



Evaluation Study of ACUE's Collaboration with Miami Dade College:
Cohort One Findings

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EXECUTIVE SUMMARY:

Evaluation Study of ACUE's Collaboration with Miami Dade College

In September 2016, Miami Dade College (MDC) and the Association of College and University Educators (ACUE) launched an initiative to credential MDC faculty in effective teaching practices. MDC faculty enrolled in ACUE's Course in Effective Teaching Practices (CETP), an online program that prepares college educators to implement evidence-based teaching practices across five units of study. The first cohort of participating faculty completed the Course during the fall semester of the 2016-2017 academic year.

This Evaluation

The Center for Research and Reform in Education (CRRE) at Johns Hopkins University led an evaluation study to analyze the impact of ACUE's course on the instruction delivered by MDC faculty and, by consequence, student outcomes. CRRE's approach was based on a logic model that examines inter-relationships between CETP "inputs" and expected "outputs" over time. The outputs are manifested in measurable changes in participating instructors' attitudes and knowledge, their behaviors, and their influences on students over time.

CRRE employed a mixed-method design, including descriptive and comparative analyses to address evaluation questions regarding the impact and perceptions of the ACUE course on participating instructors within Miami Dade Community College. The first cohort included 35 faculty members and data collection included a survey, interviews, and three semesters of course evaluations from up to 3,293 students. In analyzing and comparing student course evaluation data, we were restricted to using aggregate student survey data provided by MDC.

Findings

CRRE's logic model predicts that changes to instructors' attitudes and knowledge necessarily precede changes to instructional practice and student outcomes. This first paper focuses on changes in faculty attitudes, knowledge, and practices, key leading indicators of other student outcomes to follow.

Instructor Attitudes, Knowledge, and Perceptions

- Nearly all participating faculty (91.7%) agreed that the ACUE course increased their knowledge of and skills in using effective teaching techniques and practices
- A large majority (79.2%) agreed that the ACUE course increased their enjoyment of college teaching
- Nearly all participants (95.8%) agreed that they would recommend the ACUE course to colleagues

Instructors indicated that they had learned new strategies from the ACUE course, which positively impacted their confidence both in their preparation for college teaching and in their ability to use a variety of instructional strategies. Further, the ACUE course was effective for experienced instructors and those relatively new to higher education. Of note, instructors

commented on the positive impact of the course requirement to implement and further reflect on their use of recommended instructional practices. Given the reinforcement of previously learned practices and teaching of new strategies, it is not surprising that instructors reported increases in their confidence for both college teaching preparedness and use of instructional strategies.

Instructor Practices and Student Perceptions

Our findings regarding the impact on teaching practices were consistent with the logic model (see Figure 1 in the main report). In addition to reported changes in their practices, student course evaluation data reflected:

- more positive perceptions of ACUE-participating instructors between the pre-course semester and the semester after instructors participated in the course
- significantly more positive perceptions of instructors who had completed the ACUE course than the remainder of MDC faculty during the semester immediately after the ACUE course.

Discussion and Implications for Further Research

CRRE's analysis of ACUE and MDC's initiative finds that the ACUE course is well received by faculty and helps to improve their instructional practice and confidence in college teaching. These findings hold for both new and more veteran instructors. Instructors reported increased confidence in their college teaching preparedness, most notably in instructors' abilities to create supportive learning environments. Further, they also indicated increased levels of confidence for college teaching skills, such as their abilities to plan and design effective class sessions, make learning engaging, create a supportive learning environment, promote higher order thinking, and stimulate productive class discussion through questioning. Instructors also had highly positive views of the ACUE course due to the organization, supplied resources, and self-reflection requirement and indicated strong agreement that they would recommend the course to colleagues.

Instructors' teaching practices improved as reflected in both survey responses and student course evaluations. In terms of the latter, participating faculty, and on average, all MDC faculty received high marks from their students. Whereas we might predict that a ceiling effect would limit the amount of change in student perceptions that could be measured in association with faculty completing their ACUE training, we found just the opposite: students reported even higher levels of course satisfaction.

These findings present interesting avenues for further research. Per CRRE's logic model, ACUE's program led to positive changes in faculty attitudes about their teaching and strengthened their knowledge of effective skills. This was associated with higher levels of student course satisfaction and engagement, leading indicators of stronger academic outcomes. In subsequent papers, the effects of ACUE's course will continue to be examined, including anticipated changes in student course completion and achievement.

Evaluation Study of ACUE’s Collaboration with Miami Dade College: Cohort One Findings

The Association of College and University Educators (ACUE) developed and provides an online Course in Effective Teaching Practices that is offered to higher education instructors and faculty members. The Course enables college educators to employ research-based teaching practices by addressing topics in ACUE’s Effective Practice Framework[®], which include (a) Designing an Effective Course and Class, (b) Establishing a Productive Learning Environment, (c) Using Active Learning Techniques, (d) Promoting Higher Order Thinking, and (e) Assessing to Inform Instruction and Promote Learning.

The online Course is organized into 27 hour-long learning modules informed by research in cognition and adult learning. Modules include orienting information, opportunities to connect to prior knowledge, video demonstrations, connections to existing research, and a variety of resources and further research on module topics. Learners are provided with opportunities to analyze video clips, collaborate with other participants, apply techniques, reflect, and share with peers.

The evaluation questions draw from a “Logic Model” (see Figure 1) that evolved through discussion between ACUE and CRRE regarding assumed inter-relationships between “inputs” and expected “outputs” over time. The outputs are manifested in measurable changes in participating instructors’ attitudes and knowledge, their behaviors, and their influences on students over time.

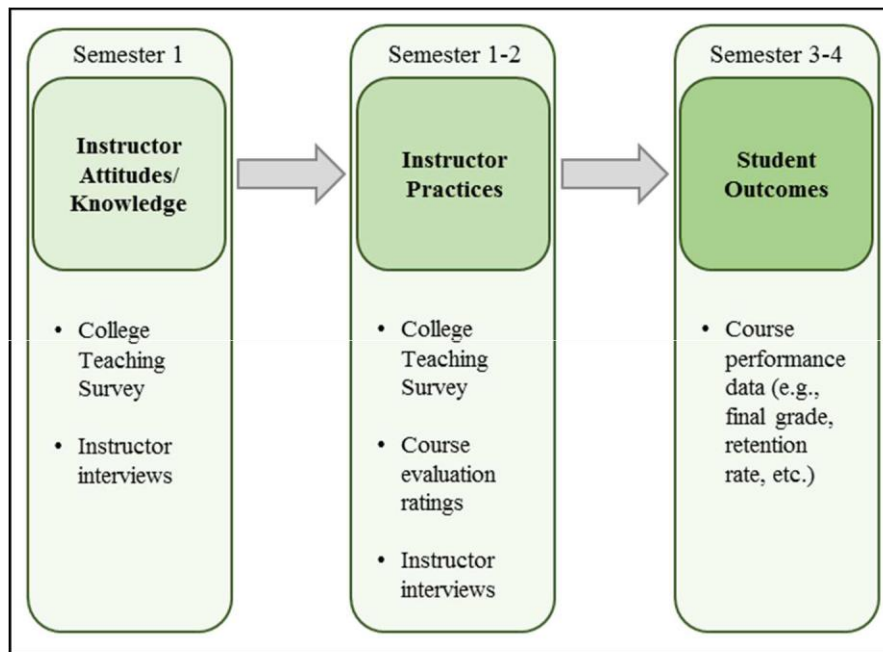


Figure 1. Logic Model of inputs and expected outputs over time.

The Logic Model is based strongly on contemporary cognitive learning and instructional

theories (see, e.g., review by Slavin, 2009¹), all of which assume that behavioral changes depend initially on the learner's motivation to "activate, guide, and maintain" new behaviors over time (Ryan & Deci, 2000²). While motivation can be activated by extrinsic incentives (e.g., cash awards), more powerful and sustaining forms are intrinsically formed based on the desire to become more competent in an area and seek challenges. Such intrinsic motivation, in turn, is influenced by the learner's confidence ("self-efficacy") and knowledge, leading to positive self-perceptions (attitudes) about being able to perform well enough to achieve desired outcomes (Bandura, 1977³; Driscoll, 2015⁴). A reasonable hypothesis, therefore, is that instructors who receive quality professional development on effective college teaching strategies would have higher motivation, confidence, and skills than their peers for implementing such strategies to improve teaching performance. Importantly in this regard, a recent comprehensive review of innovative teaching identified the following factors as major influences of instructors' willingness to adopt innovative practices: (a) a positive attitude toward change as opposed to preferring traditional practices, (b) the desire to learn and absorb new competencies, and (c) confidence in one's capability to do what is needed to meet task demands (Thurling et al., 2015⁵).

Based on the foregoing research and theoretical perspectives, a fairly immediate effect of the Course should be changes in participating instructors' attitudes toward their roles and preparedness as postsecondary educators. Exemplary changes might include increased interest in teaching, confidence about one's ability to teach effectively, comfort in exploring different teaching approaches, and expectations about their student achievement. Concurrent with attitude changes are increases in knowledge about teaching (which, in turn, positively influence attitudes) as a direct effect of participation. That is, instructors should emerge from the training much better informed about effective teaching strategies, motivating students, assessing performance, and many other components of teaching important to student success.

Based on the above assumptions and overall Logic Model, the following evaluation questions were identified as focuses for the study:

- What are the impacts of the course on participating instructors?:
 - Attitudes and confidence about teaching?
 - Use of varied teaching methods?
 - Perceptions about changes in the quality of their teaching and impacts on student engagement and learning?
- What are participating instructors' reactions to the course with regard to preparing them for teaching and more effectively impacting students?
 - What components (units, specific strategies, activities) are considered most useful?
 - What components are considered less useful?

¹ Slavin, R.E. (2014). *Educational psychology: Theory and practice* (11th Edition). London: Pearson.

² Ryan, R. M., & Deci, E.I. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67.

³ Bandura, A. (1977). *Self-efficacy: The exercise of control*. New York: Freeman.

⁴ Driscoll, M. (2014). *Psychology of learning for instruction*. Boston: Pearson.

⁵ Thurlings, M., Evers, A., & Vermeulen, M. (2015). Toward a model of explaining teachers' innovative behavior: A literature review. *Review of Educational Research*, 85(3), 430-471.

- Do the course evaluations by students of participating instructors indicate more favorable ratings relative to course/departmental norms and instructors’ prior evaluations in the same courses?
- Do student outcomes (pass rates, success quotients, retention rates) differ between ACUE course instructors and non-ACUE course instructors teaching similar courses?

Method

Design

A mixed-method design was employed, including descriptive and comparative analyses to address the evaluation questions of interest.

Participants

Participants in the study are instructors and students at Miami Dade College (MDC), a state college located in Miami, Florida. MDC has 8 campuses and 21 outreach centers located throughout Miami-Dade County. Founded in 1959, MDC is the largest higher education institution in the Florida College System with over 165,000 students and employs over 2,000 faculty. Just under one-third of MDC faculty are full-time employees.

Originally, 38 instructors were enrolled as part of Cohort One and 35 completed the course during the fall of 2016. Most (24 of 35) of the Cohort One instructors are full-time employees of MDC. Further detail regarding Cohort One instructors are presented in Table 1.

Table 1.
Cohort One instructor rankings.

	n	Rank					Not Indicated
		Instructor	Assistant Professor	Associate Professor	Associate Professor, Sr.	Professor	
		%	%	%	%	%	%
Cohort One	35	17.1	20.0	20.0	2.9	8.6	31.4

Measures

Both qualitative and quantitative data sources were included in the evaluation study. Sampling varied for different measures and is further described below.

College Teaching Survey. A survey containing both closed-ended and open-ended items was constructed by CRRE with input from both MDC and ACUE. The survey was administered at the close of the first semester of the 2016-17 academic year. The survey items (see Appendix A) covered attitudes and confidence about teaching, perceptions about changes in the quality of teaching, as well as overall perceptions of the course. A total of 38 instructors originally enrolled as part of Cohort One were invited to participate in the research study and complete the survey through email outreach from MDC and CRRE, along with follow-up emails and phone

calls. Of the 24 instructors that completed the survey (63.2% response rate), 16 (66.7%) had taken a similar course previously offered by MDC.

Interviews. A random selection of five instructors were invited to participate in a phone interview. The semi-structured interviews (see Appendix B for questions) were conducted in order to obtain richer, more detailed reactions about the course and its application.

Student course evaluations. Student course evaluations are collected on a regular basis at MDC. MDC provided the student survey results for both courses taught by ACUE course instructors and courses taught by all MDC instructors. The response rate for each survey administration is presented in Table 2.

Table 2.
Response rate for MDC student course evaluations.

Participant group	Fall 2015		Fall 2016		Spring 2017	
	Students n	Response rate %	Students n	Response rate %	Students n	Response rate %
ACUE instructors	3,293	67.7	2,574	73.8	1,383	71.1
All MDC instructors	105,155	66.4	157,091	70.5	89,540	68.4

Note: Fall 2015 data were provided instead of requested Spring 2016 data because only one ACUE instructor participated in student course evaluations during the Spring 2016 semester.

A 4-point scale was used for students' responses to each of the 15 survey items. Those students indicating "unable to answer" were not included in the analyses. Data were provided by MDC in aggregate form. Due to the aggregate data, we were unable to control for characteristics of the student sample and teacher sample.

Results

The following sections present results for Cohort One participants, including analyses of surveys, interviews, and student course evaluations. Frequencies and descriptive statistics for all survey items are presented in Appendix C.

Instructor Impacts of ACUE

Instructors responded to survey items and interview questions regarding their confidence in and preparedness for college teaching. In addition, survey items and interview questions solicited participants' confidence in their ability to use a variety of instructional strategies. Interview questions also explored participants' knowledge of instructional strategies and those strategies influenced by participation.

College teaching confidence and preparation. Survey responses revealed that participants were generally fairly confident regarding their college teaching preparedness. For example, all instructors indicated agreement that they are confident in their ability to grow as an instructor and create a supportive learning environment. The majority of instructors agreed that

they have confidence that they are able to increase students’ persistence to achieve (95.8% agreed), that students in their class learn more than do students in their peers’ classes (79.2%), that their classes are well liked (95.8%), and that they are an effective teacher (91.7%).

In addition, the majority of instructors conveyed increased levels of confidence in teaching preparedness as compared with the prior year (see Figure 2). Confidence levels were most likely to increase for instructors’ abilities to create a supportive learning environment, their ability to grow as an instructor, and that they are an effective teacher. Two-thirds of instructors reported increased levels of confidence for the other teaching preparedness survey items.

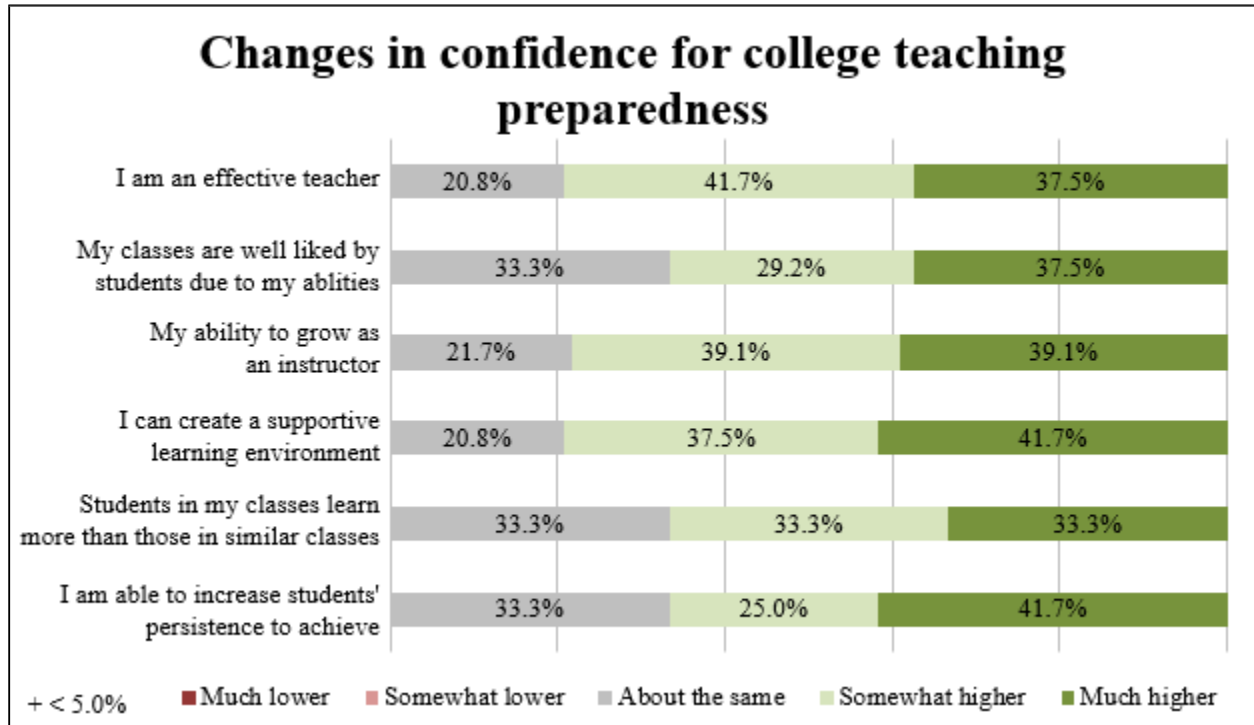


Figure 2. Survey responses for the degree to which confidence levels changed as compared with the previous year.

Survey respondents also described the impact of the ACUE course on their preparedness for college teaching in open-ended responses. Overall, respondents highly appreciated the detailed focus on best practices. Whether it was refreshing teaching strategies and classroom tactics, or introducing previously unknown instructional techniques, the course helped novice and veteran instructors to examine their classroom procedures and practices. As one instructor stated, “I learned valuable teaching techniques that I didn’t know about.” Another commented, “It allows even seasoned instructors to re-think their methods and re-evaluate their role in the classroom.” Specifically, instructors appreciated the focus on syllabus improvements, new ways for modelling learning and scaffolding, and best practices for traditional teaching strategies (such as small group discussion or pair work).

During interviews, the majority of respondents perceived a positive impact on their preparedness to teach college courses. One instructor indicated that while she felt very prepared to teach the content of her courses, the course helped her learn strategies for how to best reach all

of her students. Similarly, three instructors noted that the course helped to reinforce their approach. One commented, “I had been doing many of the strategies that were taught in the course, but I didn’t know the names of these strategies. It made me realize that I was doing the right thing. Only one instructor indicated that the course did not impact her sense of preparedness to teach, though she did appreciate having a better sense of how to explain her policies and expectations to her students, concepts that the CETP course teaches to instructors.

During interviews, three instructors described an impact on their confidence in their abilities to teach college courses. For example, one instructor noted feeling more comfortable grading because the course provided techniques on how to set expectations, what to emphasize, and what to look for. Another stated a “tremendous” impact on confidence, noting the course “made me much more confident.” A third instructor offered that the reflection scores received after completing modules provided him with feedback and reinforcement that he was utilizing best practices. One instructor was less emphatic with the perceived impact commenting, “it had minimal to some impact. It gave me a few ideas here and there about how to have an effective conversation in small groups. There were a few things there that really worked.” The remaining instructor indicated already high levels of confidence in teaching abilities, but noted that the course was very helpful and could help to make her teaching even more effective.

Summary. Instructors reported increases in confidence as compared to the prior year in their confidence in college teaching and preparedness. Confidence levels most strongly increased over the prior year for instructors feeling confident that they are an effective teacher, their ability to create supporting learning environments, and their ability to grow as an instructor. Instructors were positive towards the ACUE course, noting that the course either served to remind them of strategies and practices learned previously or taught them new practices they could employ to improve their teaching. The ACUE course was perceived as having a positive impact on their confidence in their abilities to teach college courses.

Confidence in teaching skills. Instructors were asked to indicate their levels of confidence on several instructional activities through the survey. As with confidence in teaching college preparedness, instructors reported fairly high levels of confidence. For example, all instructors reported feeling confident in their ability to offer feedback to help students improve, help students to become more self-directed learners, promote higher order thinking, create a positive learning environment, make learning engaging, and plan and design effective class sessions.

In addition, instructors were prompted to indicate the degree to which their confidence in these teaching skills changed as compared to the prior year (see Figure 3). At least three-quarters of instructors indicated increased levels of confidence in their abilities to plan and design effective class sessions, make learning engaging, create a supportive learning environment, promote higher order thinking, and stimulate productive class discussion through questioning.

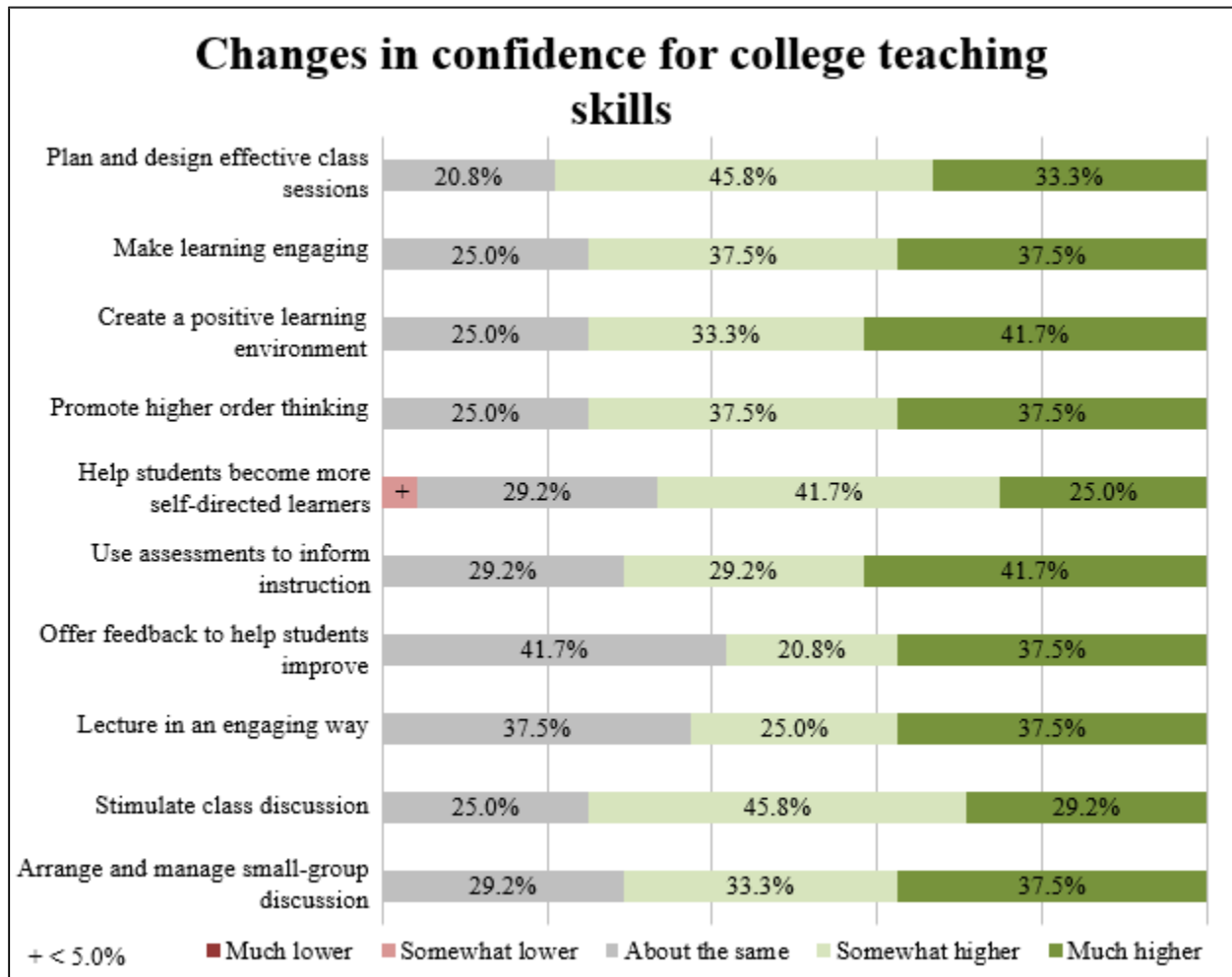


Figure 3. Survey responses for the degree to which confidence levels changed as compared with the previous year.

During interviews, participants discussed the impact the ACUE course had on their knowledge of instructional strategies. All of the instructors interviewed indicated some level of impact from the course in terms of their knowledge of instructional strategies. Three of the five participants emphatically indicated the course had impacted their instructional strategy knowledge. One observed that she did not have any formal training in how to teach and the course was “eye-opening” and she was grateful she took the course. She further stated she thinks “everyone who teaches should take the course” because it had a “big time impact” for her. A second instructor noted that the course “helped me be better at engaging with my students. Using these strategies helped me to get to everyone, even those with language barriers, who don’t understand the material. This course helps you better reach all of your students.” A third instructor noted that the course gave her more practical knowledge of how to teach a course and allowed her “to visualize how I might actually use a specific strategy in one of my courses by letting me see how other professors did it in their classes.”

The remaining two instructors noted slight knowledge gained regarding strategies. One instructor noted that the course assigned labels and added depth to practices already implemented

and utilized within normal instruction, but the instructor became more involved in how to engage students, learning about how to become a more mindful and thoughtful instructor. The remaining instructor indicated that there was minimal impact, noting that “the modules helped me to recall things” from an earlier course and that it was “useful in that respect.”

Participants enthusiastically mentioned a number of strategies during interviews that had either been developed or further strengthened by their involvement in the course. The most commonly mentioned of these strategies involved instructors’ comments on teaching perceptions and strategies for student engagement, followed by a series of other strategies more personalized to individual instructors.

Several of the interviewees noted the course had influenced them to make changes in their practice. This manifested itself in a variety of ways. One instructor noted that the course had motivated her to make small changes in her daily classroom environment. Several instructors elaborated on this topic stating they now gave and received more direct student feedback using strategies such as “I do, You do, We do,” advanced questioning, visualization strategies, and reciprocal interviews.

Another strategy that several instructors mentioned dealt with grading and the syllabus. One instructor noted that she “had revamped her grading practices” based on what she had learned in the course. Several mentioned how learning more about rubrics had influenced this change. The syllabus activities were also viewed as highly appreciated. One participant stated, “The module on creating a syllabus was wonderful. That was the most eye-opening topic.” She noted that she came into teaching with an “old fashioned view that I as the teacher knew everything about how grading and assignments were to be handled—and my students should know nothing.” The course taught her to have higher expectations of students. Another instructor elaborated on this topic stating that she now uses the syllabus more actively, rather than just as a posting to actually orient her students to the class and her expectations. She also now knows the importance of stating learning outcomes in direct, specific language.

Similar to confidence changes mentioned previously, instructors noted an increase in their confidence to employ instructional strategies primarily due to reinforcement of best practices. For example, one instructor offered “my confidence is much higher now – I am much more confident about what I am doing and how I teach because I know I am doing the right thing.” Another instructor noted that the course confirmed that the instructor was “on the right track. You’re already doing something, but someone comes in to show you a better way to do that thing.” This instructor noted that the course honed teaching skills, thereby improving overall confidence as a teacher. Another instructor noted that she already felt very confident in many of the areas covered by the modules but with time, she believes she will incorporate many of the strategies into her teaching.

Summary. Instructors confidence levels increased as compared to the prior year for all items connected to increased knowledge of teaching practices, and was most apparent in instructors’ confidence about planning and designing class sessions and creating a positive learning environments. Across surveys and interviews, participants viewed the course as having

a positive impact on their knowledge and use of instructional strategies, as well as their confidence in using these strategies in their classes.

Reactions to the ACUE Course

Survey respondents were asked to comment on in what ways the course was most effective in increasing confidence and skills in college teaching. Consistently, instructors mentioned the introduction of techniques and strategies, as well as the reinforcement that existing strategies and practices were effective.

- **Strategies and techniques.** Many instructors described the strategies and techniques that they learned helped to increase their skills and confidence in college teaching. For example, as one instructor noted, “ACUE helped me to introduce new teaching techniques that allow the students to become more knowledgeable in their courses. I am not the only one who enjoyed this technique, but the students also like them.” Another instructor commented that, “I found the techniques we implemented in the classroom and the examples brought valuable information I can put into practice for many years to come.” A third observed, “This course helped me organize my teaching skills as well as learn new ones. My confidence always increases with knowledge, but most important so does my self-efficacy.”
- **Reinforcement.** Several instructors commented on their positive experience through the course in that it reinforced many strategies and approaches they had been practicing. For example, one commented that the course “reinforced a lot of what I already do,” while another offered “The ACUE course reaffirmed what I was doing in the classroom and naturally this made me very happy. The ACUE course also allowed me to utilize different techniques that both my students and I enjoyed and made learning an adventure and not a chore.”

Participants were asked to describe their reactions to the course during interviews, such as strengths and suggestions for improvement. Survey items and interview questions also solicited whether participants would recommend the course to others.

Strengths. Participants described the strengths of the course, including the organization, resources, and self-reflection:

- **Instructional approach.** Two instructors noted the approach employed in the course as a strength. For example, one instructor noted that the sequences of the topics prepared her well to begin to learn about the strategies and then apply them. Similarly, another instructor commented, “the fact that you have to implement [the ACUE strategies], that you do it in a class. You can’t go by a previous class as you’re doing the module, you go to your class, and then you reflect. That’s the best part of the course.”
- **Video Resources.** Participants mentioned the value of the resources provided by the course, particularly the videos. The majority (three) of instructors interviewed mentioned the videos as a real strength. One instructor stated, “When I see these

people using it [strategies], it makes me believe that it must be worthwhile.” A second instructor summed up a number of comments stating, “The videos were very good, especially the animated one on Techniques.” Another mentioned the value of handouts that were provided in each lesson.

- Self-reflection. Self-reflection was also mentioned as a course strength by two instructors. Specifically, participants had to think about what they are actually doing in the classroom versus what they think they are doing. An instructor felt that the course had shown “explicit ways for best practices in the classroom,” “helped get rid of bad habits,” as well as “form guidelines for better practice.” An instructor noted that the reflection scores provided to her helped improve confidence and reinforced instructional best practices.

Suggestions for improvement. Participants offered a number of suggestions for improvement dealing with course length and requirements and an individual course component:

- Course Length and Requirements. Two instructors felt the ACUE course was “too long and difficult” and a challenge to both engage with the content and apply lessons learned to course instruction, while also balancing teaching requirements. One of these instructors further stated that “some parts and assignments became routine, and we would complete them only to get them done, sometimes rushing through the material simply to finish.” Another instructor noted that two questionnaires per module were too much as the questions were often not easy to answer, noting “I’m literally guessing at answers to get through it.” Two instructors later noted that while they were informed they would need to dedicate approximately five hours per week to complete the course in a semester, they estimated spending 8-10 hours each week.
- Course Components. The only suggestion offered by one instructor pertained to removing the Misconceptions portion of each module as it was not perceived as useful.

Survey respondents also offered areas of need or interest in teaching which the course did not address. An issue mentioned multiple times by instructors was the need for more guidance regarding students who were underachieving or unmotivated to learn. For example: “I could have used much more information on helping students with external and internal motivations,” and also, “More concentration on how to deal with students performing below college level.” Similarly, several instructors also mentioned the need for a more learner-centered approach, one which considers social, cultural, emotional, and academic idiosyncrasies. As one instructor stated, “There simply cannot be a ‘one size fits all’ model. Each individual learns in their own way.” However, almost half of all respondents stated that the ACUE course addressed all of their needs or issues.

Overall perceptions. Survey respondents indicated positive perceptions of the course (See Figure 4).

- The majority of instructors (91.7%) agreed (50.0% strongly) that the ACUE course increased their knowledge of and skills in using effective teaching techniques and practices.
- Most instructors (79.2%) agreed (50% strongly) that the ACUE course has increased their enjoyment of college teaching.
- Nearly all (95.8%) participants agreed (83.3% strongly) that they would recommend the ACUE course to colleagues.

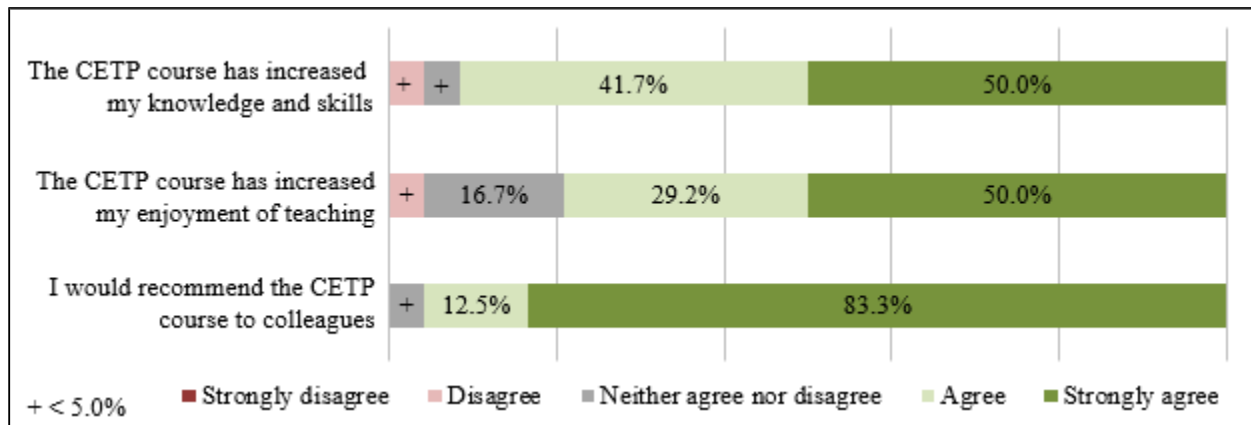


Figure 4. Response frequencies for items regarding instructors’ perceptions of the course.

Interviews corroborated survey responses. Four of the instructors interviewed stated they would recommend the course to other instructors. Three instructors felt the course would be particularly valuable for new teachers to higher education or those that had not taken a similar course previously. One of these instructors further suggested that the course be made available to public and private school teachers as it would help them be better prepared for teaching in their classrooms.

Other instructors thought that the course was effective for both new and experienced teachers. One noted,

It gives a good jumping off point and even if you’re an experienced teacher . . . it would be a great refresher course, a chance to revisit ideas that could make you a more effective teacher. A lot of the material was very up-to-date. If the developers continue to update it over time I think it could be a long-term source of information for teachers.

In addition, one instructor offered that she “told the Dean, I would highly, highly recommend this class for every teacher—especially new teachers.” One instructor indicated they would recommend the course, though with a caveat:

If you have trouble managing your workload and time, you must know up front the amount of time that it will take to get the most out of this class. Watching the videos and doing the reflections papers is easy, but using what you learn while you are teaching five

courses, you will feel crunched for time. I would recommend the course, but I would tell others emphatically, consider taking one module per week rather than two per week.

Course Evaluations

Aggregate student course evaluations from baseline (fall 2015) to fall 2016 remained relatively stable within courses taught by ACUE instructors (see Table 3). Little change was observed for students' perceptions of instructor quality before the course and at the end of the first semester while instructors were enrolled in the course. There were more noticeable changes in students' perceptions of their instructor between baseline course evaluations and the spring 2017 semester, the semester after the course was completed. Students' ratings of instructors for all 15 survey items improved across time points. The most substantial improvements were for instructors regularly informing students regarding their performance (+0.15), the instructor being concerned with students' progress in the course (+0.13), the assignments help students learn the material (+0.11), and the instructor making the course interesting (+0.11).

Table 3.
Student course evaluations for ACUE course instructors.

Question	Fall 2015 (Baseline)		Fall 2016		Spring 2017	
	M	SD	M	SD	M	SD
1-The instructor encourages me to learn.	3.80	0.54	3.84	0.49	3.91	0.36
2-The instructor helps me to see the purpose of this course.	3.79	0.54	3.80	0.53	3.88	0.45
3-The instructor is concerned with my progress.	3.71	0.62	3.75	0.60	3.85	0.46
4-The instructor informs me regularly about how I am doing in this course.	3.66	0.71	3.68	0.70	3.80	0.55
5-The instructor treats me with respect.	3.85	0.47	3.88	0.43	3.91	0.35
6-The instructor is available for individual help during office hours or by appointment.	3.81	0.52	3.84	0.49	3.86	0.45
7-The instructor creates an atmosphere that encourages me to learn.	3.77	0.58	3.79	0.56	3.87	0.43
8-The instructor makes this course interesting.	3.74	0.63	3.75	0.62	3.85	0.47
9-The instructor presents the subject matter clearly.	3.76	0.59	3.80	0.57	3.84	0.50
10-The instructor's assignments help me learn the material.	3.75	0.59	3.76	0.59	3.87	0.44
11-The instructor makes good use of class time.	3.81	0.55	3.80	0.57	3.85	0.48
12-The instructor discussed the grading policy at the beginning of the term.	3.87	0.43	3.86	0.46	3.88	0.43
13-The examinations are graded fairly.	3.83	0.48	3.82	0.51	3.88	0.41
14-The instructor responds effectively when asked questions about the subject matter of this course.	3.82	0.49	3.83	0.51	3.87	0.43
15-The instructor is prepared for class.	3.88	0.42	3.85	0.48	3.88	0.43

In addition to a longitudinal examination of student evaluations of ACUE instructor courses, a comparison of these instructors with all MDC instructors was conducted. The results of t-tests on mean ratings indicated that at baseline (fall 2015) and time two (fall 2016), there was no difference in students' perceptions of CETP and non-CETP instructors. At time three (spring 2017), CETP course evaluations were 0.12 points more positive than those of non-CETP students, a difference that was statistically significant ($p < .05$). In addition, while course ratings for non-CETP instructors remained relatively constant over time, course ratings for CETP instructors improved by 0.08 points on the survey scale from baseline to time three (spring 2017).

Table 4.

Average ratings for the 15 student course evaluation survey items for ACUE instructors and all MDC instructors.

	Fall 2015 (Baseline)		Fall 2016		Spring 2017	
	M	SD	M	SD	M	SD
ACUE instructors	3.79	0.06	3.80	0.05	3.87*	0.03
All MDC instructors	3.75	0.06	3.75	0.07	3.75	0.06

* $p < .05$

Discussion

In the sections below, we will synthesize and interpret results relative to the major evaluation questions that guided the study.

Impact of the ACUE Course

Instructors indicated that they had learned new strategies from the ACUE course, which impacted their levels of confidence in their preparation for college teaching and confidence in using a variety of instructional strategies. For experienced instructors, the course served as an important reminder of practices instructors may have learned previously but may not have made part of their regular teaching. For those relatively new to teaching in higher education, the course introduced new strategies and approaches to facilitate learning that instructors could relatively easily implement in their classroom instruction. Given the reinforcement of previously learned practices and teaching of new strategies, it is not surprising that instructors reported increases in their confidence for both college teaching preparedness and use of instructional strategies.

Our findings regarding the impact on teaching practices were consistent with the logic model (see Figure 1). In addition to reported changes in their practices, student course evaluations reflected more positive perceptions of ACUE instructors between the pre- course semester and the semester after instructors participated in the course. In addition, student course evaluations of ACUE instructors were significantly more positive than MDC instructors that did not enroll in the course. Further research should examine student course evaluation data at the

instructor level, rather than aggregate, in order to establish a causal relationship between ACUE course participation and student course evaluations.

Perceptions of the ACUE Course

Instructors had positive perceptions of the ACUE course. Instructors viewed the course as well organized with a variety of helpful resources. In addition, the course prompted instructors to reflect on the practices they implemented. Experienced instructors viewed the course as a valuable refresher. For others, the course was an effective means for them to learn of instructional strategies and approaches to ensure student success. Importantly, there was general consensus among all instructors that the course increased their knowledge of and skills in using effective teaching techniques and practices. Nearly all would also recommend the course to colleagues.

Conclusions and Recommendations

Based on the findings from survey responses and interviews, overall conclusions are:

- Student course evaluations reflected more positive perceptions of instructors after participating in the course and were also more positive as compared with MDC instructors not participating in the course.
- Both seasoned and new instructors found the course to be of value, whether serving as a refresher for previously acquired information or as new information on effective teaching practices.
- Instructors reported increased confidence in college teaching preparedness. Confidence levels most strongly increased over the prior year for instructors feeling confident that they are an effective teacher, their ability to create supporting learning environments, and their ability to grow as an instructor.
- Confidence in teaching abilities increased and was most apparent in instructors' ability to plan and design class sessions and creating a positive learning environment.
- Instructors had highly positive views of the course due to the organization, resources, and self-reflection and indicated strong agreement that they would recommend the course to colleagues.
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Recommendations include:

- Consider adapting the pacing to individual instructors' needs and teaching responsibilities. For instructors with heavy teaching loads, slower pacing might be beneficial.

Appendix A: College Teaching Survey

A. Confidence in and Preparedness for College Teaching

Please indicate for each of the following (a) your degree of confidence in the particular trait or ability noted and (b) the degree to which that confidence has changed from last year to now. Last year refers to before the Fall 2016 term/semester began.

I feel confident that I am an effective teacher.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
I feel confident that my classes are well liked by students due to my teaching abilities	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
I feel confident about my ability to grow as an instructor (learn new strategies, revise less successful ones, etc.)	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
I feel confident about my ability to create a supportive learning environment for students (e.g., through communications, availability, knowing them as individuals)	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
I feel confident that students in my classes learn more than do students in similar classes taught by other instructors.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
I feel confident that I am able to increase students' persistence to achieve	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher

B. Teaching Skills

Indicate your confidence in your skills for using each of the following instructional strategies.

Ability to plan and design effective class sessions	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Ability to make learning engaging.	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Ability to create a positive learning environment	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Promote students' higher order thinking	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Helping students to become more self-directed learners	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Using assessments to inform instruction	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Offering feedback to help students improve	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Ability to lecture (present material) in an engaging way	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Ability to stimulate productive class discussion through questioning	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
Ability to arrange and manage small-group discussion	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident

Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher
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C. ACUE Course

The ACUE course has increased my knowledge of and skills in using effective teaching techniques and practices.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The ACUE course has increased my enjoyment of college teaching.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I would recommend the ACUE course to colleagues*	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

*If strongly disagree or disagree, why?

D. Open-Ended

17. In what ways has the ACUE course been most effective in increasing your confidence and skills for college teaching?

18. Are there any areas of need or interest in your teaching which the ACUE course didn't address?

Appendix B: Instructor Interview Protocol

1. For background purposes, please tell me a little about yourself – what department do you teach in, how long have you been teaching, etc.
2. Please describe any Professional Development or Teaching Practices courses you have taken prior to the ACUE course (if any).

Confidence and Preparedness for College Teaching

1. What impact has the ACUE course had on your preparedness to teach college courses?
2. What impact has the ACUE course had on your confidence in your abilities to teach college courses?

Confidence in Teaching Abilities

1. What impact has the ACUE course had on your knowledge of instructional strategies?
2. Which strategies (old and new) in particular were most influenced by your participation in this course?
3. How has your confidence in your ability to employ instructional strategies changed due to the ACUE course?

Perceptions of ACUE course

1. What are the strengths of the ACUE course?
2. What suggested improvements do you have for the ACUE course?
3. Would you recommend the ACUE course to other instructors? Why or why not?

Appendix C: Frequencies and Descriptive Statistics for College Teaching Survey

A. Confidence in and Preparedness for College Teaching

I feel confident that I am an effective teacher.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	M	SD
	4.2%	4.2%	0.0%	33.3%	58.3%	4.38	1.01
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
	0.0%	0.0%	20.8%	41.7%	37.5%	4.17	0.76
I feel confident that my classes are well liked by students due to my teaching abilities	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	M	SD
	0.0%	0.0%	4.2%	45.8%	50.0%	4.46	0.59
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
	0.0%	0.0%	33.3%	29.2%	37.5%	4.04	0.86
I feel confident about my ability to grow as an instructor (learn new strategies, revise less successful ones, etc.)	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	M	SD
	0.0%	0.0%	0.0%	29.2%	70.8%	4.71	0.46
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
	0.0%	0.0%	21.7%	39.1%	39.1%	4.17	0.78
I feel confident about my ability to create a supportive learning environment for students (e.g., through communications, availability, knowing them as individuals)	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	M	SD
	0.0%	0.0%	0.0%	33.3%	66.7%	4.67	0.48
Compared to last year, my confidence about this is:	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
	0.0%	0.0%	20.8%	37.5%	41.7%	4.21	0.78
I feel confident that students in my classes learn more than do students in similar classes taught by other instructors.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	M	SD
	0.0%	4.2%	16.7%	29.2%	50.0%	4.25	0.90

	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	33.3%	33.3%	33.3%	4.00	0.83
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	M	SD
I feel confident that I am able to increase students' persistence to achieve	0.0%	0.0%	4.2%	41.7%	54.2%	4.50	0.59
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	33.3%	25.0%	41.7%	4.08	0.88

B. Teaching Skills

	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Ability to plan and design effective class sessions	0.0%	0.0%	0.0%	37.5%	62.5%	4.63	0.49
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	20.8%	45.8%	33.3%	4.13	0.74
	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Ability to make learning engaging.	0.0%	0.0%	0.0%	33.3%	66.7%	4.67	0.48
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	25.0%	37.5%	37.5%	4.13	0.80
	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Ability to create a positive learning environment.	0.0%	0.0%	0.0%	16.7%	83.3%	4.83	0.38
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	25.0%	33.3%	41.7%	4.17	0.82
	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Promote students' higher order thinking.	0.0%	0.0%	0.0%	45.8%	54.2%	4.54	0.51
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD

Compared to last year, my confidence about this is:	0.0%	0.0%	25.0%	37.5%	37.5%	4.13	0.80
	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Helping students to become more self-directed learners.	0.0%	0.0%	0.0%	50.0%	50.0%	4.50	0.51
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	4.2%	29.2%	41.7%	25.0%	3.88	0.85
	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Using assessments to inform instruction.	0.0%	0.0%	8.3%	50.0%	41.7%	4.33	0.64
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	29.2%	29.2%	41.7%	4.13	0.85
	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Offering feedback to help students improve.	0.0%	0.0%	0.0%	33.3%	66.7%	4.67	0.48
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	41.7%	20.8%	37.5%	3.96	0.91
	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Ability to lecture (present material) in an engaging way	0.0%	0.0%	4.2%	45.8%	50.0%	4.46	0.59
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	37.5%	25.0%	37.5%	4.00	0.88
	Very doubtful	Somewhat doubtful	Neither confident nor doubtful	Confident	Very confident	M	SD
Ability to stimulate productive class discussion through questioning	0.0%	0.0%	4.2%	41.7%	54.2%	4.50	0.59
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my confidence about this is:	0.0%	0.0%	25.0%	45.8%	29.2%	4.04	0.75
	Very doubtful	Somewhat doubtful	Neither confident	Confident	Very confident	M	SD

			nor doubtful				
Ability to arrange and manage small-group discussion	0.0%	0.0%	12.5%	33.3%	54.2%	4.42	0.72
	Much lower	Somewhat lower	About the same	Somewhat higher	Much higher	M	SD
Compared to last year, my Confidence about this is:	0.0%	0.0%	29.2%	33.3%	37.5%	4.08	0.83

C. ACUE Course

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	M	SD
The ACUE course has increased my knowledge of and skills in using effective teaching techniques and practices.	0.0%	4.2%	4.2%	41.7%	50.0%	4.38	0.77
The ACUE course has increased my enjoyment of college teaching.	0.0%	4.2%	16.7%	29.2%	50.0%	4.25	0.90
I would recommend the ACUE course to colleagues	0.0%	0.0%	4.2%	12.5%	83.3%	4.79	0.51