

Draft Number Three

Service-Learning's Role in Achieving Institutional Outcomes:

Engagement, Learning, and Achievement

Introduction

Kapi'olani Community College (KCC) is a medium-sized urban public community college that has been developing a cycle of pedagogical innovation, implementation, and evaluation in service-learning since 1995 (Franco forthcoming, 2010, 2007, 2002, Axlund and Renner 2010; Baratian, Duffy, Franco, Hendricks, and Renner 2007; Renner 2008, 2007, 2003 ; Renner and Bush 1997). In this chapter, we show how our community college organizes and utilizes internal service-learning research to form a coherent understanding of the relationship between service-learning and student success. We refer to our multi-faceted evaluation framework as the KELA– Kapi'olani Engagement, Learning, and Achievement – model.

We begin this chapter with an introduction to KCC, a description of our service-learning program, and an explanation of the KELA model. Then we discuss service-learning evaluation research in higher education. Finally, we report on research we conducted to evaluate the relationship between service-learning and student success within the KELA model of Engagement, Learning, and Achievement. We organize our *engagement* research around two questions: (1) Are service-learners more engaged in their academic career than non-service-learners?; and (2) Are service-learners more sensitive to social justice and diversity than non-service-learners? We address *learning* with the question, (3) How well do participating students achieve the service-learning outcomes? We address *achievement* with the question: (4) Do service-learning students have higher academic achievement than non-service-learners? We

conclude with suggestions for future programmatic evaluation on service-learning, especially in community colleges.

Institutional Background

The College

Located on the slopes of Diamond Head, on the island of O’ahu, in urban Honolulu, KCC is the second largest of ten public higher education institutions in the University of Hawai’i (UH) system, with an enrollment of 8,376 in Fall 2013. The college serves diverse ethnic groups. Native Hawaiian students are the largest ethnic group on the campus (18%). Students of diverse Asian ethnic backgrounds (Japanese, Chinese, Korean, Vietnamese, other) comprise 41% of the student population; mixed race, Pacific Islanders, and “other” students comprise 28 % of the student population; and racially Caucasian students make up 13 percent of the student population. International students account for 8% of the student population. The college provides nationally competitive liberal arts and career programs including Nursing, Health Science, Hospitality, Culinary, Pre-Education, and Science, Technology, Engineering, and Math (STEM). Our strategic plan is designed around an “ecology of learning” framework in which community is situated close to the center of the student-learning environment. The ecology of learning framework (see Figure 1) promotes ongoing awareness of our role in communities both on and off-campus.

The Kapi’olani Service-Learning Program (KSLP) is designed to ameliorate pressing problems in the community through issue-based, interdisciplinary pathways in education, environment, health, long-term care, intercultural perspectives, art, history, and culture. These pathways ensure that students will (1) have the opportunity to deepen their understanding of specific issues; (2) be encouraged to continue their service-learning across multiple semesters

and thus have time to become more deeply engaged with a given community; (3) provide increasingly skilled service to a given community; and (4) develop career-relevant skills.

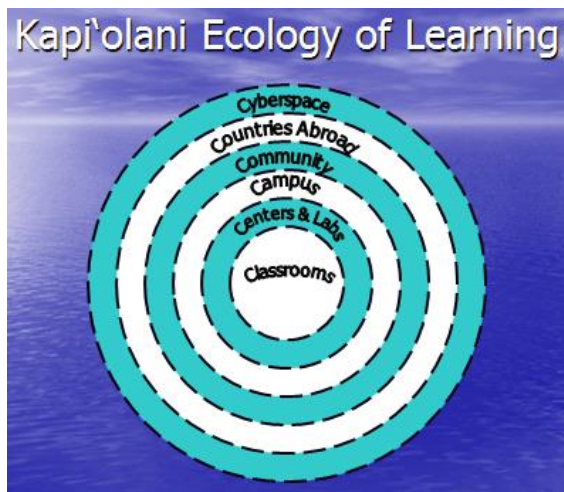


Figure 1. Kapi'olani Ecology of Learning Framework

The KSLP is grounded in choice: first faculty members *choose* to offer service-learning, then students *choose* service-learning as an option within the course, and together, students and faculty work with the KSLP to *choose* an appropriate pathway and community partner for their service. Nearly 100 service-learning course sections are offered each semester, and 250-300 students complete 25 hours of service-learning in those classes. The program is managed by a Full Time Outreach Coordinator, who supervises 6-10 paid student pathway leaders, facilitates student service-learning experience, and assists with data tracking. In addition, there are two Faculty Coordinators who receive release time to oversee faculty development, ongoing pedagogical improvement, and the learning outcomes assessment process. In addition, a service-learning leadership team, comprised of staff, faculty, and student leaders, assesses student reflection essays each semester.

The KSLP's pedagogical approach is grounded in Vygotsky's (1978) constructivist theory and principles, which focus on the role of social interaction in the development of cognition and emphasize that learning is enhanced through scaffolding and social interaction during a problem-solving process. Structured service-learning experiences, social interaction, and reflection are all needed in order to discover connections between new information and prior personal experiences. To maximize the learning potential for our service-learning students, the KSLP is guided by principles for effective pedagogy derived from a large study of pedagogical practices (National Research Council (2002). Table 1 lists these principles and shows how KSLP practices are aligned with them.

Table 1. Seven Principles for Effective Pedagogy and KSLP Aligned Practices

Seven Principles for Effective Pedagogy	KSLP Aligned Practices
	In KSLP students are encouraged or asked to:
1. Learning with understanding is facilitated when knowledge is related to and structured around major concepts and principles of a discipline.	apply knowledge and skills learned in the classroom to their service-learning experiences and then asked to reflect on the connection
2. A learner's prior knowledge is the starting point for effective learning.	draw upon prior knowledge to make meaning of their service-learning experience.
3. Metacognitive learning (self-monitoring) is important for acquiring proficiency.	self-monitor and use other meta-cognitive forms of learning through reflective writing
4. Recognizing differences among learners is important.	choose site and service based on their own academic and career interests & make own interpretations of the experience

5. Learners' beliefs about their ability to learn affect learning success.	analyze and solve programs in a real-world environment. See their own impact of their actions.
6. Practices and activities in which people engage shape what is learned.	work together with community partners, service recipients, other students, and faculty,
7. Socially supported interactions strengthen one's ability to learn.	in which social interactions enhance and shape learning

We also recognize the importance of critically assessing the learning that occurs and providing additional scaffolding for students as needed (Schweitzer and Stephenson 2008). We guide the KSLP based on evidence obtained from regular qualitative and quantitative assessment of our intended learning outcomes. This “data-driven” strategy has evolved over the life of the program.

Initial assessment or evaluation efforts were limited to data tracking (e.g., number of students, hours served, the number of faculty, course sections, community partners). Faculty later used surveys, student reflections, and institutional data to investigate student personal development, social understanding, and academic success in the forms of GPA and retention rates (Renner 2003; Renner and Hasager, 2004).. In the current phase, the assessment work is guided by the KELA model, which focuses our efforts on engagement, learning, and achievement. We assess academic engagement using the Community College Survey of Student Engagement (CCSSE); learning through rubric evaluation of end-of- semester capstone essays ; and academic achievement through the tracking of students' successful course completion, re-enrollment rate, and graduation/transfer rates.

Literature Review

Community colleges are in a unique position to be on the cutting edge of the service-learning paradigm (Elwell and Bean 2001), since their very mission emphasizes the role of the institution in serving the community (Taggart and Crisp 2011). A large body of service-learning research attests to its effectiveness in promoting students' academic, cognitive, personal, and social development, evidenced in research reviews and meta analyses (Yorio and Ye 2012; Celio, Durlak, and Dymnicki 2011; Conway, Amel, and Gerwien 2009; Eyler, Giles, Stenson, and Gray 2001). For example, Eyler et al. (2001) reviewed 76 research studies published between 1993 to 2000 that investigated the effect of service-learning on student-related outcomes. This body of research provided evidence that service-learning is positively associated with students' personal, social, and learning outcome achievement, career development, and relationship with the institution.

A recent meta-analysis by Yorio and Ye (2012) showed a medium-sized effect on students' cognitive development and a small effect on students' understanding of social issues and personal insights. The result confirmed previous findings in a meta-analysis conducted by Celio, Durlak, and Dymnicki (2011) that examined the effect of service-learning in both the K-12 and higher education settings. Their findings showed that service-learning had more of an effect on academic achievement than on other outcomes (attitudes toward self, school, and learning; civic engagement; and social skills), though all the effects were small. Conway, Amel, and Gerwien (2009) found that service-learning has a small but significant effect on personal, social, and citizenship outcomes in K-12, higher education, and adult/mixed education settings.

However, most of these meta-analyses focus on a 4-year setting; service-learning research in community college settings is still lacking. In Eyler et al (2001), only 7% of the studies in the review focused on community colleges, and no studies included in the three other meta analyses indicate a community college setting. Therefore their findings may not be generalizable to community colleges. As McClenney (2007) correctly stated:

Community colleges, we all know, are diverse institutions that serve remarkably diverse student populations. These students typically contend with competing priorities – juggling jobs, family responsibilities, financial struggles, and community commitments along with their academic endeavors (p. vii).

These unique conditions call for a specific body of service-learning assessment and evaluation research situated in a community college context at community colleges.

Taggart and Crisp (2011) brought to light 17 empirical studies of service-learning at community colleges. Through their review, they concluded a positive association between service-learning and civic involvement, perceived personal benefits, and application of knowledge. They found mixed effects of service-learning on student success as indicated by course completion, grades, or students' decisions to persist.

Many of the studies in their review were limited to samples from one or just a few classes. A majority relied heavily on locally developed survey instruments with unknown reliability and validity information. No studies reported results of rater consistency or procedures to reduce bias in reflection journal or essay evaluation. Only a few studies investigated student academic engagement (Gallini and Moely 2003) and academic achievement in terms of retention, transfer, and graduation (Hodge et al. 2001; Prentice 2009). None of the studies reviewed by Taggart and Crisp investigated all three of the KELA success domains: engagement, learning, and academic achievement.

Engaging the KELA Model at KCC: Implementation and Analysis

At KCC, four studies were conducted following the evaluation framework of KELA. Study 1 compared service-learning and non-service-learning students' academic engagement using the Community College Survey of Student Engagement (CCSSE) benchmark scores. Study 2 examined service-learning and non-service-learning students' personal growth in areas such as self-esteem and sense of social responsibility using a pre- and post-course evaluation with a locally developed survey. Study 3 investigated service-learning students' learning outcomes using rubric-based assessment of capstone essays. Study 4 used institutional data to compare service-learning and non-service-learning students' course success rates, next-semester re-enrollment rates, and graduation/transfer rates. These studies are described in turn.

Study 1: Measuring Engagement Outcomes using CCSSE Benchmark Areas

Research Question: Are service-learners more engaged in their academic career than non-service-learners?

Instrument:

CCSSE is a national survey that aims to measure areas of student engagement associated with student success in community colleges (www.ccsse.org). CCSSE survey items have five benchmark areas: Active and Collaborative Learning (ACL); Student Effort (SE); Academic Challenge (AC); Student-Faculty Interaction (SFI); and Student Support (SS). Each area consists of about 10 items.

Participants

Every other even-numbered year, a set of randomly-selected classes at KCC participate in CCSSE. This study included data from 1,739 non-duplicated survey respondents in the two most recent cohorts: 2010 and 2012. Among respondents, 40% were service-learners and 60% were non-service-learners.

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Analysis

The service-learners in this study were defined as respondents who self-reported as participating in community projects as part of a regular class sometimes, often, or very often on CCSSE Item 4.i. Self-identified non-participants were considered non-service-learners. These two groups were compared on their RBS in the five benchmark areas, while controlling for self-reported demographic background (i.e., gender, age, ESL status) and academic background (i.e., GPA range, and total earned credits). For the purpose of analysis, each CCSSE benchmark item score is rescaled from 0 to 1, called rescaled score. Raw benchmark scores (RBS) are the average of the item rescaled scores under each benchmark. The RBS for ACL was recalculated with Item 4.i removed. Five general linear model (GLM) regression analyses were conducted in SAS 9.3 with one RBS as an outcome variable at a time. For example, the GLM equation for the ACL outcome can be written out as:

$$\text{ACL} = \text{Intercept} + \text{Gender} + \text{Age Group} + \text{ESL} + \text{GPA} + \text{Total Credits} + \text{Service-Learning}$$

Due to the exploratory nature of the study, the significance level was kept at $\alpha = .05$.

Results

All five GLM regression models were statistically significant. The models account for 12.9%, 5.4%, 5.9%, 11.0%, and 4.1% of the variance in the five outcomes, respectively. In all five models, participating in service-learning showed a statistically significant positive relationship with the engagement outcomes. After controlling for participants' demographics and academic background, service-learning respondents scored 10.7% higher on the recalculated ACL benchmark (with the item related to service-learning participation removed), 5.4% higher on SE, 6.1% higher on AC, 10.8% higher on SFI, and 4.5% higher on SS. The service-learners seemed to be more engaged than non-service-learners, most evidently in ACL and SFI.

Discussion

Regarding the results on ACL, we believe that service-learners are more actively engaged in learning because they are presented with real world problems that create a demand for deeper levels of thinking, knowledge seeking, and application. At KCC, the finding that service-learners reported more interaction with faculty also came at no surprise. Students interact with service-learning faculty and staff, in and outside of classroom, in the field and community, and through one-on-one in-person communication and feedback on reflection journals. These activities all translate into a higher student-faculty interaction compared with non-service-learners.

Study 2: Measuring Sense of Social Responsibility Through Survey

Research Question

Are service-learners more sensitive to social justice and diversity than non-service-learners?

Instrument

We used a locally-developed survey instrument that measures understanding of social justice (8 items, adopted from Moely et al. 2002) and attitude toward diversity (5 items, Renner 2003). A pre-course survey and a post-course survey were administered in 23 service-learning classes in spring 2012.

Participants

In spring 2012, 512 students took the pre-course survey and 383 students took the post-course survey. The analysis used 102 students with matching IDs on the pre- and post-course surveys. Among them, 28 were self-identified service-learners in that semester and 74 were non-service-learners.

Analysis

After removing one item found detrimental to the reliability of the pre-course survey, the Cronbach Alpha reliability was 0.57 on the social justice scale and 0.64 on the understanding of diversity scale. While relatively low, these values prove acceptable for further analysis.

Twelve two-way repeated measures of ANOVAs were conducted on each of the survey item scores using the Proc Mixed procedure in SAS 9.3. The between-group main effect is group (service-learners vs. non-service-learners). The within group main effect is survey (pre-course survey vs. post-course survey). The interaction effect is group by survey. The interaction effect tells us whether the pre- to post survey rating change is significantly different between the two groups. The significance levels were set at $\alpha = .05$ due to the exploratory nature of the study.

Results

Significant interaction results were found in two items; both were on the social justice scale. On these two items, the service-learners showed improved sensitivity, more than the non-service-learners. On the item “In order for problems to be solved, we need to change public policy,” the average service-learning respondent scored 3.46 on the post-course survey ($SD = 0.96$), higher than on the pre-course survey ($M = 3.04$, $SD = 0.74$). The non-service-learners scored 3.50 ($SD = 0.80$) on the post-course survey; almost no change compared to their pre-course survey scores ($M = 3.58$, $SD = 0.88$). The change difference between the two groups was statistically significant, $F(1, 100) = 5.26$, $p = .02$.

On the second social justice item “We need to institute reforms within the current system to change our communities,” the service-learners improved in their average score on this item by the end of the semester, from 3.52 ($SD = 0.80$) to 3.71 ($SD = 0.71$), but the non-service-learners showed a slight decline by the end of the semester, from 3.81 ($SD = 0.70$) to 3.65 ($SD = 0.75$), resulting in a significant interaction effect, $F(1, 99) = 4.59$, $p = .03$.

Discussion

It is interesting to observe that the service-learners had a lower-level understanding of social justice measured by these two items at the beginning of the course compared to non-service-learners. Still, the increase in understanding reflected in higher ratings at the end of the semester may be due to participation in the KSLP. For example, every semester, over 100 students are exposed to native Hawaiian land issues and issues of capitalism and development. Dozens of students work with children in poverty in nearby public housing. Through working with the people they served and community partners, it is quite likely that they gained a deeper understanding that inequality is more of a structural issue at the societal level than it is an issue of culture differences or individual fault.

There was no difference between service-learners and non-service-learners on understanding of diversity, which relates to the global understanding and citizenship outcome defined by American Association of Community Colleges. This finding is consistent with Prentice and Robinson (2010) who found no statistical difference between service-learners and non-service-learners on this outcome. Different service activities undoubtedly lead to different learning. It is possible that, when service-learners have a more interactive role with the people or communities they serve, they develop a deeper understanding of cultural differences and others' perspectives. For example, Gutheil et al. (2006) found that after service-learners conducted one-on-one personal interviews with elderly individuals, learning about their life and perspectives, the learners experienced important positive shifts in attitudes and perceptions about older adults, combating prevailing stereotypes. Providing opportunities for meaningful personal interaction between service-learners and the people they serve may help improve this outcome.

Study 3: Measuring Learning Outcomes through Rubric-Based Assessment of Capstone Essays

Research Question

How well do service-learners achieve KSLP student learning outcomes (SLOs) by the end of the service-learning course?

Instrument

The assessment instrument is a 4-page end-of-semester essay that fulfills both service-learning program and course requirements. Each essay has the following components: (1) Problem: statement of the social problem that the student has helped to ameliorate; (2) Learning: course concepts that were applied in service-learning; (3) Change: change in point of view about the community served; (4) Goal: the students' future academic/career goals; and (5) Affect: the development or change of values as a result of the service-learning participation. For details see the KCC Office for Institutional Effectiveness web page at: <http://ofie.kapiolani>.

Outcome 1 is related to critical thinking skills that evaluate whether students are able to identify and describe the social problem and articulate how they contributed to the solution. Outcome 2 is an academic development outcome that asks students to articulate how they applied course knowledge to solve real world problems. Outcome 3 is related to global understanding and citizenship. Outcome 4 is about career and academic goal setting. Outcome 5 is a non-cognitive outcome that focuses on personal insights and transformation. Students' essays are evaluated each semester using a five-dimension rubric with five levels of performance from Level 0 to Level 4. Level 1 demonstrates emerging evidence of critical thinking. Level 2 indicates that students can substantiate their arguments with examples and illustrations. Although a score of 1 demonstrates meeting minimum competencies on the outcomes, Level 2 is our target

based on various early attempts to assess general education outcomes. See a sample rubric

http://ofie.kapiolani.hawaii.edu/wp-content/uploads/2013/01/Gen_Ed_Slos_WITH_AACU_ELOS_AND_S-L_ALIGNMENT.revised.docx

Participants

Every semester, about 10% of the over 300 student reflection essays collected as part of the KSLP are randomly selected for the SLO assessment. We include the results of 60 essays from the most recent two semesters, fall 2012 and spring 2013, in this study.

Fifteen raters score the essays each semester; three raters for each of the five dimensions. Raters go through a training and score norming procedure led by the assessment coordinator. Raters discuss their scores for each essay, agreeing on a final score. (If the raters cannot agree, the lower score is taken.) The norming at the start, and the discussion during the assessment, promote consistency.

Results

Table 2. SLO Results for Fall 2012 and Spring 2013 Cohorts

		Problem	Learning	Change	Goals	Affect
Mean Score (standard deviation)	Fall 2012	0.9 (0.9)	1.9 (0.9)	1.1 (1.3)	1.5 (1.1)	1.9 (1.2)
	Spring 2013	2.0 (1.2)	1.3 (0.8)	1.9 (1.4)	1.3 (1.1)	1.6 (1.0)
	Overall	1.5 (1.2)	1.6 (0.9)	1.5 (1.4)	1.4 (1.1)	1.8 (1.1)
% with minimum competency	Fall 2012	63	97	53	83	87
	Spring 2013	83	87	90	73	87
	Overall	73	92	72	78	87
% Meeting Target	Fall 2012	23	63	40	33	63
	Spring 2013	73	40	43	37	47
	Overall	48	52	42	35	55

Analysis

Table 2 presents the results of service-learning SLO assessment for the fall 2012 and spring 2013 cohorts. The performance was not consistent across two investigated semesters. The overall ($n = 60$) mean scores are above 1, the minimum competency level, but the variation among students is very large, with standard deviations ranging from 0.9 to 1.4. While none of the mean scores reached the target level of 2 in this year's assessment, scores on Learning and Affect are very close to 2 in fall 2012 and scores on Problem and Change are close to 2 in spring 2013. When looking at percentages meeting minimum competency, overall, about three quarters of service-learners reached this level on critical thinking (SLO 1 Problem), global understanding and citizenship (SLO 3 Change), and academic/career goal setting/adjustment (SLO 4 Goals). A high percentage of service-learners reported knowledge application (SLO 2 Learning) in their service (92%) and experienced personal sights/transformation (SLO 5 Affect) (87%). Lower percentages of learners met the target level, with the lowest achievement areas being global understanding and citizenship (SLO 3 Change) and academic/career goal setting/adjustment (SLO 4).

Discussion

Perhaps the small sampling percentage (10%) and diverse student background (e.g., courses taken, sites served, academic preparation) may account for the variation in performance across semesters. The relatively low achievement on global understanding and citizenship was consistent with our finding in the survey project (Study 2) and the finding in Prentice and Robinson (2010). The lower achievement on academic/career goal setting/adjustment is affirmed by Hodge et al. (2001), who found that only between 30 to 40% of the service-learning survey respondents at Collin County Community College reported that service learning affected their

career plans and major selection (i.e., they questioned, confirmed, or changed the plan). One possibility is to arrange more personal interaction with the people/community served. For example, a 20-minutes interview of immigrant's life in the U.S. can help students recognize immigrant contribution to the society to a greater extent; a short meeting with the staff talking about essential job skills and main duties can help student form more concrete ideas of personal/academic improvement needs and career interest.

Study 4: Measuring Academic Achievement Through Course Success, Re-Enrollment, and Graduation Rates

Research Question

Do the -learners have higher academic achievement than non-service-learners, as measured by successful course completion, next-semester re-enrollment, and transfer/certificate/graduation rates?

Instrument

The data used for analysis is from service-learning tracking system which provides service-learning enrollment data and from student data warehouse where institutional data (e.g., enrollment, GPA) is needed. *Participants*

The service-learners in the study were from fall 2010, spring 2011, and fall 2011 semesters. The number of service-learners is 343, 292, and 284 in the three semesters, respectively, with an average of 304. The comparison group is comprised of non-service-learners who enrolled in the same classes but did not choose the service-learning option. The average number of non-service-learners is 1215 per semester, and 1355, 1131, and 1159 in each of the three semesters, respectively.

Analysis

The study examined the following rates between service-learners and non-service-learners: (1) the successful course completion (C or better) rate in all the courses; (2) the next-semester re-enrollment rate; and (3) graduation/transfer rates between the service-learners and non-service-learners. The graduation status was obtained in spring 2012 and the transfer status in fall 2012. The three indicators were calculated for each semester, and then averaged.

Results

The three-semester average showed that: compared with the non-service-learners in the service-learning offering classes, the service-learners had a higher course success rate (88.9% out of a total of 1,031 grades granted) in the service-learning semester than non-service learners (64.9% out of 2,729 grades given). Even though the service-learners in general were more successful students, with a pre-service-learning-semester overall success rate at 86.9%, compared with the non-service learners (72.6%), service-learners maintained their success in the service-learning semester, while non-service-learners had a decrease in their success rate.

Regarding performance in developmental courses, by examining the average success rates across three semesters, we found that among 47 grades that service-learners received, 79.7% were successful grades. In comparison, of 171 grades received by non-service-learners, only 58.4% were successful. Again, service-learners maintained and continued their success from the previous semester (80.5%), whereas non-service-learners' success rate had decreased from the previous semester (65.2%).

The three-semester average next-semester reenrollment rate was higher for the service-learners (76.1%) than it was for the non-service-learners (61.0%). The service-learners also had higher graduation/transfer rates (13.1%) than the non-service-learners (10.5%). This pattern holds true for students in each semester.

Discussion

When examining the success of service-learning students, we need to consider the self-selection issue – more successful students seemed to choose service-learning components in the course than non-service-learners. However, given that the service-learners maintained their success in the service-learning semester, while non-service-learners had decreased success both in all courses and in developmental courses alone, it is our interpretation that, through service-learning experience, students are exposed to enhanced learning conditions that lead to increased success.

Conclusion

To evaluate service-learning and its relationship with student success, KCC used the KELA institutional effectiveness model to investigate the *engagement* of service-learners and non-service learners on CCSSE benchmarks (Study 1), the *learning* (ie: cognitive and noncognitive outcomes) for service-learners after their service experience, using previously validated survey questions and student reflection essays scored using a rubric (Study 2 and Study 3); and academic *achievement* of service-learners and non-service-learners through course success, re-enrollment, and graduation rates (Study 4).

Results indicate that service-learners were more engaged than non-service-learners, especially in the areas of active and collaborative learning and student-faculty interaction, even with demographic and academic background variables held constant. The service-learners in the study had higher course success rates and better maintained their success from the previous semester in all courses, including developmental courses, in comparison with non-service-learners. The service-learners also had a higher next-semester reenrollment rate and graduation/transfer rate than non-service-learners.

For learning outcomes, service-learning respondents showed greater understanding of social justice on two out of seven survey items than non-service respondents. The results of the service-learners' reflection essays showed that a majority of the service-learners met the minimum competencies for: critical thinking; knowledge application; global understanding and citizenship; academic/career goal setting/adjustment; and personal insight/transformation (fall 2012 and spring 2013). Yet, less than 80% of the study students achieved the target level in any outcomes in either semester. Since global understanding and citizenship and academic/career goal setting/adjustment were the two outcomes that had the lowest percentage of service-learners meeting the target, these will receive the most attention in program improvement.

The studies were designed and implemented within institutional and data constraints. Despite our effort to control for student background variables (Study 1) and prior academic performance (Study 4), identifying control groups (Study 1, 2, and 4), using pre- and post-course survey strategies (Study 2), and using rubric and training to ensure rater objectivity and consistency (Study 3), we recognize limitations in our studies. First, the student participants in these studies were not from the same cohort and not all studies used random sampling. This makes the results hard to generalize across cohorts. Second, it is possible that the service-learning students in the study were already engaged and successful learners.

Despite these and other limitations, this research provides positive evidence in favor of service-learning as an effective educational practice at the community colleges. We attribute the success of KSLP to the practices developed based on effective pedagogical principles, as well as social support provided by the Service-Learning Coordinator, student leaders, and interdisciplinary faculty working collaboratively to ameliorate real community problems. Further, the urgency of these problems provides a compelling context for students' coursework. Students

want to construct a learning experience that engages real world issues and sharpens their focus on academic and career goals. Multi-semester service pathways scaffold courses across the general education program, and connect students to a strong structure of community partnerships. Relevance and urgency drive greater student engagement for their own success.

We suspect that service-learning works for the students who are already engaged and successful. Moving forward, our action involves extending service-learning to less-engaged students who do not choose service-learning, focusing on the potential of service-learning as a pedagogical strategy for developmental and first-year courses, while building leadership skills for students join service-learning in multiple semesters or across multiple courses.

We believe the KELA model will serve as a useful evaluation framework for community colleges. First, much of the data employed in the framework – like the CCSSE data on engagement and institutional achievement data – are readily available. Secondly, the framework allows examination of service-learning effectiveness using indicators that matter most to student success. The KELA model makes the conclusions more actionable. Meanwhile, the results from multiple sources and perspectives suggest solutions for improvement that may elude a single study. To advance the KELA model for service-learning evaluation at KCC, we plan to evaluate the same cohort of students for all three domains: engagement, learning, and achievement. Since we started collecting student IDs on CCSSE, we can now use students' actual service-learning status, rather than their self-reported status, to evaluate engagement outcomes. We also plan to compare the results from multiple cohorts to ensure the generalizability of the conclusions. By focusing on engagement, learning, and academic achievement outcomes through the KELA model, KCC is able to evaluate service-learning on the outcomes that matter most to student success. The KELA model brings together disparate internal research and assessment of service-

learning to form a more coherent picture of the positive association between service-learning and student success. The overall results have driven continuous improvement on campus, promoting service-learning as an effective pedagogy and positioning the college to leverage both external funding and internal resources to support KSLP. The College strives to utilize both internal and external resources to continue to improve service-learning evaluation methods within the KELA model.

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