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Academic Success and Its Relation to Academic Habits and Motivation


Sam Ebert**

Objective: Many factors contribute to academic success. Previous research has produced inconclusive results when identifying which factors play the largest role in predicting academic success. This study focusses on the relationships between academic success, motivation, and academic habits. I hypothesized that college students who report being highly motivated will have greater academic success than those who report being less motivated. I also hypothesized that there would be a strong positive relationship between college students engaging in good academic habits and high academic success. My two other hypotheses included that motivation score would be positively correlated with academic habit scores and that intrinsic motivation would have a stronger relationship with academic success than extrinsic motivation. **Method:** Participants (N = 69) took an online survey that asked them about their basic demographics, GPA, study habits, and motivation. **Results:** Correlational analyses partially confirmed the hypotheses. The first hypothesis was not supported; however, I found a statistically significant positive relationship between academic habits and academic success. **Conclusion:** Since motivation and academic habits are not the only factors that may predict academic success, more research should be conducted in the future to identify the multitudes of predictors that collectively contribute to academic success.

Keywords: academic success, GPA, self-regulation, motivation

There is a wide range of factors that can lead to academic success. It is clear that students must have the cognitive abilities to attain academic achievement, but past research has largely focused on how and if motivation and self-regulation play a role in acquiring the success that students strive to earn. Generally, researchers have hypothesized that higher levels of motivation and self-regulation predict greater academic success (Kitsantas, 2002; Kitsantas et al., 2008; Linnenbrink & Pintrich, 2002; Turner et al., 2009).

Self-determination theory has been a key approach to defining qualities of motivation and the role they have in goal achievement (Linnenbrink & Pintrich, 2002). Qualities of motivation

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have previously been divided into three subtypes: intrinsic, extrinsic, and amotivation.

Individuals who are intrinsically motivated complete tasks because they are inherently interested in doing so for their own enjoyment, whereas individuals who are extrinsically motivated complete tasks because they are driven by external factors for their personal gain. Amotivation is simply a lack of motivation (Linnenbrink & Pintrich, 2002; Vansteenkiste et al., 2006). By determining the underlying motivation of learned behaviors, researchers aim to use these data to understand factors that may predict success in academia.

While it may be the case that intrinsically and extrinsically motivated behaviors originate from individual differences, Vansteenkiste et al. (2004) created an experimental study that aimed to frame learned material as either intrinsic or extrinsic and then measure its effect on students' comprehension. They found that students who learned material that was framed to be intrinsically motivating showed greater persistence in learning, deeper processing, and higher test performance on the material than the students in the group who learned material that was framed to be extrinsically motivating. This study illustrates that although some students may naturally be extrinsically motivated to succeed in academia, course material can be framed in such a way that it seems intrinsically motivating which could then lead to greater academic success (Vansteenkiste et al., 2004).

Another study that focused on motivation's role in academic success found a positive correlation between intrinsic motivation scores and the grade point average (GPA) of college students (Turner et al., 2009). They did not mention anything about extrinsic motivation scores, so it is unclear whether it played a role in this sample's academic success. In addition to intrinsic motivation, Turner et al. (2009) found a positive correlation between the amount of time students

spent studying in hours per week and GPA. Increased time studying is just one quality that is considered to be a part of academic self-regulation.

Academically self-regulated students are active in their own learning process. They independently seek out new information, utilize useful strategies to reach goals, and have a self-oriented feedback loop (Zimmerman, 1990). This feedback loop is a process where self-regulated learners monitor their learning strategies and then modify their self-perception and behaviors in reaction to their effectiveness (Zimmerman, 1990). While results have been inconsistent across research studies, the general thought is that students who become masters of their learning tend to perform better in academic settings than others who take less initiative (Kitsantas et al., 2008; Zimmerman, 1990).

Contrary to the results found by Turner et al. (2009), another study that measured study habits' relation with academic success found no direct correlation between hours per week that students spent studying and cumulative GPA (Nonis & Hudson, 2010). Instead, they found that students who waited until the last minute to cram for exams were likely to have higher semester GPAs than students who studied well in advanced for exams (Nonis & Hudson, 2010). While this yielded results counterintuitive to what the self-regulation hypothesis supports, one must ask if semester GPA is an appropriate measure for academic success. Instead, these findings may illustrate how using strategic cramming methods can generate short-term knowledge and scores, but they may not show the overall understanding of course material and the ability to utilize it for future use (Nonis & Hudson, 2010).

Kitsantas et al. (2008) conducted a study to see if self-regulation was a predictor of academic success in first and second-year college students. They found significant correlations between students' Motivated Strategies for Learning Questionnaire scores and GPAs.

Specifically, students who reported effective time management were more likely to have higher GPAs during their first two years of college compared to students who reported having poor time management. Surprisingly, they also found that there was no statistically significant correlation between metacognitive learning strategies (i.e. planning and monitoring academic performance) and the academic success of students during their first two years of college (Kitsantas et al., 2008).

Since students with self-regulatory behaviors are thought to have higher academic success, Kitsantas (2002) conducted interviews with students who previously took an academic test and asked them about their behaviors. These results showed that students who scored high on the test used self-regulatory processing while taking their test, studying for their test, and after receiving their test grade. Compared to students who scored low, high test scorers were more likely to set manageable academic goals for themselves, follow through with the goals, and seek help if they needed it before taking the test (Kitsantas, 2002). Additionally, those who scored lower were more likely to use memorization strategies that are not ideal for deep processing and understanding of the material, such as rehearsal. During the test, students who scored high reported that they planned out their essay responses before writing them and reviewed their answers before finishing the test. Finally, many high test scorers reported that after they received their test grades, they created a plan for improvement and got help with the material they struggled with (Kitsantas, 2002). Overall, high test scorers were significantly more likely to report using self-regulatory behaviors before, during, and after the test; thus, this could be a main factor that influenced their high test grade and could suggest that self-regulation plays a significant role in overall academic success (Kitsantas, 2002).

While some studies have shown that self-regulated students are more likely to obtain academic success compared to their passive classmates, others have found ambiguous results (Kitsantas, 2002; Kitsantas et al., 2008; Zimmerman, 1990). Due to limitations in previous studies and inconclusive results throughout the literature, more research must be conducted to establish consistent relationships between motivation, self-regulation, and academic success.

The purpose of the current study was to provide some clarity to the existing data and assess relationships between academic success, motivation, and self-regulation. To do this, current college students were asked to participate in an online survey that asked about these respective topics. I hypothesized that the academic success of college students would be positively correlated with both overall motivation and academic habits. I also hypothesized that students who report high levels of overall motivation would also report engaging in positive academic habits. My final hypothesis was intrinsic motivation would have a stronger relationship with academic success than extrinsic motivation.

Method

Participants

A total of 69 college students participated in this study in March and April 2020. I originally intended to enroll at least 100 participants. There were 135 participants who consented to participate in the survey, but only 89 (65.93%) of them met the qualification criteria. My qualification criteria required that the participants were 18 years or older, currently enrolled in an American college, and have completed at least two college semesters. Any person who did not confirm that they met the above criteria was directed to the end of the survey and thanked for their time. Of those who qualified, 69 (77.53%) completed the entire survey and provided useful data. One of the participants did not report useful data (e.g., they answered each question with

the same number and typed random characters in text entry boxes) and 19 (21.35%) participants did not complete enough of the survey to be used in the analyses. The final sample consisted of 69 American college students.

Of the 69 participants, 55 (79.7%) were women and 14 (20.3%) were men. The ethnic background of the participants was: 44 (63.8%) White, 7 (10.1%) Hispanic or Latino, 4 (5.8%) Black, 4 (5.8%) Asian, and 10 (14.5%) mixed or other. The reported majors of the participants varied greatly, but psychology was the most common major and was reported by 22 (31.9%) participants. All participants were recruited through Reddit, Facebook, or the Lindenwood Participant Pool (LPP). The subreddits that the survey was posted in included: r/Samplesize and r/University. The LPP is a group of Lindenwood University students who are enrolled in social science classes and have the opportunity to participate in research studies for extra credit. Until March 16, 2020, participants who were recruited through the LPP were granted one extra credit point, regardless if they met the criteria or finished the survey. Due to the coronavirus pandemic, LPP participants were granted two extra credit points after March 16, 2020. This was allowed because LPP participants no longer had the ability to participate in in-person studies, studies they typically would get between two and four extra credit points for participating in. Non-LPP participants were not compensated for their participation. This study met the ethical standards and guidelines of Lindenwood University's Psychology Program Scientific Review Committee and Institutional Review Board.

Materials and Measures

The survey completed by participants was created on Qualtrics, an online survey platform. The survey consisted of questions regarding the participants' basic demographics, academic success, academic habits, and motivation (see Appendix). Academic success was

measured by the GPA reported by each participant. Academic habits were measured on a 5-point Likert scale and participants were asked to select the degree to which the statements correspond with their academic habits (e.g., I actively listen during lectures). The responses to each question were summed up to create an overall academic habits score.

Motivation questions were derived from the Academic Motivation Scale (Vallerand et al., 1989), a questionnaire that measures intrinsic, extrinsic, and amotivation. These questions were measured on a 5-point Likert scale by asking the participant to select the degree to which the statements correspond with the reasons why they go to college (i.e., because with only a high-school diploma I would not find a high-paying job later on). Responses were separated into each motivation category to create three different motivation sub-scores. Additionally, intrinsic and extrinsic motivation scores were summed together to create an overall motivation score.

Analysis

Correlational statistics were used to identify relationships between academic success, academic habits, and motivation. Specifically, I ran correlational analyses on each of the following factor pairs, GPA and academic habits, GPA and overall motivation, GPA and intrinsic motivation, GPA and extrinsic motivation, and academic habits and motivation. All data analyses were conducted on Microsoft Excel.

Results

The participants' GPA ranged between 1.2 and 4.0, $M = 3.42$ ($SD = 0.45$). Average scores for subcategories of the survey were as follows: overall motivation $M = 88.2$ ($SD = 16.2$), intrinsic motivation $M = 40.9$ ($SD = 10.8$), extrinsic motivation $M = 47.1$ ($SD = 9.1$), and academic habits $M = 52.9$ ($SD = 9.1$). I hypothesized that motivation would have a statistically significant positive correlation with GPA. Specifically, intrinsic motivation would be more

strongly correlated with GPA than extrinsic motivation. I used a Pearson's correlation and found that there was no statistically significant relationship between overall motivation and GPA, $r(67) = 0.11$, $p = 0.36$, extrinsic motivation and GPA, $r(67) = -0.02$, $p = 0.89$, or intrinsic motivation and GPA, $r(67) = 0.18$, $p = 0.13$. These findings were unresponsive to my first two hypotheses.

I also hypothesized that engagement in positive academic habits would be positively correlated with academic success. By using a Pearson's correlation, I found a statistically significant weak correlation (see Figure 1) between academic habits and GPA, $r(67) = 0.29$, $p < 0.05$. This finding was supportive of my hypothesis. My final hypothesis was that overall motivation would have a positive relationship with academic habits. This hypothesis was also supported, and by using a Pearson's correlation I found a statistically significant positive correlation between motivation scores and academic habit scores (see Figure 2), $r(67) = 0.47$, $p < 0.001$.

Discussion

The purpose of this study was to see if there were relationships between academic success, motivation, and academic habits. The original hypothesis of there being strong relationships between the variables previously mentioned was partially supported. In accordance with previous research (Kitsantas, 2002; Kitsantas, 2002), correlational analyses revealed a significant relationship between academic habits and GPA, but the relationship was weaker than originally expected. Given that Kitstantas (2002) found that academic time management had a significant positive relationship with GPA but monitoring and planning did not, may account for the weak relationship; since both factors were asked in the academic habits subsection of the current survey and were both included in the total academic habits score during the final analysis. Additionally, there was a moderately strong correlation found between academic habits

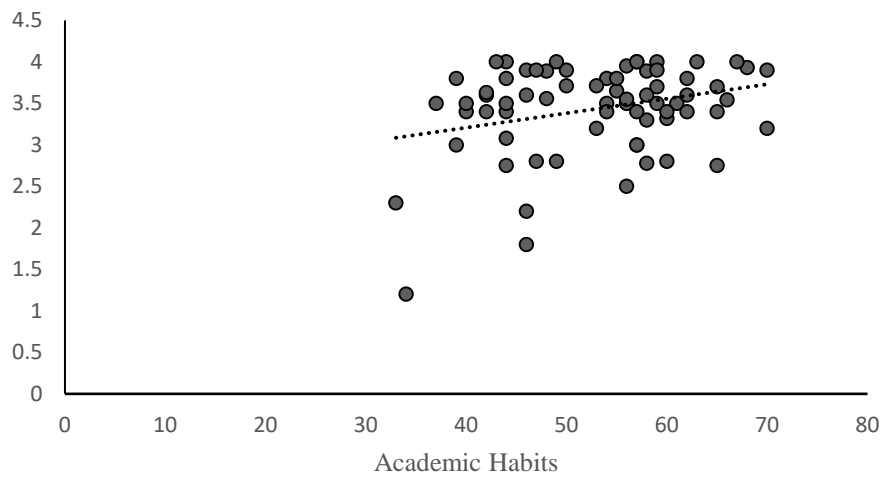
and motivation. Students who reported being motivated also reported engaging in academic habits that are thought to promote academic success. The inability to find a significant relationship between motivation and academic success was contrary to my hypothesis as well as that of Turner et al. (2009). A possible explanation for this insignificant finding may be that my sample size was unrepresentative of the population.

A major limitation of the study was that I did not achieve the intended sample size since some of the data were incomplete and had to be excluded from the final analysis. Having a larger sample would allow for a greater amount of data. I also must question if the sample was representative of the population. Since many participants were psychology students, it may have been useful to have a wider range of students from other majors participate in the study. While the current findings did not fully support my original hypotheses, one must consider that academic habits and motivation are only two factors of many that contribute to academic success. In the future, research should direct its attention to the multitudes of factors that collectively contribute to academic success such as high school academic performance, motivation, academic habits, support systems, work-life, extracurriculars, and overall interest in their major of choice. By considering all factors that lead to academic success, one may be able to answer the long-asked question on what predicts academic success.

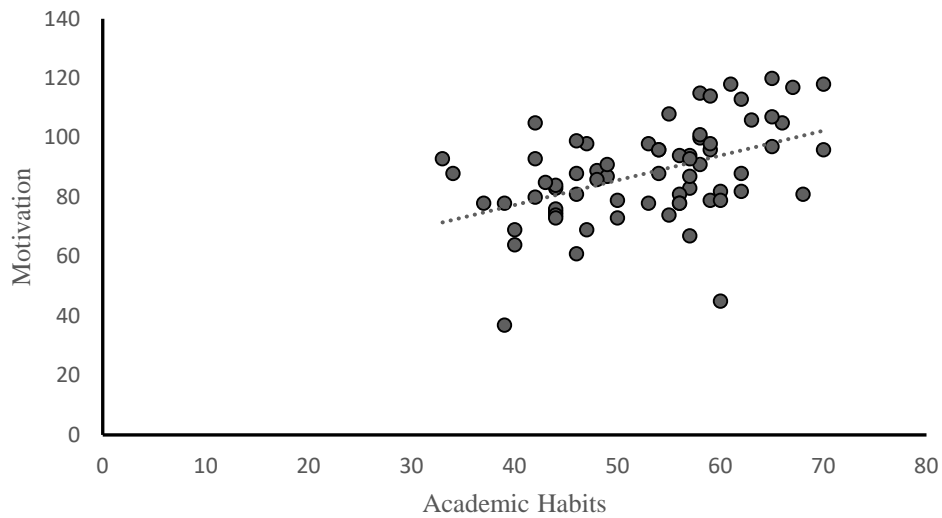
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Figure 1*Relation Between Academic Habits and GPA*

Note. Scatterplot depicting the relationship between academic habits and GPA (grade point average).

Figure 2*Relation Between Academic Habits and Motivation*

Note. Scatterplot depicting the relationship between academic habits and motivation scores.

Appendix

Background Information

1. Are you currently enrolled in college?

Yes

No

2. Is your college located in the United States?

Yes

No

3. Have you completed at least two semesters of college (one full year)?

Yes

No

4. What is/are your major(s) _____

5. What is your grade point average (GPA)? _____

6. How do you currently describe your gender identity?

Male

Female

Self Identify

7. Which categories describe you? Select all that apply to you:

- Asian - For example, Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese
- Black or African American- For example, Jamaican, Haitian, Nigerian, Ethiopian, Somalian
- Hispanic, Latino, or Spanish Origin- For example, Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Colombian
- Middle Eastern or North African- For example, Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian
- Native Hawaiian or Other Pacific Islander- For example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese
- White or European American- For example, German, Irish, English, Italian, Polish, French
- Some other race, ethnicity, or origin, please specify:

Motivation Questions

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons WHY YOU GO TO COLLEGE.

1 = Does not correspond at all

2= Corresponds a little

3= Corresponds moderately

4 = Corresponds a lot

5= Corresponds exactly

8. Because with only a high-school degree I would not find a high-paying job later on.

1 2 3 4 5

9. Because I experience pleasure and satisfaction while learning new things.

1 2 3 4 5

10. Because I think that a college education will help me better prepare for the career I have chosen.

1 2 3 4 5

11. For the intense feelings I experience when I am communicating my own ideas to others.

1 2 3 4 5

12. Honestly, I don't know; I really feel that I am wasting my time in school.

1 2 3 4 5

13. For the pleasure I experience while surpassing myself in my studies.

1 2 3 4 5

14. To prove to myself that I am capable of completing my college degree.

1 2 3 4 5

15. In order to obtain a more prestigious job later on.

1 2 3 4 5

16. For the pleasure I experience when I discover new things never seen before

1 2 3 4 5

17. Because eventually it will enable me to enter the job market in a field that I like.

1 2 3 4 5

18. For the pleasure that I experience when I read interesting authors.

1 2 3 4 5

19. I once had good reasons for going to college; however, now I wonder whether I should continue.

1 2 3 4 5

20. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.

1 2 3 4 5

21. Because of the fact that when I succeed in college I feel important.

1 2 3 4 5

22. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.

1 2 3 4 5

23. Because this will help me make a better choice regarding my career orientation.

1 2 3 4 5

24. For the pleasure that I experience when I feel completely absorbed by what certain authors have written.

1 2 3 4 5

25. can't see why I go to college and frankly, I couldn't care less.

1 2 3 4 5

26. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.

1 2 3 4 5

27. To show myself that I am an intelligent person

1 2 3 4 5

28. In order to have a better salary later on.

1 2 3 4 5

29. Because my studies allow me to continue to learn about many things that interest me.

1 2 3 4 5

30. Because I believe that a few additional years of education will improve my competence as a worker.

1 2 3 4 5

31. For the "high" feeling that I experience while reading about various interesting subjects.

1 2 3 4 5

32. I don't know; I can't understand what I am doing in school.

1 2 3 4 5

33. Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.

1 2 3 4 5

34. Because I want to show myself that I can succeed in my studies.

1 2 3 4 5

Academic Habits Questions

Please indicate which of the following options best describe your ACADEMIC HABITS.

1 = Never

2 = Sometimes

3 = About half of the time

4 = Most of the time

5 = Always

35. I study for exams.

1 2 3 4 5

36. I create my own study materials for exams.

1 2 3 4 5

37. I read the assigned material from the textbook.

1 2 3 4 5

38. I actively listen during lectures.

1 2 3 4 5

39. I ask questions during class.

1 2 3 4 5

40. I participate during class discussions.

1 2 3 4 5

41. I attend all my classes.

1 2 3 4 5

42. I take detailed notes during class.

1 2 3 4 5

43. I study many days in advance for exams.

1 2 3 4 5

44. When I don't understand something in class, I seek out resources to help me understand it.

1 2 3 4 5

45. I turn in assignments on time.

1 2 3 4 5

46. I am organized.

1 2 3 4 5

47. I keep up with my schoolwork and don't procrastinate.

1 2 3 4 5

48. I set academic goals for myself.

1 2 3 4 5