

Findings: Effects of Service-Learning on Retention

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This study replicated and extended the findings of Gallini and Moely (2003) on the effects of service-learning on student retention, academic challenge, academic engagement, interpersonal engagement, and community engagement. Students at 17 institutions of higher education in Maine, New Hampshire, and Vermont completed a questionnaire that assessed their views of how service-learning affected their academic experience. Results showed that students who engaged in more intensive service-learning experiences scored higher on retention, academic challenge, academic engagement, interpersonal engagement, and community engagement than students who engaged in less intensive service-learning experiences. A mediation model demonstrated that the effect of service-learning on retention was mediated through its effects on academic challenge and academic engagement.

Comparing Levels of Intensity of Service-Learning

Table 1 shows the means for the scales measuring retention, academic challenge, academic engagement, interpersonal engagement, and community engagement according to the intensity of service-learning in the course. A multivariate analysis of variance on these measures indicated a significant overall effect of intensity of service-learning, $F(10, 1292) = 7.85, p = .000$. Follow-up univariate analyses of variance for each scale showed significant differences among levels of service-learning in every case. For the retention scale, $F(2, 751) = 6.39, p = .002$; for the academic challenge scale, $F(2, 754) = 16.33, p = .000$; for the academic engagement scale, $F(2, 703) = 20.34, p = .000$; for the interpersonal engagement scale, $F(2, 741) = 18.84, p = .000$; for the community engagement scale, $F(2, 699) = 40.75, p = .000$. The more intense the service-learning experience was for students, the more likely they were to report an intention to re-enroll, the more they felt academically challenged, and the more engaged they felt with course content, with other people, and with the community.

Table 1: Means and Standard Deviations for Low, Medium, and High Intensity Service-Learning Students on each Scaled Measure

| | Low (<i>M, SD, n</i>) | Medium (<i>M, SD, n</i>) | High (<i>M, SD, n</i>) |
|--------------------------|-------------------------|----------------------------|--------------------------|
| Retention | 3.32 (.62) 218 | 3.45 (.68) 324 | 3.54 (.63) 212 |
| Academic challenge | 3.16 (.67) 220 | 3.29 (.64) 325 | 3.51 (.62) 212 |
| Academic engagement | 3.52 (.62) 206 | 3.70 (.71) 305 | 3.95 (.71) 195 |
| Interpersonal engagement | 3.59 (.72) 218 | 3.82 (.70) 320 | 4.00 (.66) 206 |
| Community engagement | 3.37 (.77) 209 | 3.75 (.76) 299 | 4.04 (.70) 194 |

Note. Low intensity indicates that service-learning was an insignificant to small component of the course; medium intensity indicates that service-learning was a significant component of the course; high intensity indicates that service-learning was a major focus of the course.

Testing a Mediation Model

Gallini and Moely's (2003) mediation model was tested on our retention data. In particular, we examined the prediction that service-learning (predictor) would predict student retention (dependent variable) through the mediating effects of academic engagement and challenge. A two-step hierarchical regression analysis predicting retention was conducted. The first step tested the relation between intensity of service-learning (predictor) and retention (dependent variable). The second step tested whether the inclusion of the mediators (academic engagement and academic challenge) as additional predictors of retention significantly diminished the relationship between it and the original predictor variable (intensity of service-learning). As Table 2 indicates, the predictor variable was entered into the regression in Step 1; the potential mediating variables were entered into the regression equation in Step 2. The results showed that when the mediating variables of academic engagement and academic challenge were entered into the regression, the regression coefficient for service-learning's effect on retention went from significant ($\beta = .107, p < .01$) to nonsignificant ($\beta = -.042$). Just as Gallini and Moely showed, we found that the prediction of retention from service-learning was reduced when the mediating variables of academic engagement and academic challenge were added to the regression equation.

Table 2: Regression Analysis Predicting Retention from Service-Learning

| Predictor | <i>B</i> | <i>SE B</i> | β |
|---------------------|----------|-------------|---------|
| Step 1 | | | |
| Service-learning | .092 | .032 | .107** |
| Step 2 | | | |
| Service-learning | -.036 | .027 | -.042 |
| Academic challenge | .227 | .037 | .225** |
| Academic engagement | .426 | .034 | .463** |

Note. Adjusted $R^2 = .010$ for Step 1; $\Delta R^2 = .362$ for Step 2 ($ps < .01$).
 ** $p < .01$.

Table 3 reports the means for the two items measuring overall course satisfaction and the two items measuring mood and stress according to the level of service-learning intensity. As the table shows, participants were more willing to recommend the course to others and more satisfied with the overall learning experience in the course as intensity of service-learning increased. Univariate analyses of variance bore out these observations, $F(2, 750) = 5.88, p = .003$ for willingness to recommend the course, and $F(2, 743) = 7.41, p = .001$ for overall

satisfaction. The table also indicates that as intensity of service-learning increased, so did positive mood and stress over the course of the semester, $F(2, 753) = 6.30, p = .002$ for mood, and $F(2, 742) = 3.59, p = .028$ for stress.

Table 3: Means and Standard Deviations for Low, Medium, and High Intensity Service-Learning Students on each Scaled Measure

| | Low (<i>M, SD, n</i>) | Medium (<i>M, SD, n</i>) | High (<i>M, SD, n</i>) |
|-------------------------------------|-------------------------|----------------------------|--------------------------|
| Recommend course* | 3.78 (1.14) 219 | 3.85 (1.20) 324 | 4.13 (1.07) 210 |
| Satisfaction w/ course* | 3.83 (1.15) 217 | 3.92 (1.10) 320 | 4.22 (0.99) 209 |
| Average mood for semester** | 6.61 (1.99) 220 | 6.88 (1.85) 325 | 7.25 (1.77) 211 |
| Average stress level for semester** | 5.97 (2.40) 218 | 6.35 (2.21) 316 | 6.55 (2.25) 211 |

* Students responded to these items on a five-point scale, where 1 = strongly disagree and 5 = strongly agree.

** Students responded to these items on a ten-point scale, where 1 = miserable or very low and 10 = terrific or extremely high.