

The Impact of Learning How to Teach for College Professors

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Abstract. In higher education institutions, many faculty members are hired because they are experts in their field of study, but not necessarily individuals who are trained in how to teach. This quantitative quasi-experimental study examined college faculty member's level of methodology training in relation to student satisfaction, current course performance, attendance, the belief in the need for training, and a faculty member's sense of efficacy in teaching. In other words, does having a college professor trained in how to teach matter? The researcher found statistically significant results for student satisfaction, current course performance, and attendance. The faculty member's belief in the need for teaching methodology training showed that 96% (n = 87) of the faculty surveyed felt there was a need to be trained to teach at the college level. Faculty members want to be trained and great things can happen when faculty members develop the skills in "how to teach."

Keywords: teaching practices, adult learning, methodology, faculty development

“Faculty are prepared as scholars, not teachers” (Lowenthal et al., 2012, p. 150). In the United States, college students who enroll in a teacher preparation program take years of coursework in pedagogy, or the art of teaching. In their coursework, future teachers learn how to manage a classroom, how to instill knowledge, how to plan effective lessons, how to engage learners, how to meet the diverse needs of students, and much more. To obtain licensure, pre-service teachers require extensive coursework, as well as hundreds of hours of observation and real-life practice in the field, as well as a full semester of student teaching where they put to practice the skills they learned in their studies. Many states also require teachers to pass not only a content knowledge test in each subject area, but also a pedagogy test, which shows knowledge of teaching methodologies and strategies. Once licensed, many states require continuing education hours to keep an active license. Elementary and high school teachers spend years honing the skills needed to teach and deliver content to others. To teach at the college level at most institutions, one only needs to possess the right degree (Barnes, 1984; Boyer, 1990; Lowenthal et al., 2012; Rosensitto, 1999).

A faculty member at a higher education institution has content knowledge in his or her field of study, yet most are not required to have training on how to deliver that knowledge to others (Gould & Hammond, 2021; Lowenthal et al., 2012). There is no statewide or accredited requirement for higher education faculty that specifically provides instruction on how to teach (Boyer, 1990; Hervas, 2021). Most faculty are not ever taught or trained in how to meet the diverse needs of students in the college classroom.

The purpose of the study was to explore the relationship between the level of teacher methodology training a faculty member received and the level of student satisfaction, course performance, student attendance, and faculty sense of efficacy in teaching. The study explored the impact the methodology training had on these areas.

Adult Learning Needs

There are many facets to teaching, many different types of learners, and many theories to explore when trying to find what is best for the adult learner. Adult learners have different needs than younger students and faculty members need to understand how adults learn (Gaimaro, 2021; Kane et al., 2002; Knowles, 1984). Knowles (1984) pioneered researching the way adults learn. Knowles was an Adult Learning Theorist who studied andragogy, the art and science of adult learning. Knowles believed that adults need reasoning and explanation for the things they learn, and that instruction should be task-oriented and problem-oriented, rather than learning through rote memorization or isolated learning. Caine and Caine (1990) studied the brain and looked at how the brain learns best, research that supported Knowles' theories. The brain learns best from what one experiences, not

just the things one is told. Experiential learning supports the idea of active learning strategies in the classroom (Rima & Rodriguez, 2021). The brain organizes facts and skills in isolation, like those in a lecture, differently. Facts and skills need much more practice, rehearsal, and repetition. "All new information must be worked on before it is stored" (Caine & Caine, 1990, p. 68). Concentrating too heavily on unconnected facts and pieces of data is a very inefficient use of the brain. Knowles stated learning activities should be in the context of common tasks. Caine and Caine (1990) stated that teachers need to simulate real-world experiences as often as possible through collaborative learning, visual imagery, projects, field trips, metaphors, drama, demonstrations, and other interactive and highly engaged learning tasks. Faculty members should not exclude lectures and analysis but should make them a part of the larger experience instead. Faculty members should prioritize discussing real-world application of content, helping students to connect the content to their personal lives or future careers (Blumberg, 2016).

Knowles (1984) believed that the chosen lesson delivery method should consider the wide range of different backgrounds and learners that make up a classroom. The delivery method should also differ from content to content. The activities chosen should allow for different levels of understanding, as well as different types of learners in the classroom. Many college faculty members do not recognize students' learning needs and often rely on outdated and ineffective teaching strategies that adversely affect students' ability to achieve learning goals (Elliott & Oliver, 2016). Adults are self-directed beings. Instruction should allow learners to discover knowledge independently, but with the guidance, support, and help of others (Knowles, 1984). Those who attend college to be teachers learn about teaching and learning theories and methodologies, whereas college professors typically do not receive this training as a part of their required coursework.

College Faculty as Teachers

Stark (2000) and Hora and Ferrare (2012) stated that faculty members rely heavily on their own experience to drive the planning and decision-making in the classroom. Most times, faculty members use the course syllabus and teaching materials from a curriculum committee or a previous instructor to decide what content to cover in the class. The syllabus does not provide guidance in how to teach, only the concepts on which to cover.

Faculty development and training in the area of teaching methodologies is lacking for the college professor (Gould & Hammond, 2021; Hervas, 2021; Powers, 1992). Kane et al. (2002) found that many colleges across the country have dedicated teaching and learning centers, but few have set programs in place that are specific to faculty training on teaching methodologies. Most instructors do not receive professional development training in teaching methodologies, regardless of how well they perform, and when professional development does occur, almost always it

is self-initiated (Kane, 2002). Oleson and Hora (2014) studied faculty willingness to participate in training and found that some faculty members might not see the need for improvement. For some faculty, years of satisfactory teaching were reason enough to not make additional efforts to learn more about teaching practices. Blumberg (2016) conducted a study that revealed that younger faculty members were more open to utilizing learning-centered techniques than older faculty members. Blumberg (2016) believed it would behoove the administration to train faculty in the early stages of teaching higher education or during the onboarding process, rather than having new professors learn how to meet the needs of students through trial and error during the first few years.

Benefits for Higher Education

Higher education institutions have a vested interest in the study. If there is no state requirement or teaching certification for teaching at the college level (Boyer, 1990) and many higher education institutions do not have programs in place for methodology and teaching training (Anderson & Adams, 1992; Gould & Hammond, 2021), faculty members rarely learn the pedagogical practices in how to teach. Faculty members rely on past experiences as students, experiences as researchers, working with mentors, trial and error, and other methods to learn how to teach and deliver content (Gould & Hammond, 2021; Kusch, 2016; Oleson & Hora, 2014). Research shows faculty who participated in formal training exhibit an increase in student outcomes, positive teacher attitudes, and satisfaction with the job (Butcher & Stoncel, 2012; Dixon & Scott, 2003; McArthur et al., 2004; Postareff et al., 2007; Stes et al., 2010).

Research Questions

To gain further knowledge of the impact of teaching methodology training on higher education faculty members, the study explored the following questions:

1. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' satisfaction of the faculty member?
2. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' current course performance?
3. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' attendance?
4. To what extent is there a relationship between the amount of teaching methodology training and the belief that teaching methodology training is needed?
5. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and faculty sense of efficacy?

Methods

Faculty Participants

The population for the study was university faculty members and students in the United States from community colleges, four-year colleges, and career program colleges (Table 1) and different content areas (Table 2). Surveys were distributed to 53 individual faculty members, as well as the department deans from nine different institutions. Snowball sampling was used to gain more faculty participants. To obtain the student participants, the participating faculty members agreed to distribute the survey in their classes. Ninety-two faculty members from 13 different institutions participated in the survey.

Table 1

Type of Institution of Faculty Members

	Frequency	Percent
4-year	33	35.9
2-year	35	38
Graduate Program	11	12
Career Program	13	14.1
Total	92	100

Table 2

Content Area of Faculty Members

	Frequency	Percent
STEM (Science, Tech, Engineering, Math)	12	13.1
Communications	4	4.3
Healthcare	26	28.3
Philosophy	3	3.3
Humanities	4	4.3
Law	1	1.1
Accounting	2	2.2
Education	13	14.1
Psychology	6	6.5
Business	6	6.5
Agriculture	2	2.2
Multiple content areas	13	14.1
Total	92	100

Of the faculty members responding, 62 were female, 27 were male, and three had no gender selected. Fifty-two faculty members were full-time faculty, and 40 faculty members were part-time. The average age of the respondents was 48. The average number of years that the respondents taught at the college level was nine years, with an average of 19 years working in the field in which the respondents taught. Faculty members, on average, taught the course 15 times.

Student Participants

Of the 92 submitted faculty surveys, 22 of the faculty members had students who also responded to the survey. There were 405 responses, of which 373 were complete. Students ranged in age from 17 years old to 63 years old, with an average age of 23. The majority of students were taking the class as a requirement ($n = 284$), rather than an elective ($n = 89$). Course information can be found in Table 3 and Table 4.

Table 3

Type of Degree Program of Students

	Frequency	Percent
Career/Certificate	53	14.2
Associates	127	34
Bachelors	168	45
Master's	19	5.1
Doctoral	6	1.6
Total	373	100

Table 4

Length of Course

	Frequency	Percent
Traditional Semester	302	81
Shortened Semester/Hybrid	42	11.3
Flipped	6	1.6
Online	21	5.6
No response	2	99.5
Total	373	100

Data Collection

For the faculty survey, the researcher adapted survey tools with permission from Rosensitto (1999) and Woolfolk and Hoy (1990). For the student survey, the researcher adapted survey questions with permission from Pintrich et al. (1991), and Purdue University's Instructor Course Evaluation Service (PICES) (2011).

Analytical Methods

Analysis of Covariance (ANCOVA) was used to analyze the influence of different independent variables on the dependent variable, level of training, to see if the two variables were linearly associated. The researcher controlled the study for potential confounding variables of age, motivation, and type of course format.

Limitations

The study presented some limitations. First, the sample size and restricted access to whole campus populations were a limitation. Access to the entire population at each campus was restricted to the number of participants to whom the dean or program chair forwarded the survey. Of the 92 completed faculty surveys, only 22 of the faculty had responses from the students in their classes, therefore, the sample size for the student satisfaction, performance, and attendance questions was a small sample.

Another limitation was that participation in the study was voluntary and did not necessarily represent a diverse cross-section of the pool of participants. The researcher did not have personal connections to the respondents; therefore, faculty members had no obligation to complete the survey. Kelley et al. (2003) found that surveys have a better completion rate when distributed by someone with a personal connection.

When faculty members are asked to do extra work, it is typically the motivated faculty members who volunteer. Faculty members who tend to do the minimum would not likely have taken the time to take the survey. Therefore, the survey may have been flooded with faculty who were, by nature, some of the more dedicated faculty members (Kelley et al., 2003).

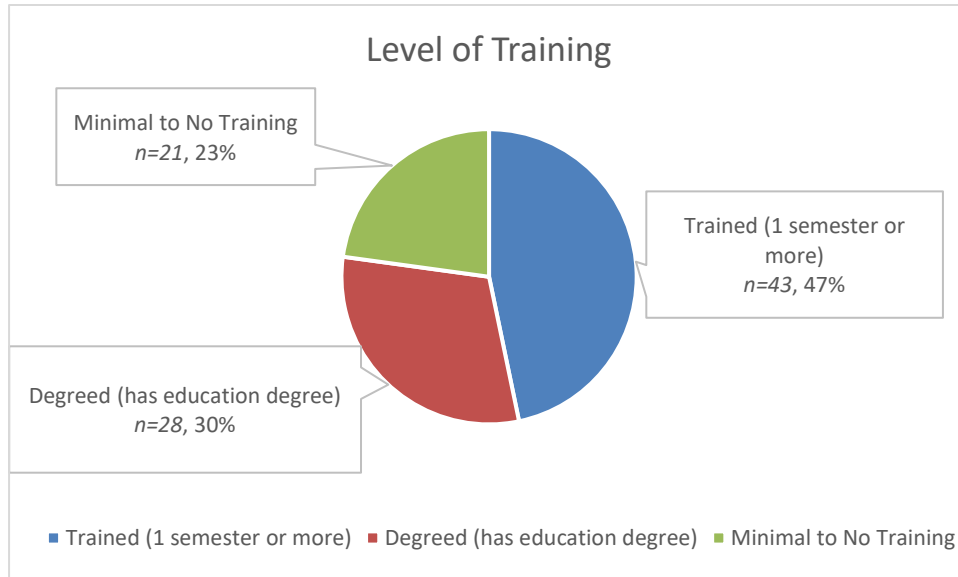
The last limitation was that grades and attendance were self-reported by the student. The faculty members did not have to verify if the information given was accurate. The survey was launched to different schools at different times so while one student may have reported their grades and attendance from the midpoint in class, another student from a different school may not have reported grades or attendance during the final week of class. Therefore, this data may have been collected at inequivalent times.

Findings

To determine if there is a relationship between the amount of teaching methodology training a faculty member has and student satisfaction, current course performance, student attendance, the belief that training is needed, and faculty efficacy, first the researcher needed to categorize each faculty member who completed the survey (Figure 1).

Figure 1

Level of Training of Participants



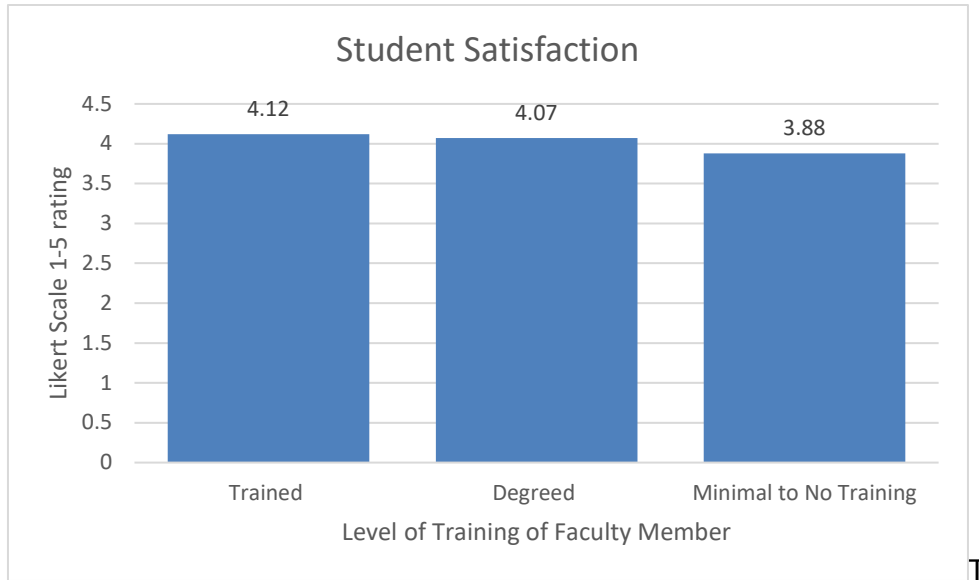
Note. Trained faculty are faculty who had one semester or more of teaching methodology training. Degreed faculty are faculty with a Bachelor's or Master's Degree in Education.

The researcher performed the current study to ascertain whether higher education faculty members' level of teaching methodology training had any relationship to student satisfaction, class performance, student attendance, perceived need for methodology development, and faculty efficacy in teaching. Statistical significance was found in the areas of student satisfaction, faculty confidence in teaching, and the perceived need for training.

Statistical significance was found in the level of student satisfaction, as seen in Figure 2. Students who were enrolled in classes taught by faculty members with an education degree, or faculty members who had formal training in teaching methodologies had a higher satisfaction score than those students enrolled in classes where the faculty member did not have any teaching methodology education or training.

Figure 2

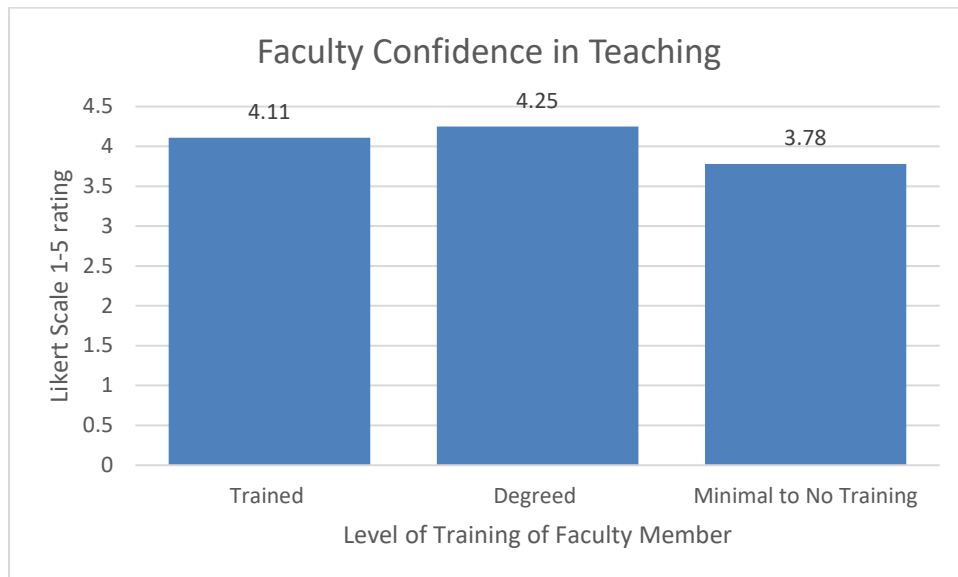
Student Satisfaction



Statistical significance was found in faculty confidence in teaching, as seen in Figure 3. Faculty members who had either an education degree or formal training in teaching methodologies had more confidence in their ability to teach. Faculty members who did not have any teaching methodology training were not as confident in their teaching abilities.

Figure 3

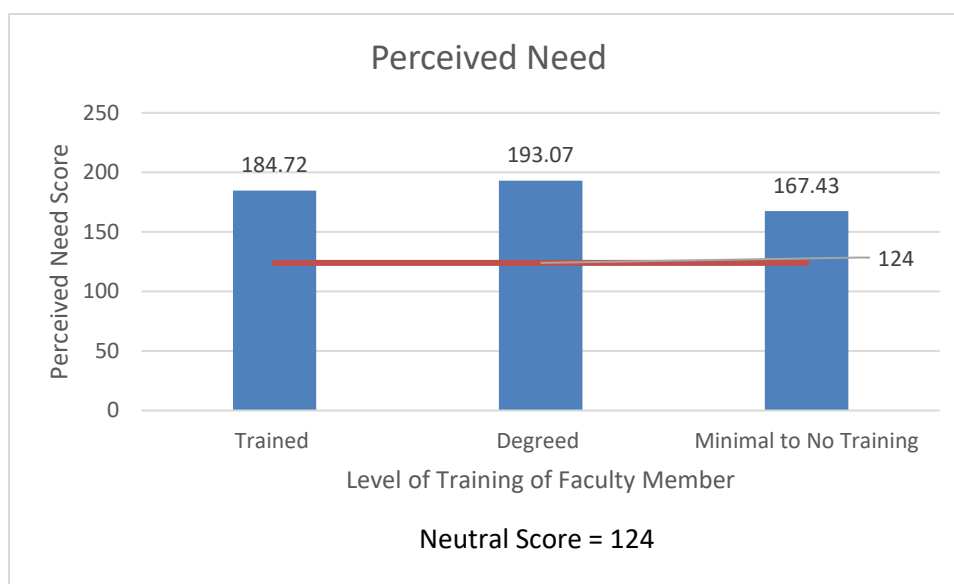
Faculty Confidence in Teaching



Statistical significance was found in the perceived need for training, as seen in Figure 4. Faculty members overwhelmingly believed in the need for faculty development training with 96% ($n = 88$) of faculty believing that being trained should be a requirement of teaching at the college level. The median of the data was 124, meaning that any score below the median felt that training was not needed, whereas scores above the median believed training was necessary. Only 4%, or four faculty members, scored below the midpoint, meaning only four faculty members felt that training was not necessary. Of these four, all four members were in the category of having minimal to no teaching methodology training. Only one of the four participants attended a teaching methodology workshop. Using the means of each group, it can be stated that the more training a faculty member had, the more the faculty member felt that training was needed. Faculty members may feel better prepared to teach their classes if they have some level of teaching methodology training.

Figure 4

Perceived Need



Implications and Recommendations

Including some form of formal teaching methodology training at the college level not only supports the belief that many have about the need for training but having trained college professors may also have an impact on faculty confidence in teaching and increased student satisfaction. Many colleges have adopted mentorship programs, but these programs typically do not include the ins and outs of how to plan and deliver a quality lesson to meet the needs of today's college students. College institutions should consider a formalized training program for new

faculty members to learn a variety of teaching methodologies. Master and Doctoral degree programs may also benefit from including some formal curricula designed to prepare faculty candidates in the methodology of teaching. If college faculty members have some basic training, experience, and practice with teaching college students, faculty may feel better equipped to manage the intricacies and unique circumstances that arise in the day-to-day life of a college professor. Having new college faculty members complete a training program will help to ensure that the next generation of college students are taught by professors who are not only subject area experts but are also highly prepared teachers with an arsenal of tools to manage teaching at the college level. It is also recommended that higher education institutions require ongoing and formalized training in teaching methodology and other best practices for current faculty to remain in good standing with the university. Having faculty complete formalized training programs will better prepare college faculty members in how to teach and deliver content in relevant, meaningful, and effective ways. College students may have better success and a better learning experience if instructed by faculty members who have basic teacher methodology training. When students are satisfied with their education, students are more likely to graduate from that institution. Students are also more likely to share with others their positive experiences. Inserting formal teaching methodology training may have an impact on student recruitment and retention. Therefore, it is to a university's benefit to employ faculty members who are both scholars and teachers.

Conclusions

There has been minimal research to determine if a faculty member's level of methodology training has any impact on student satisfaction, grades, or attendance. The survey results suggested, and the research supported, that higher education faculty members have a desire for more formalized training in the area of teaching methodologies (Lowenthal et al., 2012; Rosensitto, 1999). Results reveal that few faculty members received formal teacher methodology training prior to teaching at the college level. Faculty members are prepared as scholars but are not required to show that they are capable of delivering content to others (Boyer, 1990; Lowenthal et al., 2012; Stevenson et al., 2006). The best teachers know their content, but they also know about the process (Weimer, n.d.). The results of the current study showed that when a faculty member is provided with teacher methodology training, there may be an impact on faculty confidence and student satisfaction.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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