Degree Aspirations and Deep Approaches to Learning

Purpose & Research Questions

The aim of this study is to investigate if plans for graduate school is dependent upon seniors’ uses of deep approaches to learning. Specifically, the research questions guiding this study are as follows:

1. Does academic discipline have an impact on seniors’ decision to attend graduate school?
2. Does seniors’ uses of deep approaches to learning have an impact on their plans to earn a graduate degree?
3. Does academic discipline moderate the effect of seniors’ uses of deep approaches to learning on plans to attend graduate school?

Background

Carter (2003) offers a theoretical model to illustrate the ways degree aspirations may be affected by students’ pre-college characteristics; initial aspirations, academic and career goals; experiences and involvement in college; and academic achievement. The conceptual model pays particular attention to the role individual qualities shape students’ educational aspirations. It also highlights the impact social environments within institutions may have on future academic plans. Carter’s conceptual model align with several studies that have found differences in degree aspirations by students’ racial and ethnic background (Pascarella et al., 2004a; Perna, 2004), gender (Perna, 2004), socioeconomic status (Walpole, 2000; Paulsen & St. John, 2001), parental education (Pascarella et al., 2004a), and academic achievement (Walpole, 2000). Institutional context has also been found to influence students’ decision to attend graduate school (Ethington & Smart, 1986; Pascarella & Terenzini, 2005).

An earlier study by Ethington and Smart (1986) exploring the pathways to graduate education, found both institutional and personal factors were directly involved in undergraduate students' pursuit of a graduate degree. Additionally, they revealed a positive relationship between the social and academic involvement and the likelihood of attending graduate school. From model results, they were able to conclude the importance of academic and social integration on persisting through the educational process. A later study by Pike and Kuh (2003) corroborated this finding by exploring educational aspirations and academic and social engagement patterns by parental education. They also concluded degree aspirations were related to social and academic engagement. As a means to increase academic engagement, Kim and Sue (2009) reported a positive relationship with course-related student-faculty interactions and degree aspirations. They also concluded research-related interactions with faculty lead to an increase in educational aspirations.

It is clear from these studies that collectively institutional context, individual characteristics, and what students do in college, particularly as it relates to academic engagement, can play an important role in shaping educational aspirations. Yet, what is less clear from these studies is the impact of context of major field of study on aspirations to earn a graduate degree as well as students’ uses of deep approaches to learning as specific measure of academic engagement.

Studies have shown students who approach learning in a deep way tend to have higher grade point averages (Hill, Bolin, & Guppin, 1995; Zeegers, 2004; Zang, 2000), are less likely to fail or drop out of a course (Rosewall, Dawson, & Pollard, 1993; Vernum, 1992), retain course material (Svenson, 1997, 1984, apply critical thinking skills (Chappell, 1998; Limin, 2000), and engage in several other cognitive outcomes related to liberal learning (Pascarella, Seifert, & Blach, 2008). Many of these positive relationships continue to exist even in the presence of other academic (e.g., prior academic ability and major field) and institutional level (e.g. selectivity and Carnegie type) controls.

Sample and Variables

Using data from 2012 pilot study of the National Survey of Student Engagement, researchers received a response rate of over 71,000 seniors. From this data, they extracted 1,814 seniors’ bachelor’s degree-granting institutions. Students were asked the highest level of education they expect to complete. Responses ranged from less than a bachelor’s degree to doctoral or professional degrees. Responses were subsequently dichotomized into graduate degree aspirations or lower. The survey also asked students how often they engaged in reflective and integrative learning, and to what extent coursework emphasized higher-order learning. Mean scores of items in Table 1 were summed to calculate a composite measure to represent ‘seniors’ uses of D.A.L. (Nelson-Laid et al., 2006).

Methods

Logistic regression procedures were utilized to examine the influence deep approaches to learning had on seniors’ graduate degree aspirations controlling for student and institutional characteristics. Interactions effects by discipline and deep approaches to learning were also examined in order to investigate whether the impact of deep approaches to learning on degree aspirations depends on academic discipline.

Results Q1

Figure 1 presents the proportion of students in each disciplinary category with graduate degree aspirations. As can be seen, seniors majoring in biological sciences and social sciences have the highest percentages of students with graduate degree aspirations while business and engineering majors have the lowest.

Table 1. Component Items for Deep Approaches to Learning (α = .87)

Table 2. Logistic Regression Results

Results Q2 & Q3

Logistic regression results are presented in Table 1. Table 2 indicates that the students who use deep approaches to learning have 47% greater odds of graduate degree aspirations. Moreover, this effect was mediated by discipline. Main effects for discipline indicate that students majoring in biological sciences, social sciences and physical sciences have 2 to 3 times greater odds of aspiring to achieve a graduate degree than their business major counterparts.

Discussion and Next Steps

Overall, findings from this study suggest academic engagement in form of deep approaches to learning has a positive impact on degree aspirations. Yet, this relationship is moderated by academic discipline. This study extends the understanding about the impact of institutional context on degree aspirations to include the environmental cultures of academic fields. What is unclear from this study, however, is whether students’ uses of deep approaches to learning are moderated by institutional context or whether students who have early plans to attend medical school, for example, seek out these majors to fulfill prerequisite.

Nonetheless, findings suggest we should pay close attention to academic major when studying degree aspirations particularly how the academic context moderates the positive effect of students uses of deep approaches to learning on plans to attend graduate school. Future research should explore why deep approaches has less of an impact on degree aspirations in comparison to other fields.