The Effects of Liberal Arts Experiences on Liberal Arts Outcomes*

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Paper submitted for the annual meeting of the Association for the Study of Higher Education, November, 2006, Anaheim, CA

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*This research was supported by a grant from the Center of Inquiry in the Liberal Arts at Wabash College.

Background and Purpose

Since Aristotle differentiated “liberal” from “illiberal education” over 2000 years ago (Aristotle, 350 B.C.E) liberal arts education has been widely praised as a model form of education, especially in the United States. However, as society and the higher education system evolves, educators are struggling to determine what objectives in college should be emphasized, arguing for liberal education as opposed to practical education, “the college way versus the university way, tradition or sentiment against size and money, the finishing school and the trade school” (Matthews, 1997, p. 106). Numerous publications describe the virtues of liberal arts education, including the renowned Yale Report in 1828 (see Turner, 1996) to the more contemporary AAC&U (2002) report, “Greater Expectations: A New Vision for Learning as a Nation Goes to College.” Advocates of liberal arts education claim that it produces “broad and deep learning,” allowing students to acquire “a rich fund of meaningful knowledge” (AALE, 2003, ¶ 7).

Unfortunately, despite its long-held status and assumed benefits, neither the structure nor impact of liberal arts education has been carefully examined by researchers until recently. In 2005, Pascarella, Wolniak, Seifert, Cruce, and Blaich published an extensive analysis of a combination of teaching practices and institutional college conditions that capture the basic environmental elements of many liberal arts colleges. These practices and conditions promoted student development on a wide range of liberal education outcomes, from valuing literacy and learning for its own sake, to scientific reasoning and critical thinking. Moreover, this combination of practices and conditions was effective in promoting these outcomes regardless of the kind of institution which students attended.

The Wabash National Study of Liberal Arts Education was developed to extend these findings by enriching the range of measured outcomes, institutional conditions and teaching practices. We conducted the first phase of this study with students from four institutions in 2005. The basic research question that continues to guide our work is the following: after controlling for an array of background characteristics and institution type, to what extent, if any, do students' liberal arts experiences influence liberal arts outcomes?

Methods

Sample

The sample consisted of students from the four institutions participating in the pilot phase of the Wabash National Study of Liberal Arts Education. Although the institutions represented three states, differed in Carnegie classification, and selectivity, we selected them because of their willingness to participate in piloting the data collection processes. The institutions included a research university, a regional institution with limited graduate programs, a liberal arts college, and a community college.

We randomly sampled and invited students from each institution to participate in the study. We aimed for 200 students from each institution evenly distributed across years in school. In the event students of color did not comprise ten percent of the institution's undergraduate student body, we oversampled students of color. Students received a cash stipend for participating. We developed a sample weighting algorithm to adjust for sample bias by gender and year in school for each institution.

Data Collection

We collected data in three phases. In the first phase, students completed a registration form with basic demographic information either online or by mail. Students then received a

paper copy of the college experiences questionnaire which measured a range of in- and out-of-classroom experiences as well as the openness to diversity and positive attitude toward literacy scales. Finally, students attended a monitored session in which they completed one of two assessment batteries. Based on a matrix sample, students were randomly assigned to an assessment group. Assessment Group A completed the Reasoning and Current Issues (RCI) test (Wood, Kitchener, & Jensen, 2002), Intercultural Developmental Inventory (IDI) (Hammer & Bennett, 2001), and the Psychological Well-being Scale (Ryff, 1989; Ryff & Keyes, 1995) while Assessment Group B completed the Defining Issues Test-2 (DIT-2) (Rest, Narvaez, Thoma, & Bebeau, 1999), Intercultural Developmental Inventory (Hammer & Bennett, 2001), Need for Cognition (Cacioppo & Petty, 1982), and the Socially Responsible Leadership Scale (Tyree, 1998). 723 students completed the college experiences survey and 601 students completed the matrix of assessment instruments (285 students in Assessment Group A and 316 in Assessment Group B). Because of attrition between completing the questionnaire and the assessments, the matrix sampling procedure, and the different models estimated, the samples for these analyses vary from 708 to 279. We clearly specify the N sizes of all models in the full paper.

Variables & Analyses

The main independent variable of interest in these analyses was the "liberal arts experiences" variable. Based on the empirically-vetted liberal arts experiences variable created by Pascarella, Wolniak, Seifert, Cruce, and Blaich (2005), we derived this scale from student reports of the following college experiences: positive and influential student-faculty contact; a challenging classroom environment characterized by high expectations; faculty interest in teaching and students' development; frequency of contact with faculty and student affairs professionals, frequency of engaging in cooperative learning activities, teacher clarity and

organization, overall diversity experiences and interactions, integration of ideas through class activities and assignments, academic effort and challenge, academically meaningful out-of-class experiences, emphasis on higher-order assignments and examinations, involvement with active learning, degree to which college environment is supportive, frequency of feedback received from faculty, positive influence of interactions and relationships with peers, diversity courses, and research outside of class with faculty. We included students' age, race, gender, parents' education and household income, if student was financially dependent on parents, high school GPA, a scaled measure of high school involvement, precollege academic ability, educational aspirations, and the racial composition of high school to serve as a battery of student background characteristics. We also added a series of dummy variables representing institution attended. We added these background characteristics and institutional-level variables into the regression equations in order to control for any confounding influences.

Multiple dependent variables were of interest in this study. Drawing from the breadth of literature on liberal arts education, we selected a host of outcomes we believed to be conceptually and theoretically related to this form of education (Center of Inquiry in the Liberal Arts at Wabash College, 2006). As such, we estimated the effects of students' liberal arts experiences in the following areas: moral reasoning, reflective judgment, leadership, inclination for lifelong learning, intercultural effectiveness, and psychological well-being. The full paper provides complete variable definitions and a table of descriptive characteristics.

We used Ordinary Least Squares (OLS) regression to conduct these analyses. Using weighted data, we estimated total and direct general effects models predicting both summary measures and sub-scales, depending on the properties of the instrument. In the total effects model, we regressed the background characteristics and institutional dummy variables on the

outcomes. The direct effects model was similar to the total effects model but we stepped the liberal arts experience variable into the regression specification. This allowed us to examine the amount of additional variance in the various liberal arts outcomes explained by students' liberal arts experiences. Our results report the direct effects standardized regression coefficient (beta) of student-level liberal arts experiences on the outcomes. Beta can be interpreted as the amount of a standard deviation change in the dependent variable for a standard deviation increase in the independent variable (Cohen, Cohen, West, & Aiken, 2003). The results are presented in Table 2 of the full paper.

Results

Overall, net of an extensive battery of student background characteristics and institution attended, we found students' liberal arts experiences positively affected six of the eight liberal arts outcomes. Adding the liberal arts experience variable significantly changed the amount of explained variation in the liberal arts outcomes from slightly over 1% to more than 14%. The magnitude of the statistically significant effects of liberal arts experiences on liberal arts outcomes ranged from .13 to .43 of a standard deviation.

Turning to the individual liberal arts outcomes, we found liberal arts experiences to have no significant effect on moral reasoning or reflective judgment. We discovered, however, consistent positive effects of liberal arts experiences on the seven sub-scales of the Socially Responsible Leadership Scale (Tyree, 1998). The sub-scales for citizenship and civility were most heavily influenced by the liberal arts experiences variable with increases of .39 and .32 of a standard deviation, controlling for student background characteristics and institution attended. We found significant positive effects of liberal arts experiences on both measures of inclination for lifelong learning. Net of confounding influences, students' liberal arts experiences affected

need for cognition and positive attitude toward literacy by .24 and .26 SD, respectively. Students' liberal arts experiences, also positively affected both measures of intercultural effectiveness, but to differing degrees. Controlling for all other factors, students' liberal arts experiences positively influenced students' openness to diversity by .43 SD where the effect of liberal arts experiences on the developmental score of the Intercultural Development Inventory was .14 SD. Finally, students' liberal arts experiences positively affected all of the dimensions of psychological well-being, with the effects having the greatest magnitude for the personal growth (.24 SD) and life purpose (.24 SD) sub-scales.

Discussion and Implications

Pascarella and colleagues (2005) found mere attendance at a liberal arts college inconsistently influenced cognitive outcomes. In contrast, students' liberal arts experiences dependably predicted gains in many of these areas. In the current study, we further tested the construct validity of the liberal arts experiences variable by examining whether it predicted outcomes theoretically associated with the liberal arts. Given that we found significant positive relationships between six of the eight liberal arts outcomes (consisting of eighteen of twenty separate measures), our results suggest the liberal arts experience variable is a valid construct.

It is rare for a student to experience the campus environment in isolated segments (i.e. interaction with faculty, interaction with peers, class challenge). These dimensions of the environment overlap and blend together. We suggest this holistic "overlap and blending" is a key feature of the array of experiences, practices, and conditions which characterizes liberal arts education. Conceptually speaking, what sets the liberal arts experience variable apart from other "good practice" benchmarks (Chickering & Gamson, 1987) is that it attempts to capture the holistic and seamless nature of this learning environment with a single scale.

We believe that our results are good news for colleges and universities. Despite the preliminary nature of the findings, the connection between liberal arts experiences and liberal arts outcomes is one worth noting. Although it may be virtually impossible for a college or university to change its institutional type, any institution can implement the practices that foster rich and integrated learning environments. Like Pascarella and colleagues (2005), we found students' liberal arts experiences to be influential in predicting learning outcome development, net of the institution attended.

Consistent with previous research (Astin, 1993; Chickering & Gamson, 1987, 1991; Kuh, Kinzie, Schuh, & Whitt, 2005, Pascarella and Terenzini, 1991, 2005), our findings lend further support to the evidence that an institutional focus on good teaching and student engagement in an active, collaborative, and supportive environment positively affects student learning and development. Our results suggest that any institution, possessing the organizational will to place student learning at the center, can create a culture which maximizes liberal arts experiences and thus, the development of liberal arts outcomes for all students.

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