Title of Proposal

The Role of Individualized Education Program (IEP) Usage and Special Education on 12th Grade Postsecondary Aspiration and Actual Four-Year College Enrollment

Abstract

For students using an IEP and/or in special education, four-year postsecondary enrollment aspirations are typically higher than expectations. This study seeks to understand the relationship between demographic, parental, and academic factors and enrollment in a four-year college—with a focus on students using an IEP and/or in special education.

Format

First Choice: F04- Poster Session
Second Choice: F00-
Third Choice: F00-

Content

For students aspiring to attend four-year institutions, preparing and applying to college does not always translate into actual enrollment. Jacob and Wilder (2009) note, “expectations refer to what individuals think happen and aspirations refer to what individuals hope will happen” (p. 3). Historically, aspirations are higher than expectations. This is especially true for certain student groups, specifically those with individualized education programs (IEP) and those enrolled in the special education track.

According to the National Center for Education Statistics (2013a), over the last three decades, a significant increase was observed for students within the K-12 system served under the Individuals with Disabilities Education Act (IDEA). The once 3.7 million participating in IDEA services in 1976-1977 has nearly doubled to over 6.4 million in 2010-2011, accounting for 13 percent of total enrollment in the K-12 sector (National Center for Education Statistics, 2013a). Mandated under IDEA, an IEP is a written statement addressing the level of functioning, academic goals, and needed services for a student with a disability within the K-12 sector, and provides ongoing support and annual assessment of a student’s academic progress (U.S. Department of Education, Office of Special Education Programs, 2006). Although only 5.3 percent of students with disabilities have an educational environment outside of a regular classroom, 34.3 percent of students with disabilities have less than 79 percent of their academic coursework within a typical classroom setting (National Center for Education Statistics, 2013b). In addition to the disparity in regular classroom inclusion, research indicates that students with disabilities score significantly lower in reading and mathematics than their non-disabled peers (Blackorby et al., 2010). Despite the increasing presence of individuals with disabilities in the postsecondary environment (Raue & Lewis, 2011), individuals with disabilities with an IEP and/or enrolled in special education classes remain at a significantly decreased chance for ever enrolling in a postsecondary institution (Newman et al, 2010).

Although the majority of students with disabilities participate in similar academic accommodations at the secondary level, this student population is a diverse group and varies in demographic characteristics and socioeconomic status (SES). Research indicates, however, that students of low SES and minority backgrounds fare less successfully in their academic journey to postsecondary education enrollment than their White peers (Newman et al, 2010; Sanford et al., 2011). According to Newman et al. (2010), African American students with disabilities are more likely to enroll in two-year colleges than White students with disabilities. Moreover, when investigating postsecondary enrollment patterns by income levels, Sanford et al. (2011) found that students with disabilities from households with incomes less than $50,000 were less likely to enroll at a postsecondary institution (51 percent) than students with disabilities from households with parental incomes over $50,000 (68 percent). More notably, students with disabilities from
households with incomes less than $25,000 were only 43 percent likely to enroll in postsecondary coursework (Sanford et al., 2011).

Research indicates a disparate amount of low SES and minority student populations in special education (Blair & Scott, 2002; Borgemenke, 2001; Howard, Dresser, & Dunklee, 2009). When investigating placement rates for students enrolled in special education classes, Borgemenke (2001) found disproportionate amounts of undocumented immigrant students and student populations embodying negative SES characteristics in special education. For students utilizing additional academic supports, through the use of special education coursework and/or an IEP, being of a minority background or of low SES may create a disparity between postsecondary aspiration and enrollment.

The gaps between four-year aspirations and enrollment are seen as early as the first year of high school, and vary widely by SES and racial groupings (Berkner and Chavez, 1997). For individuals receiving IEP accommodations or participating in special education coursework who are already at a decreased likelihood for postsecondary enrollment, low SES or possessing a historically underrepresented minority background are even at a lesser rate of enrollment opportunity (Blair & Scott, 2002; Newman et al., 2010; Sanford et al., 2011).

Research demonstrates that several predictors of academic aspirations are related to the realization of postsecondary enrollment, but the actual extent of this relationship is unknown – especially as it relates to students with disabilities with IEPs and/or in special education. The purpose of this quantitative study is to determine if, among 12th grade students with aspirations to attend a four-year postsecondary institution, a relationship exists between demographics, parental, and academic factors – with a focus on IEP usage and special education. This study distinguishes itself from other research and attempts to fill a gap related to student aspirations and actual four-year postsecondary enrollment by looking only at the relationship between 12th grade students’ early four-year college aspirations and the factors that may contribute to their actual enrollment. Additionally, this study examines the influence of IEP usage and special education on postsecondary enrollment – an aspect not readily examined in existing literature.

Research Questions

This study uses a quantitative analysis to address the following research questions:

1. Among 12th grade students who aspire to enroll in a four-year institution, how does postsecondary enrollment differ by SES, race/ethnicity, and parental education? How does this differ for 12th grade students using an IEP or in a special education track?

2. What student-level factors contribute to the realization of 12th grade student aspiration to enroll in a four-year institution? How do these factors differ by IEP usage and enrollment in a special education track?

Theoretical Framework

For this study, Hossler and Gallagher’s (1987) college choice model was used to highlight the multistage process of a student’s journey to postsecondary enrollment, including the three college choice stages – (1) predisposition, (2) search, and (3) choice. This theoretical model frames the current research questions in how context, behavior and expectations, both of the student and the socio-academic environment, impact students’ transition from the secondary to postsecondary learning environment (Hossler & Gallagher, 1987). Building on current research, often including race, ethnicity, and SES background in students’ predisposition and path to college choice (Carolan-Silva & Reyes, 2013; Pitre, 2006; Jung, 2013), this study adds to the literature by utilizing the presence of individualized education programs and/or enrollment in special education courses and how this may affect this student population aspirations for and eventual enrollment in four-year postsecondary institutions.

Data Source and Sample

This study used data from the National Center for Education Statistics’ (NCES) Educational Longitudinal Study (ELS:2002). The ELS:2002 is a nationally representative four-wave survey originating with 10th grade students in Fall 2002. The ELS dataset is desirable as it focuses on students’ trajectories from 10th grade to post-secondary education. The sample for this study included students that participated in the ELS:2002 base-year survey (2002), the first follow up in 2004, and the second follow up in 2006. Only students indicating an aspiration of attending a four-year institution during the first follow-up (12th grade) were included in the sample (N= 5586).
Variables

This study primarily used variables from the first ELS follow-up questionnaire (F1: 2004) originally administered during respondents’ senior year of high school in 2004. The dependent variable, level of offering of first attended postsecondary institution, is from the ELS second follow-up questionnaire (F2) administered in 2006, and contains three outcomes: (1) four or more years, (2) at least 2, but less than 4 years, and (3) less than 2 years. Those students indicating enrollment at an institution identifying as four or more years (N= 5586) were considered. Table 1 contains a complete list of predictor variables used.

Although the ELS:2002 captures data for students using an IEP or enrolled in a special education track, no overarching indicator for either group of students exists in the public dataset. As a result, and guided by the literature, an ‘IEP determinants’ indicator variable was derived to include 10th grade students whose parents identified them as having specific learning disabilities, speech/language impairments, mental retardation, emotional disturbance, hearing impairment, orthopedic impairment, visual impairment, or other disability that affects English and/or math school work. This resulted in an unweighted sample of 1,015 students identified as either using or qualifying for an IEP based on parental responses. Similarly, students were identified as being on the special education track (N= 341) if they indicated they were in a special education program during 10th grade.

Methodology

This study used a non-experimental quantitative approach through binary-logistic regression analysis to address guiding research questions related to factors associated with 12th grade aspiration and eventual enrollment in a four-year institution, with a specific focus on students with IEPs and/or enrolled in a special education track. As the dependent outcome variable (enrollment at a four-year institution or not) is dichotomous, binary logistic regression was used to address research question two. Prior to running the logistic regression analysis, a check for multicollinearity across the study’s independent variables was completed. The tolerance and VIF scores indicated there is little to no multicollinearity. Table 2 contains descriptive statistics for variables used.

Limitations and Assumptions

This study has limitations that warrant discussion, specifically its use of public release data. By using the public release data, certain disability-related variables were not available. Using the restricted license would provide additional insight, specifically for those students using an IEP or enrolled in the special education track.

Regarding IEP usage, the majority of factors used to derive an IEP indicator variable were part of the base year parent survey in 2002, but the study primarily focused on 12th grade student postsecondary aspirations and eventual four-year college enrollment. It is possible parents identified their 10th grader as having an impairment in 2002, but it may not have been present two years later, or in 12th grade.

Results and Findings

This study sought to address research questions related to 12th grade aspirations and subsequent enrollment in a four-year institution, including the demographic profile, specifically those students identifying as using an IEP or enrolled in a special education track. Of those students with aspirations in the 12th grade to attend a four-year institution (N= 5586), about 70.9 percent of students actually enrolled following high school graduation (51.1 percent female and 45.9 percent male).

Table 3 presents descriptive statistics of the level of postsecondary enrollment among the sample arranged by SES. When examining the SES of those students that enrolled in a four-year institution, the majority (49.2 percent) were from the highest SES quartile, while just 9.8 percent were from the lowest quartile. For students using an IEP or enrolled in a special education track, the majority identified as being in the upper SES quartiles. About 58 percent of students with an IEP and 41 percent of students in a special education track ultimately enrolled in a four-year institution.

Table 4 presents the level of postsecondary enrollment of 12th grade students crossed with race/ethnicity. Of all students in the sample, 67.9 percent of students identified as White, 11.6 as Asian, 9 percent as Black, 7.3 as Hispanic, 4.1 as more than one race, and 0.2 percent as American Indian. About 17.7 and 20.8 percent of underrepresented minority students with an IEP
or enrolled in a special education track with four-year aspirations enrolled in a four-year institution, respectively.

Table 5 details the level of postsecondary enrollment of 12th grade students and parental (mother and father) highest level of education. Of those students in the sample, the majority of students whose mother and father completed a four-year degree program realized their 12th grade aspirations and enrolled in a four-year institution in 2006, 40.6 and 36.3 percent respectively. In addition, students whose parents completed a Master’s or advanced degree also saw increased enrollment in four-year institutions. For students with an IEP and whose mother’s and father’s highest level of education was either a four-year or advanced degree, 63.1 and 69.1 percent enrolled in a four-year institution, respectively.

Moreover, this study sought to determine what student-level factors contributed to the realization of 12th grade aspirations to enroll in a four-year postsecondary institution. To address this question, logistic binary regression was conducted to assess whether the independent predictor variables predicted the actualization of enrollment for students in the sample. When the predictor variables were collectively considered for each of the three models, they significantly predicted the actualization of enrollment for students across the general population, those using an IEP, and those on the special education track.

Table 6 presents the logistic regression analysis and odds-ratio for all predictor variables across the three models. Significant predictors for all students included father’s level education, math performance, SAT/ACT intentions, SAT prep course, and seeking college information from guidance counselors, teachers, and college websites. For students using an IEP, increased SES, math performance and coursework, and GPA significantly predicted four-year college enrollment. For those students enrolled in a special education track, math performance, GPA, years of math courses, and seeking college information from websites were significantly related to the realization of 12th grade aspirations.

Discussion

Although there are significant results across the three models, the findings indicate math performance as a significant predictor of enrollment in a four-year institution for all students, those using an IEP, and those in a special education track. The descriptive analyses illustrate the differences in SES, race/ethnicity, and parental education, but indicate IEP usage as a significant predictor for African-American students. This is particularly striking as the identification of a disability coupled with the stigma of ethnicity is perceived as undesirable, but often unavoidable due to an IEP imposed by school officials (Harry & Klinger, 2014). Moreover, among underrepresented minority groups in lower SES quartiles with parents whose education is lower, higher aspiration and actual enrollment in a four-year institutions exists for students in special education. For White students in higher SES quartiles with parents whose education is more advanced, however, higher aspiration and actual enrollment actually increase for students using an IEP.

For students using an IEP, results reiterate the disproportionate gap in SES and college access. For students with an IEP in the highest SES quartile, the odds of enrolling in a four-year school are about 200 percent higher than for students in the lowest SES quartile. Regarding academic ability, the odds of enrolling in a four-year school for students with an IEP with math performance in the third quartile are 153.7 percent higher than students in the lowest quartile. Similarly, for IEP students with an academic GPA between 3.0-4.0, the odds of enrolling in a four-year school are 85.9 percent and 64.3 percent higher than students with a GPA lower than 2.0 and between 2.0 and 3.0, respectively.

For students in a special education track with a GPA between 3.0 and 4.0, the odds of enrolling in a four-year school are 85.3 percent higher than students with a GPA below 2.0. From a college prep perspective, students on a special education track that participated in no school-sponsored activities, the odds of enrolling in a four-year school are 99.6 percent lower than students that participated in several activities. Similarly, for students in special education that used college publications as part of a postsecondary school search, the odds of four-year school enrollment were more than 300 percent higher than students that did not use these materials.


Harry, B., & Klinger, J. (2014). Why are so many minority students in special education:


