest differences tended to be in GPA's from the first semester and first year GPA's. On all GPA comparisons, the retained students had significantly higher GPA's than the not retained students.

Objective Three Results

Objective three of the study was to determine if a model exists that significantly increases the researcher's ability to correctly classify College of Business majors at a research university (RU/VH) on whether or not they were retained into their third semester from the following selected demographic and academic characteristics:

- a. Credit hours the student earned in their first two semesters of enrollment.
- b. The GPA achieved at the end of each of the first two semesters of college enrollment and at the end of the first year of college enrollment.
- c. Whether or not the students changed major and if so, whether or not they were retained within the College of Business,
- d. Whether or not the students resided in the Business Content-Based Residential College during their first year of enrollment, and
- e. Whether or not the students changed major and if so,

To accomplish this objective, the multiple discriminant analysis statistical technique was used. The dependent variable of this study was whether or not the student remained enrolled within the COB in the

research institution in their third semester of study. The independent variables for the study were entered into the model as either continuous or dichotomous variables.

When the standardized canonical discriminant function coefficients were examined the centroids for the groups were -1.595 for the students who were not retained and .009 for the students who were retained in the third semester of enrollment. One independent variable entered the discriminant model, yielding an overall canonical correlation of $R_c = .122$. This variable was “Second Semester Earned Hours.

This variable had a cumulative standardized discriminant function coefficient of ($\beta = 1.000$). The nature of the influence of this variable on retention in the third semester was such that having a higher measure on “Second semester Earned Hours” increased the likelihood of being retained to the third semester of enrollment.

In addition to examining the standardized discriminant function coefficients, the researchers also examined the within-group structure coefficients. The structure correlations provide a bivariate measure of the relationship between the independent variables and the discriminant score computed for each subject from the variables that entered the significant model. A substantively significant structure correlation is any coefficient that is half or greater than the magnitude of the highest structure correlation. Therefore, any structure correlation of .500 (half the value of 1.00, which was the highest structure correlation in this study) or higher was considered substantively meaningful.

Only one independent variable was found to have a structure correlation that met this criterion. This was also the statistically significant discriminant score.

TABLE 3
SUMMARY DATA FOR STEPWISE MULTIPLE DISCRIMINANT ANALYSIS OF THE
EXPLORATORY MODEL FOR RETENTION STATUS OF STUDENTS AT A
RESEARCH UNIVERSITY-VERY HIGH RESEARCH (RU/VH) UNIVERSITY
IN THE SOUTHERN REGION OF THE UNITED STATES

Discriminating Variables	β^a	s^b	<u>Discriminant Functions</u>	
			Group	Centroids
Second Semester Earned Hours	.384	.942	Not Retained	-1.579
			Retained	.187
<u>Eigenvalue</u>	<u>R_c^c</u>	<u>Wilk's Lambda</u>	<u>p</u>	
.015	.122	.985	< .001	

Note. **N** = 786

^a β = standardized discriminant function coefficient

^b s = within group structure coefficient

^c R_c = canonical correlation coefficient

For the last step of the discriminant analysis, the researchers examined the correctly classified cases. As shown in Table 4, the model correctly classified 82.8% of original grouped cases. The Tau statistic is used to determine the substantive significance of the percent of correctly classified cases. The rule of thumb is that to be meaningful, the model should show a 25% improvement over chance. This would be 62.5% of cases correctly classified for a two-category dependent variable. Since the measure in this analysis is 82.6% (which equates to a Tau statistic of 66.1%) the derived model yields both a statistically and substantively significant model.

TABLE 4
RETENTION STATUS OF STUDENTS WHO ENTERED A COLLEGE OF BUSINESS AT A
RESEARCH UNIVER-SITY-VERY HIGH RESEARCH (RU/VH) IN THE SOUTHERN
REGION OF THE UNITED STATES

	<u>Actual Group</u>	<u>Predicted Group</u>	
	<u>n</u>	Not Retained	Retained
		<u>n</u>	<u>n</u>
		%	%
Not Retained		45	35
		56.2	33.1
Retained		96	578
		17.7	82.3
Total		202	548
		100%	100%

Note: Percent of cases correctly classified: 82.8%

Note: n = 756

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Students who were retained in their third semester in a College of Business at a Research University had more hours earned in their first two semesters and in their first year overall than students who were not retained.

A potential implication of this conclusion is that students who earn more hours may be more motivated to continue their enrollment. When students complete substantially less than 15 hours in their early semesters, they have little chance of completing the baccalaureate degree in four years another (Twijukye et al., 2023).

Based on this conclusion, the researchers recommend additional research to determine if students who complete fewer hours in their first semesters do so because they enroll in fewer hours or if they complete fewer hours because they drop a larger number of courses. In either case, this research should seek to determine why students either schedule fewer hours or if they drop more hours (Twijukye et al., 2023).

Retained students have higher academic performance in college than not retained students. The retained students were found to have a significantly higher GPA at the end of their first and second semesters as well as at the end of their first year ($M = 3.110$, $SD = .542$) than the not retained students ($M = 2.210$, $SD = .650$) ($t_{df = 116} = 11.221$, $p < .001$).

While it may seem too evident that retained students had higher GPA's, the more important question may be how can the university identify early the students who are encountering academic difficulties, and what can the College of Business do to address the problems before they have progressed to the point of exit from the University? If the College of Business can implement academic assistance programs and use early detection techniques to identify the students' existing academic performance problems, then perhaps through intervention programs such as tutoring, required advising sessions, etc., the ultimate goal of retaining the students in the College of Business, hopefully to degree completion, can be realized.

Participation in the Business Content-Based Residential College (CBRC) did not influence the retention of business students into their fifth semester in Business at a Research University.

When whether or not the College of Business students resided in the CBRC during their freshman year in college was examined for independence from whether or not the students were retained into their third semester of enrollment in the College of Business the variables were found to be independent ($\chi^2(1) = 0.920$, $p = .337$).

There are numerous potential positive implications of a CBRC. It may well be that some of the students who lived in the CBRC would have exited the university if not for the CBRC. The researchers recommend a qualitative study of students who lived in the Business CBRC in recent years intending to identify positive

aspects of this type of residence hall before it is abandoned. Other residential Colleges at the same institution that have successfully impacted retention rates should be examined with the idea of possibly duplicating some of the activities of these residential colleges as appropriate. CBRC's at other colleges and universities, especially in colleges of business at other research universities, should also be studied to identify possible activities that could positively influence retention. The researchers further recommend that additional study be initiated with the current study subjects including following them to the six-year point to determine if the CBRC might have a longer-term impact on degree completion. In addition, the researchers recommend conducting a qualitative study of the students who exited to determine factors, specifically factors related to the CBRC, that influenced their decision to exit from the College and University. A study should also be conducted that interviews students that were retained to determine if the CBRC influenced their continuation in the program, and specifically what activities exerted this influence.

REFERENCES

- Chonko, L.B., & Roberts, J.A. (1996). An innovative introduction to business course: Marketing the skills that marketing majors (and others) as business majors will need for success. *Marketing Education Review*, 6(3), 53–71.
- Hernández, A. (2011). Success lives here: The impact of the residential experience on student success. *Hispanic Outlook*, 23.
- Hodges, D., & Burchell, N. (2003). Business graduate competencies: Employers' views on importance and performance. *Asia-Pacific Journal of Cooperative Education*, 4(2), 16–22.
- Jiménez, A., Palmero-Cámara, C., González-Santos, M.J., González-Bernal, J., & Jiménez-Eguizábal, J.A. (2015). The impact of educational levels on formal and informal entrepreneurship. *BRQ Business Research Quarterly*, 18(3), 204–212.
- Kara, A., & DeShields, O.W. (2004). Business student satisfaction, intentions and retention in higher education: An empirical investigation. *Marketing Educator Quarterly*, 3(1), 1–25.
- Nichols, M. (Director). (1970). *Catch-22* [Film]. Paramount Pictures.
- Phan, P.H., Wong, P.K., & Wang, C.K. (2002). Antecedents to Entrepreneurship among University Students in Singapore: Beliefs, Attitudes and Background. *Journal of Enterprising Culture*, 10, 151–174. <https://doi.org/10.1142/S0218495802000189>
- Twijukye, R., Norze, J., & Burnett, M. (2023). Examining Student Retention in a College of Business at a U.S. Research University (RU/VH). *Journal of Applied Business and Economics*, 25(7), 156–177.
- Wagner, U., & Nettles, M. (1998). It takes a community to educate students: How three HBCUs succeed at retention. *Change: The Magazine of Higher Learning*, 20(2), 18–25.
- Zemke, R. (2000). The best customer to have is the one you've already got. *The Journal for Quality and Participation*, 23(2), 33.