

Closing the Gap: Can Service-Learning Enhance Retention, Graduation, and GPAs of Students of Color?

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The education system is responsible for the choices and chances provided to the students it serves. Although racial disparities continue to impede some students' chance of success in education, service-learning in the classroom context may be the transformative strategy needed to make institutions of higher education the "great equalizers" they ostensibly aspire to be. Using data from an urban, public, Research I institution located in the Midwest region of the United States, this study assessed the use of service-learning in two general education courses as a strategy to increase retention and graduation rates at the institution. Service-learning was found to have a significant effect on student retention, grade point average, and graduation. Students who took either course performed better than their counterparts without service-learning experiences.

Today, a high school diploma does not offer the same promise of social mobility and stability that it once did. As an academic credential, the college degree has taken its place as a de facto requirement for a middle class lifestyle. As a public good, higher education contributes to society by educating citizens, improving human capital, encouraging civic engagement, and boosting economic development (Altbach, Reisberg, & Rumbley, 2009). Because student populations are increasingly diverse in numerous ways – race and ethnicity, socioeconomic backgrounds, educational preparation, and intellectual abilities – the teaching and learning process is concomitantly more complex (Altbach et al.). A diverse student population requires a diverse curriculum to make higher education accessible and to allow students to be successful within the institution. Many colleges and universities face the challenge of meeting the needs of all its students since retaining and graduating students, especially students of color, remains a growing problem. Nationally, the six-year completion rate for Black undergraduate students is 20% less than their White counterparts (National Center for Educational Statistics, 2014). Graduation for all student groups should be the primary goal of colleges and universities. Supporting a diverse student body is motivation to be innovative and creative about approaches to accomplish this goal. Accordingly, pedagogical strategies must be explored since research shows that classroom teaching has an effect on student engagement in the classroom (Kuh, 2008; Tinto, 1982, 2003, 2006, 2012). Service-learning, co-curricular service activities, and community-based research are a few

of the pedagogical approaches through which post-secondary institutions may attempt to accomplish their institutional goals.

Retaining and graduating students of color is a problem endemic to higher education across the United States. Race has a legacy in American society that is fundamental to the social order. It has been and continues to be an organizing element that describes, prescribes, and dictates access and opportunity – including educational opportunity. By failing to see the reproduction of racial stratification, solutions to solve the achievement gap problem focus only on student-related interventions and not pedagogical ones that are within an institution's control. That is, rather than asking what post-secondary institutions can do differently to improve retention and graduation rates, they prescribe what students should do differently. Since schools do not exist as independent social institutions separate from economic, political, cultural, and social contexts, they can neither be insulated from the challenges that each context provides (Carter & Welner, 2013) nor can they remain blind to the solutions needed. Although prejudice, discrimination, and disadvantage did not begin within the university, nevertheless the university is obligated to address these issues since they impede progress and success for achieving institutional outcomes (Altbach et al., 2009). Thus, it is imperative that post-secondary institutions challenge the very foundation they stand on with regard to policies and procedures, especially questioning its delivery of academic functions: what is being taught; to whom; how; and most importantly, is it working?

Theoretical Framework

Retaining and graduating students is an important responsibility for colleges and universities. However, it remains a significant challenge for many post-secondary institutions. Retention has evolved from being conceptualized as a deficiency of student attributes such as skill and motivation to one that includes the academic environment and the activities that occur therein (Astin, 1991; Pascarella, 1980; Tinto, 1987). Relatively recent definitions of retention have expanded our understanding of how closely intertwined cultural, social, political, and economic forces are with student retention (Berger, 2001; Tinto, 1988). Researchers have also found that classroom involvement is an important aspect of retention (Tinto, 1997, 2001, 2006), and not only is it important but how it is done and when it is done is just as significant (Upcraft, Gardner, & Barefoot, 2005).

Institutional practices can have a positive impact on retention and graduation (Astin, 2005), especially practices that combine faculty-led classroom learning with hands-on experience. Service-learning can assist higher education with improving the quality and productivity of instruction in ways that may increase retention and graduation rates for post-secondary institutions since as a pedagogy it combines classroom engagement with educationally purposeful activities (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2011). There are numerous definitions that frame the structure, intent, purpose, and goal of service-learning at various institutions; however, there are two main components of all definitions that are consistent: community service and reflection. Carefully crafted descriptors depict the learning process such as pure, discipline- or academically-based, experiential, and community-based, and are used to distinguish one pedagogical approach from another (Harkins, Rudoff, Salvo, & Brophy, 2007; Heffernan, 2001; Rama & Zlotkowski, 1998; Soska & Butterfield, 2005). Service-learning is an active and creative pedagogy that integrates community service with academic learning in order to strengthen a student's ability to think critically, solve problems practically, and prepare to be a citizen in a democratic society (Batchelder & Root, 1994; Billig, 2004; Giles & Eyler, 1994; Kuh, 2008). Classroom curriculum is enhanced when community members and organizations are resources for learning (Harkins et al., 2007). Service-learning courses have been found to promote retention by increasing interaction with faculty (Astin & Sax, 1998; Eyler, Giles, & Braxton, 1997) and enhance students' academic integration and commitment to the institution (Gray et al.,

1998; Reed, Rosenberg, Staham, & Rosing, 2015). When students are integrated into the campus community, they are more likely to be retained as a result of being involved in educationally effective activities.

Research is emerging about the effect of service-learning courses on institutional outcomes such as retention and graduation. Although the generalizability of the data can be questioned, it provides insight into the success that some institutions are having by utilizing a service-learning pedagogical model. In all, service-learning has been found to promote persistence toward graduation in undergraduate students. A study conducted by Lockeman and Pelco (2013) sought to analyze the longitudinal relationships between student characteristics, service-learning class participation, and degree completion of the FTIAC (first time in any college) population at one mid-Atlantic institution. Controlling for grade point average, they found that undergraduate students who participated in service-learning courses were more likely to graduate in six years than students who did not participate in service-learning classes. They also found that minority and low-income students who took service-learning classes were more likely to graduate than their peers within this period as well. While exploring the role of service-learning in promoting undergraduate persistence, Reed, Rosenberg, Staham, and Rosing (2015) found that it benefitted part-time and full-time students' persistence evenly. Students who enrolled in service-learning classes were more likely to reenroll in subsequent terms, especially in the first and third year. They also found that service-learning was a stronger predictor of persistence than student characteristics such as age, gender or race.

Bringle, Hatcher and Muthiah (2010) found a positive relationship between fall-to-fall retention and service-learning class enrollment. By evaluating the effect sizes for service-learning outcomes in 62 studies with control group designs, Celio, Durlak, and Dymnicki (2011) found that service-learning can be an effective practice for encouraging students' academic success. Chaison (2008) found that communication skills, multicultural and cross-cultural competency skills, and personal efficacy, defined as confidence and leadership, improved for freshman students who participated in an international service-learning trip and were retained for their sophomore year.

For colleges and universities, graduation is not only a symbolic ceremony celebrating student success; it is also a public demonstration of achieving an institutional goal: retaining and graduating students. Service-learning may assist higher education

in reaching their benchmarks for retaining and graduating students. Research on the effects of service-learning on institutional outcomes is relatively new. The present study builds on past empirical evidence that suggests service-learning is a pedagogical approach to assist colleges and universities with improving their retention and graduation rates. Four research questions formed the basis for this research: (a) Do students who take a service-learning course persist at the university longer than comparable students who do not take a service-learning course? (b) Is taking a service-learning class a predictor of graduation? (c) Does race moderate the effect of service-learning on graduation? (d) Are grade point averages higher for students who take a service-learning course than comparable students who do not take a service-learning course?

Methods

To investigate the relationships between the independent variables on enrollment status and grade point average, this study utilized a quantitative, nonexperimental, *ex post facto* research design (McMillan, 2011). Institutional data was downloaded from the university's Student Tracking Advising Retention System (STARS). STARS is a web-based application that interacts with a collection of databases that enable convenient access to university data at both an individual and aggregate level for advising, retention, curriculum tracking, and program evaluation. Data were downloaded for students who entered the university through the fall 2008 and fall 2009 cohorts because students in these cohorts had eight to ten semesters to graduate by 2013.

Participants

Participants for this study included first time in any college (FTIAC) students who entered the university in the fall 2008 and 2009 cohorts ($N=2,728$) and who took either an Introduction to Sociology or English Composition class. FTIAC students were used as the sampling frame in this study to align with the trend found in achievement gap literature as well as research on college student success. These classes were chosen because they often include a service-learning component as part of the learning objectives and one of the colleges advertises them as fulfilling its service-learning requirement. Although honor students are required to take a service-learning class, they are excluded from the sample because they could potentially bias the results. Honor students are retained at higher rate and tend to graduate in four or five years unlike many

non-honors students at the university. Additionally, honor students are required to have a 3.30 or higher grade point average in order to retain their honor status. To assess service-learning as a possible means to improve retention and graduation rates, it is important that the sample being analyzed was representative of the general student population and not the special population of honors students.

To determine the representativeness of the analytic sample, descriptive statistics were compared to available official institutional data published by the university. In most cases, the data suggest that the sample is representative of the students in the 2008 and 2009 cohorts. For instance, the official 6-year graduation rate of the Fall 2008 cohort was 33.8%, which is slightly higher than the 27% in the sample. This difference is likely attributable to the removal of honors students from the analytic sample. The racial composition of the sample is generally consistent with university enrollment data from 2009: the university reported an overall racial composition of 48.7% White, 31.4% African-American, 2.8% Hispanic, and 10.6% unknown while the composition of the sample is 44% White, 33% African-American, 3% Hispanic, 9% Asian, and 10% unknown. One difference between the sample and the available institutional data is that the sample contains a higher representation of female students (64.3%) than the official reports from 2009 (55.3%). Thus, overall it appears that the sample is generally representative of non-honors students from 2008-2009, with the exception of an over-representation of female students.

Analyses

Variables used for this study were limited to the available data collected from the university: demographic information, enrollment status, grade point average per term, cumulative grade point average at final term enrolled, and number of classes completed. Race is defined using the standard categories which universities are required to report to the federal government. The categories are Black, Hispanic, Asian, White, Native American, unknown, two or more races, and non-resident alien.¹ Students identifying as belonging to either two or more racial categories or Native American were removed from the sample because small sample sizes make results for these groups unreliable. Students identified as non-resident alien were added to the category unknown because the race/ethnicity of students placed in this category is not known. For example, many foreign students at the university are Canadian. To answer the research question: Does race moderate the effect of service-learning on graduation, students who

identified as White served as the reference category for the other race variables since achievement gap literature often compares success measures between underrepresented and White students.

Although, individual departments and colleges offer service-learning courses for various reasons, they are not institutionally mandated, identified, or tracked, making data on service-learning classes difficult to gather. The data containing service-learning classes completed was constructed by using the historical lists of service-learning classes advertised by one of the colleges at the university and cross-listing them with the course numbers of the classes completed by students. By using their tracking system, two classes were identified as often having a service component as part of the classroom curriculum and as being offered regularly in each term: English and Sociology. These courses are general education courses that do not have required prerequisites, and tend to enroll a large percentage of first and second year students. Importantly, when students enroll in either class they are not always aware that their specific section of the course has a service component because this information is not available on the schedule of classes and the two classes have numerous sections offered, with one or two actually being service-learning. Admittedly, word of mouth as well as internet sites that maintain information about specific instructors and courses may alert students to the service-learning component. But since service-learning courses are not easily identifiable at the university, this study assumes that students essentially chose these specific class sections without knowing about the service-learning component based on the fact that each course is part of the general education requirement and the service-learning component was mandated by the department and is not a curricular decision by a specific instructor.

Multinomial logistic regression was used to examine the educational outcomes of students who have and who have not taken a course that has a service-learning component. As a predictive analysis, multinomial logistic regression is appropriate for this study because it describes the relationship between a polychotomous dependent nominal variable and a mixture of continuous and binary independent variables (Liao, 1994). The dependent variable is a nominal variable with three levels (graduated, stopped out, and retained). For the models estimated, *stopped out* serves as the reference category; as such the multinomial logit estimated as a model for *graduated* relative to *stopped out* and a model for *still enrolled* relative to *stopped out*. For instance, a model with only the binary service-learning (SL) variable is:

$$\log \left[\frac{\text{Pr } ob(y_{ik} = j_k)}{\text{Pr } ob(y_i = J_1)} \right] = \alpha_k + \beta_{1k}(SL)$$

The above equation depicts the log odds of student i being in category j on the dependent variable, relative to J_1 , which is the reference category of stopped out. In this model, α_k can be interpreted as the log odds of a student not taking a service-learning class either graduating or remaining enrolled relative to stopping out. β_{1k} is interpreted as the difference between the log odds of service-learning students either graduating or remaining enrolled compared to non-service-learning students.

$$\begin{aligned} \log \left[\frac{\text{Pr } ob(y_{ik} = j_k)}{\text{Pr } ob(y_i = J_1)} \right] &= \alpha_k + \beta_{1k}(Female) \\ &+ \beta_{2k}(Black) \\ &+ \beta_{3k}(Hispanic) \\ &+ \beta_{4k}(Asian) \\ &+ \beta_{5k}(Unknown) \end{aligned}$$

All predictors are added to the model in the same way. For instance, the above equation shows the model with the variables indexing race and gender. Here, α_k is the log odds of a White male student either graduating or remaining enrolled relative to stopping out. β_{1k} represents how the log odds change when the student is female and β_{2k} represents how the log odds change when the student is Black compared to White. Because the magnitude of log odds coefficients can be difficult to interpret, Odds Ratios (OR) is also reported to aid in interpretation. Odds ratios reflect the difference in the odds of the outcome in question for a 1 unit increase in the independent variables and are computed by exponentializing the log-odds coefficients. For example, in the second equation above, $e^{\beta_{1k}}$ is interpreted as the ratio in the odds of either graduating or remaining enrolled for female compared to male students.

Ordinary least squares (OLS) regression was used to examine the relationship between the final grade point average and the independent variables. OLS is a technique that analyzes relationships between continuous, interval level outcomes and a mixture of binary and continuous predictors (McClendon, 1994). *Final grade point average* is used as an indicator of student performance (DiMaggio, 1982; Kao & Thompson, 2003), and is measured as the student's cumulative grade point average received at the university during their final enrolled semester as of Fall 2013. Final grade point average is measured on the standard 4-point scale.

Results

Students were classified into three groups: graduated by Fall 2013; stopped out or not enrolled in Fall 2013; or remained enrolled during the Fall 2013 semester. Of the 2,728 students in the sample, 27% graduated, 39% stopped out, and 35% remained enrolled at the university. The mean final grade point average was 2.70 and 11% took a service-learning class. The racial/ethnic composition of the sample is Black 33%, Hispanic 3%, Asian 9%, White 44%, and unknown 10%. Lastly, 64% of the sample is female. Table 1 presents the descriptive statistics for presented variables.

Table 2 shows the results of the presented multinomial logistic regression models to answer three of the four research questions: (a) Do students who take a service-learning course persist at the university longer than comparable students who do not take a service-learning course? (b) Is taking a service-learning class a predictor of graduation? (c) Does race moderate the effect of service-learning on graduation? The variable *service-learning* is dichotomous, comparing students who took a service-learning class and those who did not. In Model 1, which uses the binary service-learning indicator as the sole predictor variable, students who took a service-learning course had odds of graduation compared to stop-out students that were nearly 2.4 times greater ($\beta = .873, p < .001, Odds Ratio = e^{.873} = 2.39$) than students who did not experience service-learning. Whether or not a student takes a service-learning course does not have a statistically significant impact on stopping out compared to remaining enrolled.

To illustrate further the results for service-

learning on graduation, Figure 1 presents predicted probabilities from Model 1 with all variables except service-learning fixed at the sample mean. These probabilities can be interpreted as the counterfactual probabilities that we would observe if all students had the mean values on all independent variables except service-learning and serve to illustrate the effect that service-learning has on graduation compared to stop-out at the university. Figure 1 shows that among students with service-learning experience, the model predicts 47.7% to graduate (among students who either graduate or stop-out). However, for students without service-learning experience, the model predicts only 34.4% to graduate. Thus, service-learning has the potential to increase graduation rates markedly at this university. Moreover, the benefit of service-learning is equal among students of all racial backgrounds.

Figure 2 illustrates this pattern by displaying predicted probabilities of graduation by service-learning and race. Figure 2 demonstrates that service-learning, while not reducing racial disparities in graduation, does increase the chances of graduation for all students. In a typical year, the university enrolls around 3,000 FTIAC students; the results here suggest that if all students were required to take service-learning courses, nearly 400 additional students in each incoming class would graduate within 6 years rather than stopping out.

Table 3 presents the results of the ordinary least squares (OLS) regression models that answers the fourth research question: Are final grade point averages higher for students who take a service-learning course than comparable students who do not take a service-learning course? Model 1 enters the service-learning indicator variable only. Model

Table 1
Descriptive Data of Variables by Ethnicity

	Total	Asian (n =242)	Black (n =906)	Hispanic (n =89)	White (n = 1212)	Unknown (n = 279)
Graduated	26.8	40.9	8.9	13.5	36.5	34.4
Stop-Out	38.6	24.8	59.5	46.1	27.1	30.5
Still Enrolled	34.6	34.3	31.6	40.4	36.5	35.1
Service-Learning (1=yes)	10.6	10.8	21.9	3.1	55.2	9.0
Female (1=yes)	64.3	8.4	39.2	3.1	39.6	9.8
Detroit High School (1=yes)	23.9	1.8	86.2	4.4	4.0	3.5
Final GPA ^a	2.70 (.98)	3.02 (.91)	2.10 (.95)	2.68 (.92)	3.08 (.80)	2.87 (.92)
ACT	20.7 (4.54)	22.91 (4.83)	17.33 (3.20)	19.43 (3.76)	22.67 (3.97)	20.60 (4.02)
HS GPA	3.26 (.67)	3.491 (.61)	2.90 (.61)	3.16 (.63)	3.46 (.60)	3.38 (.61)

Source: Student Tracking Advising Retention System, XXX University Means (or percentages) and Standard Deviations (in parentheses)

^aSee text for description of variable metrics

N=2728

Table 2
Multinomial Coefficients of Outcome Variable on Selected Independent Variables

	Model 1		Model 5	
	Graduated	Still Enrolled	Graduated	Still Enrolled
Service-Learning	.873*** (.150)	-.056 (.172)	.555*** .174 (.122)	-.309 .178 (.105)
Female			-.149 (.192)	-.359*** (.147)
Black			-.816*** (.192)	-.424*** (.147)
Hispanic			-.771** (.359)	-.165 (.255)
Asian			.180 (.193)	-.010 (.189)
Unknown			.385 (.206)	.205 (.195)
City			-.560 (.202)	-.076 (.137)
ACT			.118 (.016)	.041 (.014)
High School GPA			1.047*** (.104)	.515*** (.084)
- 2 Log Likelihood	2788.179		2178.134	

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 1
The Effect of Service-Learning on Graduation for Service-Learning vs. Non-Service-Learning

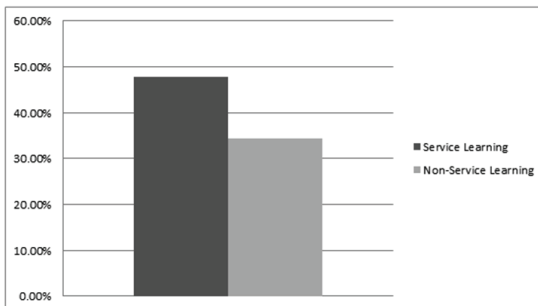
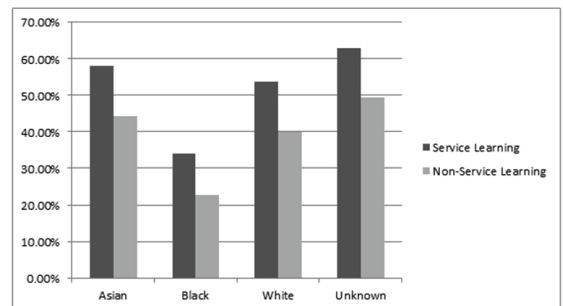


Figure 2
The Effect of Service-Learning on Graduation by Race



1 indicates that students who had taken a service-learning class had final GPAs that are .381 ($\beta = .381, p < .001$) above students who did not take a service-learning course, and that service-learning experiences explain about 1.5% of the variation in final GPA among the sample. Model 5 tests whether service-learning experiences can explain variation in GPA and indicates that service-learning experiences ($\beta = .155, p < .01$) has an effect on student GPA. Controlling for all of the student characteristic variables, students who take a service-learning course have GPAs that are .155 higher than students who do not take a service-learning course.

To determine if the association between taking a service-learning course and GPA is constant for all students, I estimated interaction effects between

the service-learning dummy variable and all of the independent variables. Two significant interaction effects were detected which are displayed in Models 6 and 7. Model 6 shows the interaction effect of female and taking a service-learning class on students' final grade point average. The interaction effect in model 6 ($\beta = .255, p < .001$) indicates that the effect of service-learning is stronger for female students compared to males. Specifically, the results suggest almost no effect of service-learning for male students ($\beta = -.025, p > .05$). However, for female students, having service-learning experiences lead to an increase in GPA of .230 ($-.025 + .255 = .230$).

Model 7 presents the results of the interaction of high school GPA and service-learning. The signifi-

Table 3
OLS Coefficients on Final Grade Point Average

	Model 1	Model 5	Model 6	Model 7
Service-Learning	.381*** (.067)	.151** (.057)	-.025 (.102)	-.777* (.315)
Female		.006 (.038)	-.019 (.040)	.001 (.038)
Black		-.450 (.057)	-.449 (.056)	-.452*** (.056)
Hispanic		-.050 (.101)		-.051 (.101)
Asian		-.078 (.065)	-.079 (.065)	-.073 (.065)
Unknown		-.114 (.067)	-.114 (.067)	-.114 (.067)
Detroit		-.226*** (.053)	-.225*** (.053)	.228*** (.053)
ACT		.031 (.005)	.031*** (.005)	.0301 (.005)
High School GPA		.368*** (.031)	.366*** (.031)	.343*** (.032)
Female X Service-Learning		.255		
HS GPA X Service-Learning			.123 .269**	
R ²	.015	.293	.294	(.090) .292

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

cant interaction effect ($\beta = .269, p < .01$) in Model 7 suggests that the positive effects of service-learning are most positive among students with higher high school grade point averages. In other words, the positive effect of service-learning increases as students’ high school GPA increases.

Discussion

The purpose of this research was to show that service-learning is a pedagogical approach that has the potential to improve retention and graduation rates specifically at the university under study and perhaps at other institutions. Research findings presented provide supporting evidence for existing studies that show the positive effects service-learning has on institutional outcomes (Bringle et al, 2010; Lockeman & Pelco, 2013; Reed et al, 2015). Students who took a service-learning class had higher grade point averages and were more likely to graduate than students who did not take a service-learning class. Results indicate that students who took a service-learning course graduated from the university within six years at a rate 2.4 times higher that students who did not take a service-learning course, and had better final grade point averages than comparable students who did not take a service-learning course.

As institutions responsible for creating, distrib-

uting, and perpetuating ideas for and about society, colleges and universities transmit knowledge with the purpose of preparing individuals to live “productively” in society. Moreover, as social institutions, the education system is also responsible for the opportunities provided to the students it serves. Albeit racial disparities continue to impede some students’ chance of graduating from post-secondary institutions, findings in this study suggest service-learning as a possible solution to assist colleges and universities with increasing the graduation rates for the students they serve. Service-learning in the classroom context may be the transformative strategy needed to make institutions of higher education the “great equalizers” they ostensibly aspire to be. Contrary to my expectations, however, race did not moderate the effect of service-learning on graduation; however, it was found to improve graduation rates for all students regardless of their racial/ethnic backgrounds. Therefore, by increasing the number of students from all racial/ethnic backgrounds who graduate, service-learning results in increasing graduation rates students of color, thereby decreasing the retention and graduation rate gaps.

Results showed that service-learning is efficacious for retention, graduation, and GPA. For students who took a service-learning class, 47.7% were predicted to graduate rather than stop out of college. However, for students who did not take a

service-learning class, only 34.4% were predicted to graduate. The current six-year graduation rate for the university is 34.3%. Thus, service-learning has the potential to increase graduation rates for all students at this university by more than 28%.

Race plays a powerful role in shaping students' educational outcomes, and the situation at the university in this study reflects this broader trend (Carter & Welner, 2013; Kao & Thompson, 2003; Kozol, 1991). Students who are Black or Hispanic have odds of graduating that are 89% and 78% respectively lower than students who are White, and Black students are also 58% less likely to remain enrolled in college after six years. Students who are Black, Hispanic, and categorized as unknown also have lower final grade point averages than White students. Beyond race, academic preparation also has an impact on graduation. Findings here suggest that attending a high school in Detroit, ACT score, and high school grade point average served as significant predictors of both a student's final grade point average as well as graduation. Specifically, this study found that the higher a student's ACT score and high school grade point average, the higher their odds for remaining enrolled and graduating. Students who attended a high school in Detroit had odds of graduating that are 66% and odds of remaining enrolled that are 29% lower than students who attended high schools outside of Detroit. These findings are unfortunate yet expected and point to the fact that school location matters. "A diploma from a ghetto high school does not count for much in the United States today" (Kozol, 1991, p. 29).

Based on the results from this study, service-learning was found to have a significant effect on student GPA, as students with service-learning experiences performed better in their courses than their counterparts without service-learning experiences. However, results also indicated that service-learning is most beneficial to students who had above average high school grades. Thus, service-learning experiences increase GPA disparities based on high school performance. This pattern is typical for educational interventions because better students tend to benefit more from them. This pattern is likely found because students with better academic preparation possess the cultural capital needed to navigate the higher education environment, whereas students who perform worse academically may not (Levin, Belfield, Muennig, & Rouse, 2007). Students who lack cultural capital likely do not know that outside of classroom activities such as supplemental instruction, learning communities, service-learning classes, and research projects are educationally-purposeful forms

of engagement that serve to enhance student success (Kuh, 2008). As findings indicate, at the university in this study these students are more likely to be Black, attended a high school in Detroit, and enter the university with lower ACT scores and worse high school GPAs than White students. An unexpected finding was that female students benefit more from service-learning than their male counterparts. Future research should determine if this gender pattern generalizes to other universities.

Limitations

A significant limitation of this study is that it assesses the effect of service-learning at just one institution. Therefore, the findings are suggestive and exploratory yet provide insight on a pedagogical addition that institutions can make that may assist with improving retention and graduation rates for its students. Notably, the study found a beneficial impact of service-learning on institutional outcomes despite a somewhat crude measure of service-learning; that is, the quality of the service-learning experience, how much faculty involvement occurred, and how much effort students expended with their service-learning course was not captured. Nevertheless, findings were positive for service-learning. While encouraging, the findings themselves are limited since the university does not mandate or track service-learning courses. This study utilized a tracking system used by one of the colleges at the university but the tracking system does not record the actual service performed in each class. cursory knowledge about the service-learning experience in the English course was found but not reported in this study because it could not be verified.

Most of the limitations with this study may be attributed to the use of institutional data which does not include measures of the myriad of constraints that may have played a role in service-learning not being beneficial to students of color. Many important indicators of family background and cultural capital could not be a part of the empirical analysis presented here because of a lack of access to data. In response to these limitations, future research can assess the impact of service-learning at institutions that have a robust service-learning program but also challenges with student retention and graduation.

Implications for Practice

The research presented in this article suggests that service-learning can assist post-secondary institutions with improving educational opportunities that result in increased retention and graduation

rates as well as higher grade point averages. The experiential knowledge gained through the service-learning process allows students to construct, connect, and have a voice in their own learning through reflection designed to link the learning and service, thereby creating an educationally effective learning experience. Because researchers have shown service-learning to increase retention and graduation rates (Bringle et al., 2010, Lockeman & Pelco, 2013; Reed et al., 2015), I suggest it also has the potential to improve the proverbial playing field; however, this outcome can only occur if service-learning is implemented in ways that align this teaching pedagogy with general education requirements as opposed to an extracurricular activity for selected classes. For example, general education courses should have service-learning as a requirement. By requiring all students to participate in service-learning courses, the university may improve retention rates for more students, not only those who have higher high school grade point averages, since findings presented here show that high school students with higher grade point averages benefited from service-learning more than students who had lower high school grade point averages. Additionally, service-learning should be integrated into selected major and minor classes, allowing students to create their “mix” of service-learning classes required for graduation. Requiring service-learning would decrease the need for under-prepared students to enter college already possessing the cultural capital needed to successfully navigate the collegiate journey. Instead, service-learning could assist with building the skills for academic success along the way.

Beyond the findings that this research suggests, service-learning as a requirement in general education courses may be a unique and fiscally responsible approach to assist with improving other institutional outcomes such as preparation for working in the real-world, improved critical thinking and complex reasoning, lifelong dedication to helping others, and enhanced communication skills (Eyler & Giles, 1999). However, reforming the general education curriculum to include a pedagogical shift requires significant resources beyond just money. Faculty would need encouragement and training. Additional staff would be needed to (a) support faculty in the classroom and students in the field; (b) track courses; (c) build and maintain community relationships, and (d) collect and maintain data for assessment purposes. However, the impact of service-learning could yield a dividend worthy of the investment if retention and graduation rates increase.

With regard to learning, one size does not fit all.

Yet teaching strategies must accommodate all students – prepared and under-prepared – who enter the institution. It is imperative for institutions of higher education to have the courage to envision different possibilities for schooling, and teach and provide opportunities accordingly (Lopez, 2003). Service-learning, as demonstrated by this study, can provide that kind of opportunity.

Note

¹ According to the National Center for Educational Statistics, a non-resident alien refers to a person who is not a citizen or national of the United States and who is in this country on a visa or temporary basis and does not have the right to remain indefinitely. I acknowledge that this is neither a racial nor ethnic category.

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