

Teaching and Learning Center Program Evaluation 2023-2024

This study examined the impact of three faculty development initiatives—Teaching Innovation Grant (TIG), Association of College and University Educators (ACUE) Training, and Engaging Explorations (EE)—on teaching quality and student persistence (DFQ) across five analyses. For the matched analyses, instructors were statistically matched on college, gender, race, and number of students enrolled in their courses to ensure comparability. Two initiatives (ACUE and EE) also included pre–post analyses.

ACUE Training – Matched Analysis

Matched comparison of ACUE-trained instructors ($n = 1,228$) to non-ACUE instructors ($n = 1,228$) showed a statistically significant multivariate effect (Pillai's Trace = .015, $F(2, 2453) = 18.41$, $p < .001$). ACUE-trained faculty had higher teaching ratings ($M = 4.43$) than non-ACUE faculty ($M = 4.30$), $F(1, 2454) = 29.40$, $p < .001$, partial $\eta^2 = .012$. DFQ rates were also significantly lower (12.22% vs. 15.04%), $F(1, 2454) = 20.65$, $p < .001$, partial $\eta^2 = .008$.

ACUE Training – Pre–Post Analysis

A paired-samples t -test using 36 courses taught before and after ACUE training revealed DFQ rates decreased from 12.87% ($SD = 13.91$) to 10.48% ($SD = 12.00$). This 2.39% reduction approached significance [$t(35) = 1.73$, $p = .092$, two-tailed; Cohen's $d = .29$]. IDEA teaching evaluations ($n = 13$) improved from 4.22 ($SD = 0.32$) to 4.39 ($SD = 0.26$), $t(12) = -2.50$, $p = .028$, Cohen's $d = .69$, indicating a medium effect (Table 2).

Table 2

ACUE Pre–Post DFQ Rate and IDEA Scores

Measure	Pre M (SD)	Post M (SD)	$t(df)$	p	Cohen's d
DFQ Rate	12.87% (13.91)	10.48% (12.00)	1.73(35)	.092	.29
IDEA Scores	4.22 (0.32)	4.39 (0.26)	–2.50(12)	.028	.69

Engaging Explorations (EE) – Matched Analysis

Matched analysis ($n = 1,628$ EE vs. $n = 1,629$ non-EE) showed a significant overall effect (Pillai's Trace = 0.005, $F(2, 3254) = 8.71$, $p < .001$). EE-trained faculty scored slightly but significantly higher ($M = 4.37$ vs. 4.31), $F(1, 3255) = 9.17$, $p = .002$, partial $\eta^2 = .003$, and had lower DFQ rates (13.62% vs. 15.69%), $F(1, 3255) = 13.44$, $p < .001$, partial $\eta^2 = .004$.

Engaging Explorations (EE) – Pre–Post Analysis

Paired-sample *t*-tests for 50 instructors showed teaching ratings improved from 4.24 (*SD* = 0.59) to 4.38 (*SD* = 0.54), $t(49) = -2.37$, $p = .022$, Cohen's $d = .34$. DFQ rates dropped from 16.30% (*SD* = 15.06) to 11.23% (*SD* = 12.02), $t(48) = 2.86$, $p = .006$, Cohen's $d = .41$, a moderate effect (Table 3).

Table 3

Engaging Explorations Pre–Post DFQ Rate and Teaching Ratings

Measure	Pre <i>M</i> (<i>SD</i>)	Post <i>M</i> (<i>SD</i>)	<i>t</i> (<i>df</i>)	<i>p</i>	Cohen's <i>d</i>
DFQ Rate	16.30% (15.06)	11.23% (12.02)	2.86(48)	.006	.41
Teaching Rating	4.24 (0.59)	4.38 (0.54)	–2.37(49)	.022	.34

Teaching Innovation Grant (TIG)

A multivariate analysis revealed a statistically significant effect of TIG participation on teaching quality (Pillai's Trace = 0.007, $F(2, 1463) = 5.05$, $p = .007$, partial $\eta^2 = .007$). Faculty who received TIG funds earned higher Excellent Teacher scores ($M = 4.33$, $SD = 0.62$) than non-TIG faculty ($M = 4.22$, $SD = 0.70$), $F(1, 1464) = 9.92$, $p = .002$, partial $\eta^2 = .007$. The DFQ rate was slightly lower for TIG faculty (15.41%) than for non-TIG faculty (16.18%), but this difference was not statistically significant ($F(1, 1464) = 0.73$, $p = .393$; Table 3). Pre-post tests were not conducted due to insufficient sample size.

Table 3

Teaching Innovation Grant (TIG) Descriptive Statistics

TIG Status	<i>n</i>	Excellent Teacher <i>M</i> (<i>SD</i>)	DFQ Rate % (<i>SD</i>)
No TIG	733	4.22 (0.70)	16.18 (18.23)
TIG	733	4.33 (0.62)	15.41 (16.16)
Total	1466	4.28 (0.67)	15.80 (17.22)

Discussion

Across all initiatives, faculty development efforts improved teaching ratings, with varying degrees of impact on DFQ rates (Figure 1). ACUE demonstrated large institutional effects, producing significant improvements in both matched and pre–post analyses. EE yielded statistically significant DFQ and teaching gains in the matched analysis and the largest changes in pre–post comparisons, showing that training translated into classroom-level

improvements. TIG improved the perceived teaching quality but did not significantly change DFQ rates.

Effect sizes were small for most matched analyses (partial $\eta^2 = .003-.012$), but given the large sample sizes, even modest improvements translate into hundreds of students retained each year. Pre-post findings for EE and ACUE offer evidence that instructors changed their instructional practices, producing moderate effects in student outcomes. The layered approach—TIG for innovation, ACUE for scalable training, and EE for immersive teaching practice—demonstrates complementary impacts on teaching and student success.

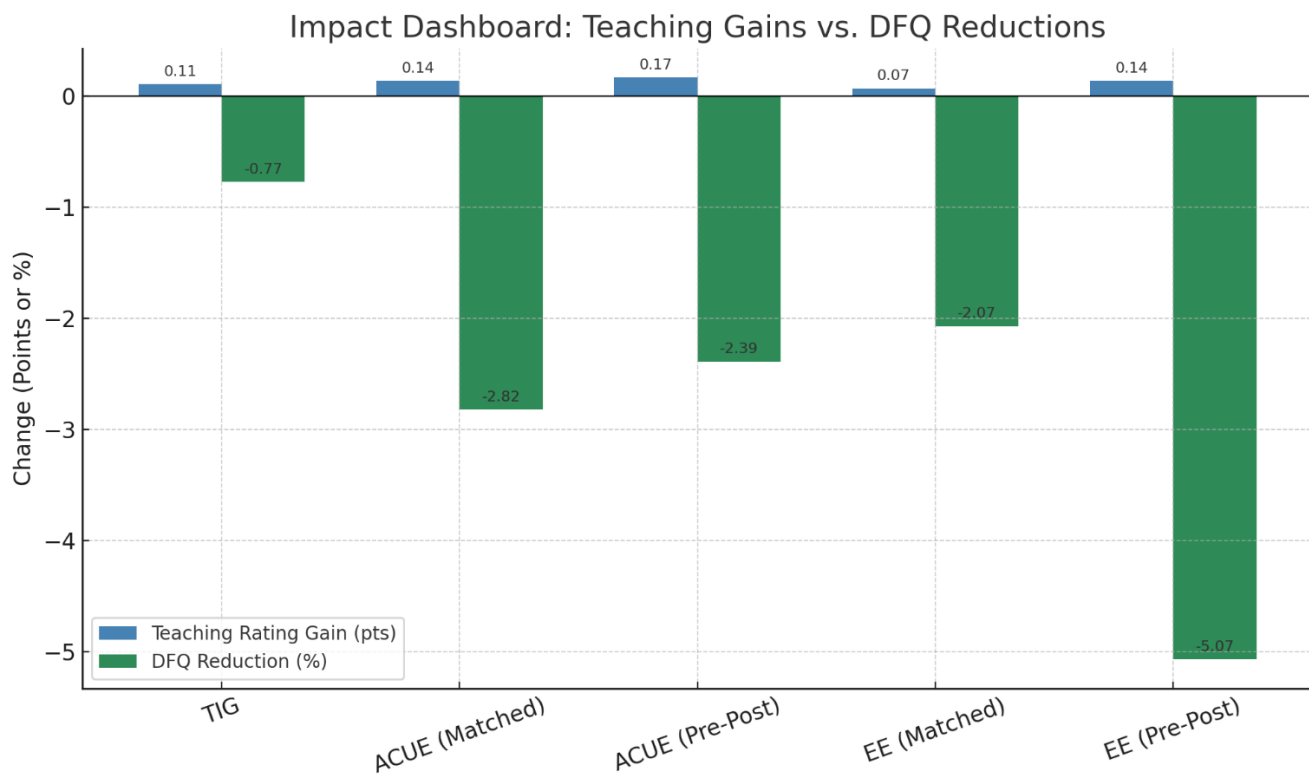


Figure 1. Visual summary of the results