THE STATE OF STUDYING AND LEARNING IN BUSINESS SCHOOLS TODAY: APPLYING AN EXPECTANCY THEORY FRAMEWORK

Marcel M. Robles
Michael T. Roberson

Abstract

Purpose: *The purpose of this study was to determine students' academic study attitudes and behaviors and the extent to which student work employment impacts either attitudes or behaviors.* ***Research Questions:*** *The Expectancy Theory of Motivation was used to examine student perception of linkage between "effort and performance" (belief that hard work in school leads to better grades); between "performance and outcome" (better grades lead to future success); and the degree to which their study and work time, as well as study approaches and behaviors are consistent with expectancy theory prediction (their attitudinal beliefs).* ***Method:*** *A questionnaire was received from 211 junior and senior university students, a majority (83%) of whom were business majors.* ***Findings:*** *Students perceived a connection between effort and good grades, believed a connection existed between grades and future success, but spent 10 hours per week or less studying.* ***Conclusions:*** *The methods that students used to study command more concern because they lack sound, long-term retention of learning.* ***Recommendations/ Implications:*** *Business educators need to continue to provide students with persuasive, impactful criteria about the importance and efforts of effective scholarship for creating a competitive advantage in their career for achieving long-term success.*

Introduction

There is growing, national concern over the decline in the number of hours that university students study outside the classroom. Many educators have noticed changes in students' scholarly performance in recent years. Conventional wisdom states that students should spend two to three hours outside of class per one hour of class time. The National Survey of Student Engagement (NSSE, 2012) study found that 40% of seniors reported spending 10 hours or less per week studying, with a median of 11-15 hours, and only 23% stating that they studied 21 hours per week or more.

Several key questions need to be answered regarding students' motivation and their choices. Do today's students believe that effort applied toward studying and learning translates into future success? What factors are associated with many students today choosing not to study and apply themselves to the extent previous generations did? What study tools and approaches are students using today?

The research indicates that more studying leads to better grades, but students do not always believe that extra effort in studying leads to higher grades (Carbonaro,

Dr. Marcel M. Robles is a professor of Corporate Communication and Technology, School of Business, Eastern Kentucky University, Richmond, KY. Dr. Robles can be contacted at marcel.robles@eku.edu.

Dr. Michael T. Roberson is a professor of Management, School of Business, Eastern Kentucky University, Richmond, KY. Dr. Roberson can be contacted at mike.roberson@eku.edu.

2005; Davies & Graff, 2005; Glenn, 2007; Gortner Lahmers & Zulauf, 2000; Rau & Durand, 2000). Although, students tend to believe grades are important for their future success (Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997). Students use a variety of approaches to studying (Elias, 2005; Foster & Lin, 2007; Zhu, Valcke, & Schellens, 2008), but many are not exerting the effort in the amount of time they spend studying (Church, Elliot, & Gable, 2001; Lieberman & Remedios, 2007).

Does the amount and quality of a student's study time, as measured by study habits, impact the relationship between the quantity of employee work hours and the amount and quality of study time as compared to academic performance; especially at a time when students spend equal or less time doing academic studies rather than working, socializing, or watching television (Nonis, Philhours, & Hudson, 2006)? Student employment has been widely believed to be a strong contributing factor to the low number of hours today's students are spending on their out-of-class studies (Barke et al., 2000; Callender, 2008; Curtis & Shani, 2002; Manthei & Gilmore, 2005; Watts & Pickering, 2000).

Purpose of the Study

This study sought answers to five research questions aimed at better understanding students' study attitudes and behaviors and the extent to which student employment impacts either attitudes or behaviors. The Expectancy Theory of Motivation was used as a conceptual framework to examine the degree to which students perceived the key linkages between "effort and performance" and between "performance and outcome", and the degree to which students' study time and behavior are consistent with those predicted by expectancy theory.

The Expectancy Theory of Motivation, originally published in 1964 (Vroom, 1994) represents a widely respected explanation of the factors that influence individual behavior. In this study, Expectancy Theory was applied to understand students' attitudes toward hard work and study in school and whether those attitudes are consistent with students' study behaviors. Specifically, this study was done to determine the degree to which students (a) believed hard work in school leads to better grades, (b) believed better grades lead to future success, and (c) engaged in study time and behaviors that are consistent with their attitudinal beliefs.

This study posed five research questions regarding the study skills of business college students:

Research Question 1: What do students believe regarding diligence in studying for their classes leading to better grades (effort to performance linkage)?

Research Question 2: What do students believe regarding the importance of grades for their future success (performance to outcome linkage)?

Research Question 3: How do students' study behaviors match their beliefs about the importance of studying?

Research Question 4: How does work (employment) explain how much time students spend studying?

Research Question 5: What study approaches do students use most often?

Review of the Literature

Vroom (1994) described the Expectancy Theory of Motivation as containing three components: (a) perceived linkage between one's effort and performance, (b) perceived linkage between one's performance and outcomes, and (c) the value of the outcomes.

Business students prepare for class and study for tests in a variety of ways: reading textbook chapters, reviewing notes, and doing assigned homework. Some of these studying practices may improve their test scores and/or course grades. Some research has shown that students performed better when they were given explicit study guides that were very similar to the test questions (Perrin, Miller, Haberlin, Ivy, Meindl, & Neef, 2011), which may have resulted in higher scores on exams, but does not necessarily facilitate learning or retention of knowledge. Business students study less than other seniors (Lipka & Berrett, 2011; Richard, 2011), demonstrate less learning on assessment measures (Martell, 2007; Michlitsch & Sidle, 2002), and score the lowest on GMAT scores (Glenn, 2011). They are also more "anti-intellectual" than other majors; in other words, less interested in learning for learning's sake (Pfeffer & Fong, 2004; Vasconcellos e Sa, 2006). Additionally, senior students spend less time studying than freshmen (Young, 2002).

Findings from the NSSE Study (2012) indicated that 15% of students reported studying five hours or less per week, 40% of students reported spending 10 hours per week or less on their studies, and 60% studied 15 hours or less. Only 23% devoted 21 hours or more per week to study. Therefore, students with 15 semester hours were spending two hours or less per course per week in reading, studying, preparing assignments, etc. Further, there is evidence that the low amount of study time begins before college. An investigation of high school study habits revealed that 60% of college freshmen reported that they studied five hours or less per week when they were in high school (Pryor, et al., 2012).

Nonis and Hudson (2006; 2010) conducted research to determine the relationship between study time and performance and found that it is not only how much time a student spends studying, but also how effectively the time is spent that influences academic performance. Research on student learning and retention has indicated that repeated reading alone can be an ineffective study method, whereas repeated memorization and retrieval can enhance learning and

retention of knowledge (Karpicke, Butler, & Roediger, 2009). According to the research, students erroneously think that their practice of memorization and recall does not promote their knowledge retention, rather they assume that rereading of the text helps them to study.

While most of the studies have investigated the relationship between study time and academic performance (Krohn & O'Conner, 2005; Lahmers & Zulauf, 2000), the studies have not controlled for the effectiveness of how this time has been spent and if this variable could explain the difference in research results. Therefore, if students spend their time repeatedly reading material as opposed to actually studying the material, they may be deficient in their knowledge (Karpicke et al., 2009).

Further, student procrastination is a concern among college students, with many cramming the night before an exam; and in turn, not doing as well as they might have if they studied at an even pace (Perrin et al., 2011). One of the persisting challenges for professors is to encourage students to study with a theoretical foundation and to integrate those theories into the business strategies and why those strategies are effective, stressing the benefit of learning and knowledge retention with this method of study (Karpicke et al., 2009).

Teaching students how to be more engaged in their learning and studying strategies improves their academic performance. Student engagement includes active learning and student participation in the teaching and learning process. This engagement process consists of student willingness and motivation to attend and participate in class; take effective notes; ask relevant questions; seek out and use available resources; develop a productive study schedule; complete assignments to the best of their ability; and persist in their learning, integration, and retention of knowledge. Using all of these engagement elements will facilitate an effective learning strategy for students to develop habitual study skills leading to success in their academic studies and future careers (Rachal, Daigle, & Rachal, 2007).

Karpicke et al. (2009) conducted a study to examine the prevalence of retrieval practice, relative to other study strategies, in students' real-world study behaviors and students' metacognitive awareness of the benefits of self-testing. Even though one might expect that students would report that they practice recall while studying, research has shown that students lack metacognitive awareness of the testing impact. One of the purposes of the Karpicke et al. (2009) study was to determine if students' self-reported study habits matched their research findings. The researchers collected data on college students' study habits to assess how often students use retrieval tools relative to other strategies and whether students knew about other study tools, such as mnemonic devices. They found that students did not utilize practice retrieval or memory retention while studying. The majority of their students reported repeatedly reading their notes and textbooks for studying, but not self-assessing or reciting memorization or knowledge retrieval. Their conclusions denoted that students do not view memory recall as a strategy that

promotes learning. If students do practice recall during study time, they do so to generate knowledge about the status of their own learning, not because they believe that recall helps their learning of the material (Karpicke et al., 2009).

Because students have control over the majority of how their time is spent, and there is research that indicates today's college students are giving less time for studies and more time for other activities, there is a need for further research on this issue (Nonis & Hudson, 2010; Nonis et al., 2006).

The current study focuses on the methods that college students use to study for their classes. Some of the strategies include rereading text materials and cramming the night before tests, although these may not always be the best strategies (Hartwig & Dunlosky, 2012; Karpicke, et al., 2009). Other studying strategies, such as self-assessments, have been shown to be much more effective for immediate learning and long-range retention (Roediger & Butler, 2011), but those strategies are not shared by students as often (Karpicke et al., 2009).

Methods and Procedures

A questionnaire was distributed in nine business classes of junior and senior-level students at a southeastern, regional, comprehensive university.

Participants

Convenience sampling was used by distributing a questionnaire in classes of "Principles of Management," "Management Reports," and "Computer Information Systems." The majority of the 211 students (83%) were majoring in business; 47% were juniors and 36% were seniors. The remaining 17% of the students were non-business majors.

Instrumentation

A 56-item questionnaire was developed and administered to students in nine classes. Participants were asked questions related to these topic areas:

- Their attitudes/beliefs about studying and the outcomes of studying/learning
- Their study practices and behaviors
- Demographic information potentially related to studying/learning

Students were asked how much time they spent on course-related activities such as highlighting their textbook, preparing chapter summaries, using online materials, organizing class notes, studying with a peer, and reviewing for exams. They were also asked about their approaches to studying and their perceptions regarding the importance of study skills.

Limitations of the Study

The study included 211 students who were enrolled in three different courses (nine sections) at a southeastern, regional, comprehensive university during the fall and spring semesters. The sample of students, therefore, is not representative and should not be generalized beyond this study. Participation was voluntary; all students in the classes agreed to participate in the study.

Findings and Analysis

The results to the survey questions and analysis of the data are reported in this section. One hundred fifty (71%) of the participants reported that they worked a paying job, with a mean of 26.8 hours worked per week; whereas, 78 (37%) reported working 30 or more hours in a typical week.

Research Question 1: What do students believe regarding diligence in studying for their classes leading to better grades (effort to performance linkage)?

In this study, most students indicated that hard work effort and studying for classes leads to better grades, as depicted in Table 1. Ninety-three percent indicated there is "a good bit" or "a great deal" of connection between more studying and better grades, while only one percent of participants said that hard work was related to grades either "not at all" or "very little."

Table 1
Student Perceptions Regarding More Studying Leads to Better Grades (N = 207)

Mean	Not at All	Very Little	Somewhat	A Good Bit	A Great Deal
4.6	0 (0%)	2 (1%)	12 (6%)	66 (32%)	127 (61%)
Total	2 (1%)		12 (6%)	193 (93%)	

Research Question 2: What do students believe regarding the importance of grades for their future success (performance to outcome linkage)?

A strong majority of students (67%) in this study believed that there is a strong connection between grades and success, as shown in Table 2. Most of those students also indicated that hard work leads to better grades, with 67% of participants answering there was "a good bit" or "a great deal" of connection between grades and success. At least 92% noted at least some connection between grades and future success.

Table 2
Student Perceptions Regarding the Importance of Grades for Future Success (N = 207)

Mean	Not at all	Very Little	Somewhat	A Good Bit	A Great Deal
3.9	8 (4%)	8 (4%)	52 (25%)	69 (33%)	70 (34%)
Total	16 (8%)		52 (25%)	139 (67%)	

Research Question 3: How do students' study behaviors match their beliefs about the importance of studying?

Students were asked to indicate the number of hours per week they studied outside of class, using the same eight categories as the NSSE study (0 hours, 1-5 hours, 6-10 hours, 11-15 hours, 16-20 hours, 21-25 hours, 26-30 hours, more than 30 hours). The median range was 6-10 hours, and 69% reported spending 10 hours per week or less. Only 7% said they spent 21 hours or more per week studying. The breakdown of the data is shown in Table 3.

Table 3
Number of Hours Students Spend Studying (N = 211)

Number of Hours Per Week	# (%) of Students	Cumulative # (%)
0	4 (2%)	4 (2%)
1 – 5	69 (33%)	73 (35%)
6 – 10	71 (34%)	144 (68%)
11 – 15	34 (16%)	178 (84%)
16 – 20	19 (9%)	197 (93%)
21 – 25	6 (3%)	203 (96%)
26 – 30	6 (3%)	209 (99%)
> 30	2 (1%)	211 (100%)
Median Response	6 – 10 hours per week	

Table 4 shows the percentages of students who used different approaches to studying. Only 26% indicated that they "usually" or "always" completed course readings by the assigned date and took good notes in class, while 31% said they "rarely" or "never" did the readings or took good notes. A majority

(57%) of students admitted that they sometimes, rarely, or never prepared chapter summaries or outlines, and only 38% say that they "usually" or "always" used some means of checking their recall when studying.

Table 4

Percentage of Students Who Use Different Approaches to Studying*

Mean	Never	Rarely	Sometimes	Usually	Always
	Complete Assigned Readings on Time (N = 210)				
2.9	17 (8%)	48 (23%)	91 (43%)	47 (22%)	7 (3%)
Total	65 (31%)		91 (43%)	54 (26%)	
	Take Good Notes in Class (N = 210)				
2.9	17 (8%)	48 (23%)	91 (43%)	47 (22%)	7 (3%)
Total	65 (31%)		91 (43%)	54 (26%)	
	Prepare Chapter Summaries (N = 211)				
3.3	21 (10%)	31 (15%)	67 (32%)	59 (28%)	33 (16%)
Total	52 (25%)		67 (32%)	92 (44%)	
	Check Their Recall (N = 210)				
3.1	16 (8%)	38 (18%)	76 (36%)	63 (30%)	17 (8%)
Total	54 (26%)		76 (36%)	80 (38%)	

**Does not total 100% due to rounding area*

A strong majority (74%) of students also indicated that they did "a good bit," "most," or "all" of their studying for exams during the last two days or less before the exam, as shown in Table 5.

Table 5

Percentage of Amount of Studying that Students Do within Two Days Prior to the Exam (N = 198)

Category	All (100%)	Most (76-99%)	A Good Bit (51-75%)	Some (26-50%)	Very Little (1-25%)	None (0%)
Percentage	22 (11%)	69 (35%)	55 (28%)	38 (19%)	14 (7%)	0 (0%)
Total	91 (46%)		93 (47%)		14 (7%)	

Research Question 4: How does work (employment) explain how much time students spend studying?

Even though student employment has been widely believed to be a strong, contributing factor to the low number of hours today's students are spending on their out-of-class studies, results from this study failed to support a strong or even modest linkage to that indication.

The cross-tabulation of study hours and work hours shown in Table 6 indicates similar percentages of students in the three levels of study hours across the three levels of time worked on a job. The results of the χ^2 test did not show a significant difference between the number of hours a student studied and the number of hours a student worked.

Table 6

Cross-tabulation of Hours of Study and Hours Worked on a Job

		Hours Worked				
		Not Employed	**1 – 20**	**21 or more**	**Total**	χ^2
Hours of Study	1 - 10	39 (67%)	39 (71%)	53 (65%)	131	
	11 - 20	14 (24%)	15 (27%)	21 (26%)	50	0.56*
	21 or more	5 (9%)	1 (2%)	7 (9%)	13	
	Total	58	55	81	194	

*p>.05 Numbers shown in parentheses are column percentages.

Table 7 shows the correlation between the number of hours worked and time spent studying, completion of reading assignments, and student perceptions of grade importance for future success. Comparing this data with the data collected for Table 3, there is no correlation between the number of hours students work and the number of hours they spend studying. However, there is an inverse relationship ($p < .002$) between the number of hours worked and students who completed their reading assignments (data from Table 4). There is also an inverse relationship ($p < .01$) between the number of hours students worked and their perceived importance of grades for future success (data from Table 2).

Table 7
Correlations of Student Work Hours to …

Item	n	r	p	Relationship
…# hours spent studying	194	−.110	.134	None
…# who complete assigned readings	194	−.220	<.002	Inverse
…perceived importance of grades for future success	192	−.190	<.010	Inverse

Research Question 5: What study approaches do students use most often?

In this study, students were asked to indicate the frequency with which they utilized various study tools and approaches. One of the most prominent answers was "study PowerPoint slides posted by the professor," which 59% of students indicated they did "usually" or "always." Fifty-three percent (53%) admitted to cramming the night before the exam "usually" or "always. Responses for each of the study tools and approaches can be seen in Table 8.

Table 8
Student Ranking of Alternative Study Approaches Used Most Often (N = 211)

Study Tools/Approaches	Mean	Rank	Always or Usually	Sometimes	Rarely or Never
Take careful notes in class	4.0	1.0	156 (74%)	32 (15%)	23 (11%)
Cram the night before the exam	3.5	2.5	112 (53%)	59 (28%)	40 (19%)
Study PowerPoint slides posted by the professor	3.5	2.5	124 (59%)	51 (24%)	36 (17%)
Organize/Combine class notes/chapter summaries	3.3	4.0	97 (46%)	53 (25%)	61(29%)
Prepare and study chapter summaries/ outlines	3.2	5.0	91 (43%)	67 (32%)	53 (25%)
Highlight important sections of your text	3.0	6.0	80 (38%)	66 (31%)	65 (31%)
Read the text multiple times	2.6	7.5	44 (21%)	70 (33%)	97 (46%)
Study with a friend	2.6	7.5	53 (25%)	63 (30%)	95 (45%)
Use flash cards	2.5	9.5	51 (24%)	50 (24%)	110 (52%)
Use online materials from the textbook website	2.5	9.5	49 (23%)	56 (27%)	106 (50%)
Review notes every night before/after class	2.3	11.0	32 (15%)	52 (25%)	127 (60%)

Table 9 shows students' study behaviors and perceptions related to the number of hours they spend studying. Students perceived a connection ($p < .05$) between the amount of their study time and the importance of various study approaches. They also perceived grades to be indicative of future success ($p < .005$).

Table 9

Correlations: Hours Spent Studying with…

Item	*r*	*p*
…Importance of taking good class notes	.15	< .050
…Importance of preparing chapter summaries	.21	< .005
…Belief that grades are important to future success	.20	< .005
…Completion of assigned readings	.27	< .001
…Preparation of chapter summaries	.33	< .001

Summary and Conclusions

Today's students are studying fewer hours and employing fewer complete study approaches than previous generations of students. The research indicates possible explanations for the declining time and attention devoted to studies, including belief that study effort does not lead to better grades, belief that good grades are not associated with future success, or lack of value of future success. However, the results of the present study suggest the opposite: students *do* perceive a connection between their efforts and good grades, and they also *do* believe a connection exists between grades and future success. One would expect those students to work hard to achieve success. To the contrary, large percentages of students reported that they were spending 10 hours per week or less studying—far below the 30 or more hours per week believed to be required by traditional axioms of academia. Looking at *how* students are studying provides more concern, as many students are not reading assigned material on time, not preparing chapter summaries, and not studying early enough before exams to permit sound long-term retention of learning.

Therefore, if students believe that hard work leads to better grades ($E \rightarrow P$) and better grades will lead to future success ($P \rightarrow O$), why don't students' study behaviors match their perceptions? Success in the present situation was assumed to be valuable to students because it was self-defined by each individual. However, this assumption may have been flawed, and future study will need to measure how individual students define success and the degree to which success is valued.

Recommendations

Future research needs to focus on understanding the reasons for declining student effort and the effectiveness of various interventions aimed at motivating students to study harder and smarter. A key factor to consider may be student perceptions. Expectancy Theory is based on an individual's perceptions of three factors: an effort to performance linkage, a performance to outcome linkage, and the value of the outcome. To the extent that a given student's perceptions are inaccurate, that person's behaviors and choices may not match those actually needed for success. It is essential that business educators provide students with persuasive, impactful information about what effective scholarship involves, why it is important, and how much effort is required to create a personal competitive advantage in one's career to achieve long-term career success.

The present study did not investigate the personal value of "future success" based on the assumption that success is personally defined and therefore is inherently valuable. That assumption requires, however, that the individual actively thinks about success and does so in a rational, informed manner; and it is possible that is not the case, such that investigation of the value of future success to students (i.e., valence) should be investigated.

Implications for Business Education

According to the literature and the results of this ongoing study, a wide variety of needs continue to exist on college campuses for enhanced study activities and strategies to encourage students to prioritize academics over other time demands. Ongoing assessment of student studying and success strategies is necessary to maintain a high quality program. Creating conditions under which instructors can gain and sustain knowledge is as important as creating the conditions for an enriched learning environment. Exposing faculty members to new pedagogical approaches and instructional innovations for classroom use should be a top priority in a quality business education program.

References

Barke, M., Braidford, P., & Houston, M., Hunt, A., Lincoln, I., Morphet, C., … Walker, A. (2000, July). *Students in the labour market: Nature, extent and implications of term-time employment among University of Northumbria undergraduates* (Vol. 215). Nottingham, England: Department for Education and Employment. Retrieved from http://webarchive.nationalarchives.gov.uk/20130401151715/https://www.education.gov.uk/publications/eOrderingDownload/RB215.pdf

Callender, C. (2008, July 1). The impact of term-time employment on higher education students' academic attainment and achievement. *Journal of Education Policy*, *23*(4), 359-377.

Carbonaro, W. (2005, January). Tracking, students' effort, and academic achievement. *Sociology of Education*, *78*(1), 27-49.

Church, M. A., Elliot, A. J., & Gable, S. L. (2001). Perceptions of classroom environment, achievement goals, and achievement outcomes. *Journal of Educational Psychology*, *93*(1), 43.

Curtis, S., & Shani, N. (2002). The effect of taking paid employment during term-time on students' academic studies. *Journal of Further and Higher Education*, *26*(2), 129-138.

Davies, J., & Graff, M. (2005, July). Performance in e-learning: Online participation and student grades. *British Journal of Educational Technology*, *36*(4), 657-663.

Elias, R. Z. (2005). Students' approaches to study in introductory accounting courses. *Journal of Education for Business*, *80*(4), 194-199.

Foster, J., & Lin, A. (2007). Approaches to studying and students' use of a computer supported learning environment. *Education for Information*, *25*(3/4), 155-168. Retrieved from http://editlib.org/p/102288/

Glenn, D. (2007, September 7). Your parents were right: Scholars say more studying leads to better grades. *Chronicle of Higher Education*, *54*(2), 50. Retrieved from http://www.economics.uwo.ca/cibc/cibc_press_references_docs/postsecondary/Stinebrickner%20Chronicle%20of%20Higher%20Ed%2009-07-2007.pdf

Glenn, D. (2011, April 14). Business educators struggle to put students to work. *Chronicle of Higher Education.* Retrieved from http://chronicle.com/article/Business-Educators-Struggle-to/127108/

Gortner Lahmers, A., & Zulauf, C. R. (2000, September/October). Factors associated with academic time use and academic performance of college students: A recursive approach. *Journal of College Student Development*, 41, 544-556. Retrieved from http://www.highbeam.com/doc/1P3-68707838.html

Harackiewicz, J. M., Barron, K. E., Carter, S. M., Lehto, A. T., & Elliot, A. J. (1997). Predictors and consequences of achievement goals in the college classroom: Maintaining interest and making the grade. *Journal of Personality and Social Psychology*, *73*(6), 1284.

Hartwig, M. K., & Dunlosky, J. (2012, February 19). Study strategies of college students: Are self-testing and scheduling related to achievement? *Psychonomic Bulletin & Review, 19*(1), 126-134.

Karpicke, J. D., Butler, A. C., & Roediger, H. L. (2009). Metacognitive strategies in student learning: Do students practice retrieval when they study on their own? *Memory, 17*(4), 471-479.

Krohn, G. A., & O'Conner, C. M. (2005, Winter). Student effort and performance over semester. *Journal of Economic Education*, 36, 3–29. doi:10.3200/JECE.36.1.3-28

Lahmers, A. G., & Zulauf, C. (2000). The secret to academic success: Hours and hours of study. *Journal of College Student Development*, 41, 545–554.

Lieberman, D. A., & Remedios, R. (2007, June). Do undergraduates' motives for studying change as they progress through their degrees? *British Journal of Educational Psychology*, *77*(2), 379-395.

Lipka, S., & Berrett, D. (2011, November 17). Engineering majors hit the books more than business majors do, survey finds. *Chronicle of Higher Education*, *58*(14), A18-A19. Retrieved from http://chronicle.com/article/Who-Hits-the-Books-More-Study/129806/habits

Manthei, R. J., & Gilmore, A. (2005). The effect of paid employment on university students' lives. *Education+ Training*, *47*(3), 202-215.

Martell, K. (2007). Assessing student learning: Are business schools making the grade? *Journal of Education for Business*, *82*(4), 189-195.

Michlitsch, J. F., & Sidle, M. (2002). Assessing student learning outcomes: A comparative study of techniques used in business school disciplines. *Journal of Education for Business*, *77*(3), 125.

National Survey of Student Engagement (NSSE). (2012). *Promoting student learning and institutional improvement: Lessons from NSSE at 13*. Bloomington, IN: Indiana University Center for Postsecondary Research. Retrieved from http://nsse.iub.edu/NSSE_2012_Results/pdf/NSSE_2012_Annual_Results.pdf

Nonis, S. A., & Hudson, G. I. (2006, January/February). Academic performance of college students: Influence of time spent studying and working. *Journal of Education for Business,* 81, 151–159.

Nonis, S. A., & Hudson, G. I. (2010, March). Performance of college students: Impact of study time and study habits. *Journal of Education for Business, 85*(4), 229-238.

Nonis, S. A., Philhours, M., & Hudson, G. I. (2006). Where does the time go? A diary approach to business and marketing students' time use. *Journal of Marketing Education,* 28, 121–134.

Perrin, C. J., Miller, N., Haberlin, A. T., Ivy, J. W., Meindl, J. N., & Neef, N. A. (2011, Fall). Measuring and reducing college students' procrastination. *Journal of Applied Behavior Analysis, 44,* 463-474.

Pfeffer, J., & Fong, C. T. (2004, December). The business school 'business': Some lessons from the U.S. experience. *Journal of Management Studies*, *41*(8), 1501-1520.

Pryor, J. H., Eagan, K., Blake, L. P., Hurtado, S., Berdan, J., & Case, M. H. (2012). *The American freshman: National norms fall 2012*. Los Angeles, CA: Higher Education Research Institute, UCLA. Retrieved from http://www.heri.ucla.edu/monographs/theamericanfreshman2012.pdf

Rachal, K. C., Daigle, S., & Rachal, W. S. (2007, December). Learning problems reported by college students: Are they using learning strategies? *Journal of Instructional Psychology, 34*(4), 191-199. Retrieved from http://eric.ed.gov/?id=EJ790467

Rau, W., & Durand, A. (2000, January). The academic ethic and college grades: Does hard work help students to" make the grade"? *Sociology of Education*, 19-38. Retrieved from http://www.jstor.org/stable/2673197

Richard, P. (2011, November 17). Would-be engineers hit books the hardest, a study finds. *New York Times,* 17. Retrieved from http://www.nytimes.com/2011/11/17/education/college-student-survey-shows-balance-of-work-and-study.html?_r=0

Roediger, H. L., & Butler, A. C. (2011). The critical role of retrieval practice in long-term retention. *Trends in Cognitive Sciences, 15,* 20-27.

Vasconcellos e Sá, J. A. (2006, March/April). Get down to Earth to teach strategy. *Bized*, *5*(3), 54. Retrieved from http://www.e-digitaleditions.com/i/59297/55

Vroom, V. H. (1994). *Work and motivation*. New York, NY: Wiley. (Original work published 1964)

Watts, C., & Pickering, A. (2000). Pay as you learn: Student employment and academic progress, *Education + Training*, 42(3), 129-135.

Young, J. R. (2002, December 6). Homework? What homework? *Chronicle of Higher Education*, *49*(15), A35. Retrieved from http://chronicle.com/article/Homework-What-Homework-/2496

Zhu, C., Valcke, M., & Schellens, T. (2008). A cross-cultural study of Chinese and Flemish university students: Do they differ in learning conceptions and approaches to learning? *Learning & Individual Differences*, *18*(1), 120-127.