Academic Coaching in an Online Environment: Impact on Student Achievement

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Abstract: Although the idea of online education is not new, the development of massive open online courses (MOOCs) brought the idea of using 100% online courses in higher education to the forefront of educational debate. As more universities offer 100% online programs, concerns about student retention and academic outcomes continue to linger. In addition to these concerns in general, there are questions regarding the increasingly large class sizes and the effectiveness of different ways of minimizing the impact of this size on both instructors and students. Academic coaching provides a potential way of addressing both concerns. In this model, trained coaches assist instructors with course related matters such as grading assignments, overseeing and grading discussion boards, and grading and providing feedback on written assignments. However, there are concerns regarding the effectiveness of the model on student academic outcomes and student satisfaction. The current study examined differences in student satisfaction and the role of Need for Cognition (NfC) in student outcomes. Results indicate that students with higher levels of NfC are more satisfied with professors, courses, and programs overall both when coaches are used and when they are not.

Keywords: Academic coach, Need for cognition, Student achievement, Student satisfaction

Introduction

Online learning can trace its roots back much further than one might expect, beginning with the University of Chicago offering the first correspondence courses in 1892 (Online Schools Center, 2019). In 1976, education took a significant step towards the online learning model that we know today. That year, Coastline Community College became the first virtual college. Fully online courses became possible when Blackboard was released in 1997. Blackboard served as the first eLearning platform and is still used in higher education. The introduction of Apple iTunes U provided access to college-level lectures and increased the interest in and demand for alternatives to traditional brick-and-mortar universities. Massive open online courses (MOOCs) brought online education and the debate over its effectiveness to the forefront of educational science.

Although online education is a mainstay of higher education, there are still concerns about the effectiveness of learning though this format. Faculty historically resisted online learning (Allen & Seaman, 2006) and the belief persists that students in traditional courses are more successful than their online peers (Bowen, Chingos, Lack, & Nygren, 2012; Ward, Peters, & Shelley, 2010). Furthermore, the increasingly larger class sizes can lead to a lack of faculty engagement with students, increased stress on professors, and a poorer quality experience for students.

Academic coaching provides a means of addressing these concerns. Although academic coaching is a somewhat new approach for online education, the research is promising. Gazza and Matthias (2016) found that the use of academic coaches help increase enrollment, reduce faculty stress and promote student success. In addition, academic coaches have a positive impact on student experiences resulting in greater student satisfaction (Cipher, Urban, & Mancini, 2018). However, the research into the effects of academic coaching is extremely limited.

Furthermore, the role of cognitive resources in online learning is lacking. Cacioppo and Petty (1982) identified Need for Cognition (NfC) as extent to which an individual enjoys and tends to engage in effortful mental tasks. NfC correlates with academic achievement, student satisfaction, and intelligence scores. However, these findings have not extended into the realm of virtual education or how NfC influences students' perceived experiences with academic coaches. Therefore, the current study examined the effect of academic coaches and Need for Cognition on student satisfaction with their overall program of study, with the professor for the course, and with the course experience.

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Academic Coaching Model at LSUS

Graduate level education courses are 100% online and courses are 7 weeks in length. If a class has more than 30 students, the instructor can request an academic coach. Coaches are assigned based on a 30-count basis (e.g., if there are 60 students in a course, the instructor can request three academic coaches). Although the instructor of record is responsible for all curriculum-related activities, the coaches' duties can include grading exams, overseeing and grading discussion boards, and grading and providing feedback on written assignments.

Methodology

Participants

Participants were recruited through the Masters of Education: Curriculum and Instruction and Masters of Education Leadership programs at Louisiana State University-Shreveport. A total of 145 students participated over a single 7-week academic term.

Instruments

Need for Cognition Scale

The Need for Cognitions Scale (Cacappico, Petty, & Kao, 2013) measures individual differences in participants' tendency to engage in and enjoy mental endeavors. The scale consists of 18 items with responses being on a Likert scale from 1-5 with 1 being highly uncharacteristic of me. Based on previous research, the Need for Cognition Scale appears to be a valid and reliable measure of individuals' tendencies to pursue and enjoy the process of thinking—that is, of their "need for cognition" (Cacioppo & Petty, 1982; Cacioppo, Petty, Feinstein, & Jarvis, 1996; Cacioppo et al., 1984; Sadowski, 1993; Sadowski & Gulgoz, 1992b). Need for Cognition scores are not influenced by whether an individual is male or female, or by differences in the individual's level of test-taking anxiety or cognitive style (the particular way that an individual accumulates and merges information during the thinking process). In general, social desirability responses do not affect scores on the NFC (Cacioppo & Petty, 1982). Studies show that NFC is related to academic achievement (Cacioppo, Petty, Feinstein, & Jarvis, 1996), student satisfaction (Grass, Strobel & Strobel, 2017), and intelligence scores (Wilhem, Schulze, Schmiedek, & Süß, 2003).

Student Satisfaction Survey

This survey was adapted from the questionnaire used by Grass, Strobel and Strobel (2017). The survey consists of 10 statements such as "I like to study" and "Studying this subject has great personal meaning to me" and participants rated each statement on a scale of 1 to 5 with 1 being "extremely uncharacteristic of me: and 5 being "extremely characteristic of me". Responses were averaged to provide the student satisfaction score.

Procedure

After obtaining IRB approval, an informed consent document, the Need for Cognition Scale, the Student Satisfaction Survey, and a demographic form were made available to students in the MEDCI and MEDL programs through a link available in Moodle. Near the end of each 7-week academic term, instructors for the programs announced the presence of the survey and encouraged students to participate; however, students were not penalized if they chose not to participate. After the surveys closed, an assistant assigned a randomly generated number to each participant to allow for tracking the student across courses without the researcher being able to identify individual students.

Results

We used three one-way ANOVAs to determine the impact of NfC scores and the presence/absence of an academic coach on student satisfaction with the program overall, satisfaction with the course, and satisfaction

with the instructor of record. For the NfC scores, we did a median split and excluded any student scores that fell exactly at the median, leaving 139 participants. The remaining students were divided into a high NfC group and a low NfC group. The results showed that having an academic coach had no effect on overall student satisfaction with the program and no interaction. NfC did have a significant effect, $F(1,130) = 39.78$; $p < .001$; $\acute{\eta}2 = .234$(see Figure 1). Students with higher NfC scores reported higher levels of satisfaction with the course overall (mean = 41.63; SD = 4.28) than did students with lower NfC scores (mean = 36.49; SD = 4.73).

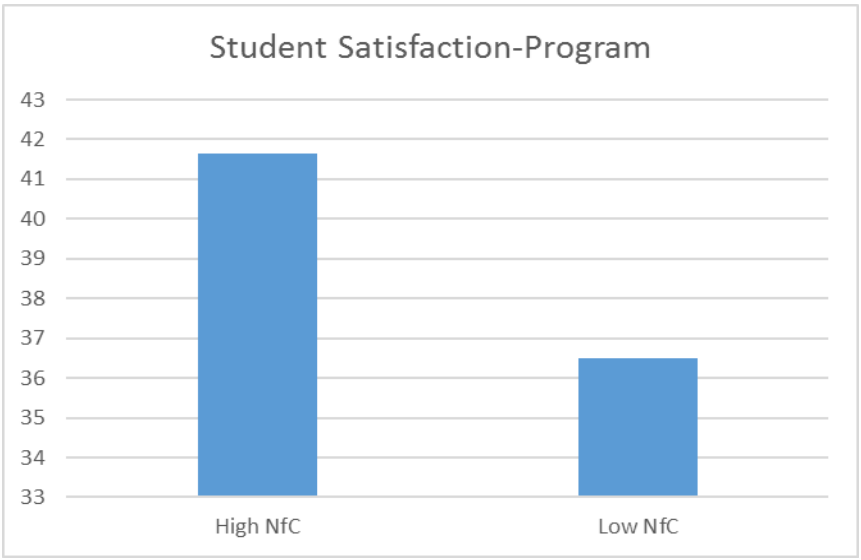

Figure 1. Student Satisfaction with Program of Study

Next, we examined the impact of NfC and presence of an academic coach on satisfaction with the instructor. The results revealed no significant impact from the presence of an academic coach and no interaction. However, NfC scores did impact student satisfaction with the instructor, $F(1,130) = 4.20$; $p = .042$; $\acute{\eta}2 = .031$ (see Figure 2). Students with higher NfC scores reported higher levels of satisfaction with the instructor (mean = 4.90; SD = .30) than did students with lower NfC scores (mean = 4.71; SD = .58). Finally, we examined the effect of NfC and presence of an academic coach on student satisfaction with the course. Again, results revealed no effect of the presence of an academic coach and no interaction. NfC scores affected student satisfaction with the course, $F(1,130) = 10.81$; $p = .001$; $\acute{\eta}2 = .07$ (see Figure 2) . Students with higher NfC scores reported higher levels of satisfaction with the course (mean = 4.82; SD = .42) than did students with lower NfC scores (mean = 4.65; SD = .57). In general, the results showed a pattern of NfC playing a key role in student satisfaction, in courses that have academic coaches as well as in courses that do not.

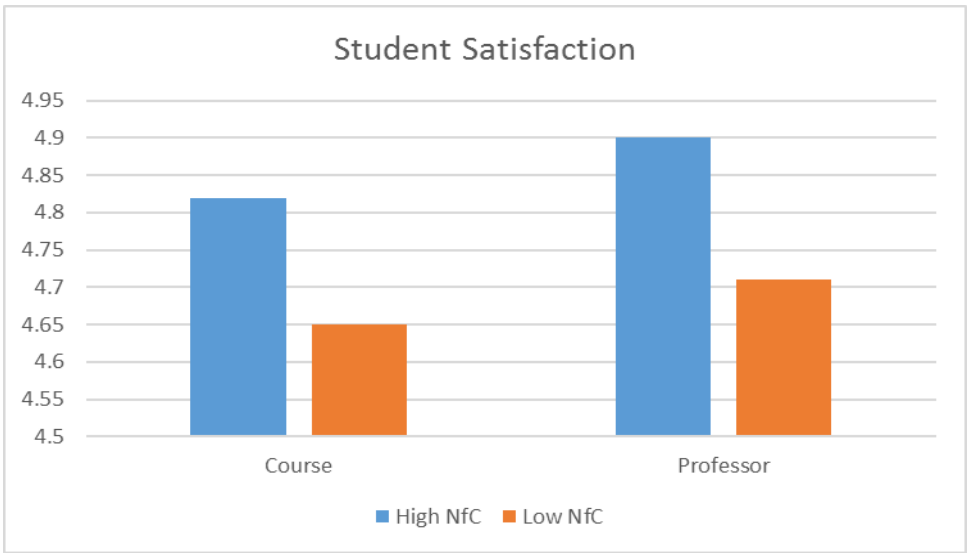

Figure 2. Student Satisfaction with Course and Instructor

Conclusion

The current study found that students with higher levels of Need for Cognition reported higher levels of satisfaction with the overall program experience, with the professor for the course, and with the course itself. These findings are consistent with findings by Grass, Strobel and Strobel (2017) in which higher levels of NfC contributed to greater student satisfaction and extend those findings into the realm of online education. Although there were no significant differences based on the presence of an academic coach, there was a numerical trend with students who had academic coaches reporting higher levels of satisfaction with the program overall and with the professor for the course. This finding provides preliminary support for the academic coaching model as a way to provide support for professors while maintaining both quality instruction and student satisfaction. With student satisfaction often being a factor in students' decisions to continue in a program (Grass, Strobel & Strobel, 2017), using academic coaches can also contribute to the retention of students within a program.

As online education continues to grow and thrive, it is increasingly important to identify ways to improve the experience for both students and instructors. Using academic coaches provides a viable way of addressing the needs of all parties. Academic coaches reduce the demands, and the subsequent stress, that comes with teaching large classes (Cipher, Urban, & Mancini, 2018; Gazza & Matthias, 2016). At the same time, academic coaches potentially improve the experience for students as well, resulting in higher levels of student satisfaction and retention.

Limitations

The limited focus of this study (i.e. graduate programs) made determining the impact of academic coaches on student achievement difficult. Student GPA is the most common means of measuring academic achievement, but the requirements for the programs (minimum GPA of 3.0) artificially limited the variance in the sample. Consequently, the ability to assess the impact of academic coaches on academic success was limited. In addition, the current sample came from a single academic term resulting in a small sample size. It is possible that the study lacked sufficient power to tease out differences in student experiences between courses that used an academic coach compared to those where students interacted solely with the professor.

Future Research

The study is ongoing, thus allowing for tracking students across academic terms and across courses. This allows for a more robust exploration students' experiences across courses and instructors both with and without academic coaches. Furthermore, the researchers identified three questions to add to the demographic questionnaire: how likely are you to continue in this program of study (1 very likely to 5 do not plan to continue); how satisfied were you with the academic coach in this course (1 very satisfied to 5 very dissatisfied); and how often, during this course, did you think about quitting the program (1 very often to 5 never thought about quitting). Finally, expanding the study to include students in undergraduate courses will provide the ability to explore effects of academic coaches on student achievement as well as student satisfaction.

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