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Exploring Learning Styles Expressed In Teaching Philosophies Among Agriculture University Teaching Faculty

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Abstract

Faculty at universities must prepare students to successfully enter the workforce. Preparing students requires effective teaching, but excellence in teaching is complex and can be difficult to achieve. To capitalize on excellent and effective teaching, a teaching philosophy is necessary to embody the teaching faculty members' personal philosophy of student learning in the classroom. The purpose of this study was to explore if a faculty members' preferred learning style is expressed in his or her teaching philosophy statement. Using a mixed methods research design, findings revealed a majority of university faculty members identified an assortment of learning styles based on their teaching philosophy statements. It is recommended that university teaching faculty members engage in professional development opportunities that enhance their teaching philosophy. Experienced university teaching faculty with a diverse teaching philosophy should mentor early-career teaching faculty in developing instruction that incorporates all four learning styles.

Keywords: faculty; learning style; teaching philosophy

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Introduction

The United States workforce is expected to have more people with post-secondary, higher education degrees in the next several years (Georgetown University, 2014). Jobs in the United States will continue to demand post-secondary degrees; by 2020, 65% of jobs will be held by employees with a post-secondary education compared to 59% and 28% of jobs in 2010 and 1973 (Georgetown University, 2014). University teaching faculty must prepare students to enter the workforce successfully (Sankey & Foster, 2012). Preparing students requires effective teaching, but excellence in teaching is complex and can be difficult to achieve (Andrews, Garrison, & Magnusson, 1996). Excellent teaching requires, "content expertise and methodological technique, as well as about participants in the educational enterprise valuing and achieving quality outcomes" (Andrews et al., 1996, p. 101). To capitalize on excellent and effective teaching, a faculty member should have a teaching philosophy statement that embodies the personal belief of student learning

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in the classroom (Schonwetter, Sokal, Friesen, & Taylor, 2002). Not only is a teaching philosophy important for guiding student learning, but teaching philosophies have become a requirement for faculty position applications (Schonwetter et al., 2002).

A teaching philosophy can simply be defined as written statements delineating beliefs and principles of the teacher to guide teaching and learning (Fitzmaurice & Coughlan, 2007). More specifically, a "teaching philosophy statement is a systematic and critical rationale that focuses on the important components defining effective teaching and learning in a particular discipline and/or institutional context" (Schonwetter et al., 2002, p. 84). A teaching philosophy should describe why the instructor teaches the way that they do and defines the goals or beliefs that support their teaching (Fitzmaurice & Coughlan, 2007). Overall, a teaching philosophy should clarify "(a) what good teaching is, (b) provide a rationale for teaching, (c) guide teaching behaviors, (d) organize the evaluation of teaching, (e) promote personal and professional development, and (f) encourage the dissemination of effective teaching" (Schonwetter et al., 2002, p. 87).

A sound teaching philosophy should address six main areas in the written document. These key areas include: (a) definition of teaching, (b) definition of learning, (c) view of the learner, (d) goals and expectations of the student-teacher relationship, (e) discussion of teaching methods; and (f) discussion of evaluation (Schonwetter et al., 2002). A well-written teaching philosophy statement can bring to light the multifaceted interaction between the educator and students and combine personal characteristics, context of the education, and learning ideologies to result in effective teaching (Schonwetter et al., 2002). Traditionally, those applying for teaching jobs at the university level do not receive adequate guidance when writing a teaching philosophy, even if it is an application requirement (Schonwetter et al., 2002). A teaching philosophy can serve as a point of evaluation for not only self-reflection, but also for administration (Schonwetter et al., 2002). A teaching philosophy statement can serve as an evaluation form when a faculty member moves through the tenure and promotion process.

Since a teaching philosophy stresses the importance of the relationship between teaching and learning, the educators' own learning style should be considered when evaluating their teaching philosophy. Currently, there is limited research on how teaching faculty members' own learning styles influences their teaching philosophy.

Literature Review

Kolb's (1984) learning styles served as the conceptual framework guiding this research. Learning styles are derived from experiential learning theory, originally coined by Dewey (1938) and later elaborated on by Kolb (1984). These styles are considered a state rather than a type to account for the individuality humans possess (Kolb, 1984). According to Kolb (1984), learning occurs through a process where new experiences continually shape and influence acquired knowledge. In order for any learning to occur, a person must move through various aspects of the learning cycle to attain knowledge (Kolb, 1984). These stages, or learning modes, follow four main points: (a) concrete experience, (b) reflective observation, (c) abstract conceptualization, and (d) active experimentation (Kolb, 1984). When a person enters the concrete experience stage feelings are emphasized over thinking because of the direct involvement with the experience (Kolb, 1984). Next, in the reflective observation stage, one typically observes and focuses on reflecting about the concrete experience. During this phase of the learning cycle, understanding phenomenon is emphasized more than technical application (Kolb, 1984). After reflecting, a person places more importance on thinking rather than feeling in the abstract conceptualization stage. Generalizations and hypotheses are formed to analyze the experience in a systematic way (Kolb, 1984). Finally, in the learning cycle, the person actively experiments with the results of the conceptualization, which

create new experiences. An emphasis is placed on doing and practical application as opposed to observing and reflection (Kolb, 1984). Once the person completes this last stage, the cycle of learning begins again with the new experience created in the active experimentation stage (Kolb, 1984). A learning style may also be classified as either diverging, assimilating, converging, or accommodating (Kolb & Kolb, 2005).

When a person has a convergent learning style, their strong learning abilities lie in abstract conceptualization and active experimentation (Kolb, 1984). People who fall in this learning style appreciate the real world application of learning through solving problems and decision-making (Kolb, 1984). They prefer single answer problems and questions (Kolb, 1984). In addition, people with a convergent learning style do not prefer to handle social and interpersonal situations, but would rather solve technical problems (Kolb, 1984). Opposite of the convergent learning style is a person who has tendencies of the divergent learning style. A divergent learning style places emphasis on concrete experience and reflective observation (Kolb, 1984). People with a divergent learning style value creative processes and the ability to make meaning of the world around us (Kolb, 1984). Therefore, observing is done more than action from those with a divergent learning style. Someone with a divergent learning style is able to take many perspectives and relationships and put them into a meaningful form. Divergent learning styles excel with brainstorming activities and take an interest in relating to people while being feeling-oriented and imaginative (Kolb, 1984).

Next, the other two learning styles, assimilation and accommodative, are also opposites of each other. When a person has an assimilation learning style, they focus on abstract conceptualization and reflective observation (Kolb, 1984). Much like a convergent learning style, learners with an assimilation learning style focus less on practical implications and are concerned with logical theory, ideas, and abstract concepts. Assimilation people also have strengths in inductive reasoning and their ability to make observations and explanations in the form of a theoretical model (Kolb, 1984). Conversely, the accommodative learning style emphasizes concrete experience and active experimentation. This type of learning style instigates doing tasks, carrying out plans, and getting into new experiences, as opposed to reflecting on experiences (Kolb, 1984). Those with an accommodative learning style will adapt immediately to changes. People who exhibit an accommodative learning style rely on people and do relate to them, but they also solve problem using trial-and-error verses analyzing the experience on their own (Kolb, 1984).

Previous literature has shown those with certain learning styles exhibit learning differently, and they prefer different learning methods. In one study, researchers investigated the relationship between learning style and learning preferences (Loo, 2004). Results indicated convergers preferred to work in groups more than assimilators, and divergers preferred to partake in applied experiences more than assimilators (Loo, 2004). Both of these findings are concurrent with Kolb's (1984) descriptions of these styles. Doing learning types, such as accommodating and converging learning styles, favored participating in group work significantly more than diverging and assimilating learning styles (Loo, 2004). Between all learning types, hands-on type experiences and problem solving were preferred methods of learning as opposed to writing or presenting on a topic (Loo, 2004). Recommendations from this study included using many learning methods in the classroom. Instructors should not focus on the link between learning style and method, specifically, but rather create a classroom that encompasses a variety of teaching and learning methods (Loo, 2004).

In a more recent study, undergraduate students who participated in an international experience reflected on their personal learning style through their reflective journals (Lamm et al., 2011). Through a content analysis of the participants' journals, students were found to have similar tendencies outlined by Kolb (1984) for each of the four learning styles they identified with through

the Kolb Learning Style Inventory (LSI). In this study, assimilators were found to organized, orderly, and logical (Lamm et al., 2011). Lamm et al. (2011) noted the participants that identified as assimilators lacked personal reflection in their journals, which is concurrent with Kolb's interpretation of someone with an assimilation learning style (Kolb, 1984). Assimilators, in this study, preferred both lecture and field work. Students who identified as divergers also followed suit in Kolb's learning style description. These students were much more focused on interactions with people, asking questions, expressing their feelings through their reflections. They also expressed open-mindedness through their reflections (Lamm et al., 2011). Those with a divergent learning style, however, countered Kolb's description of a diverger by not enjoying working in groups (Lamm et al., 2011). Accommodators placed an emphasis on personal communication and enjoyed time with the local Costa Ricans. Furthermore, accommodators preferred physically engaging in the lessons as opposed to classroom work time (Lamm et al., 2011). Finally, convergers demonstrated typical traits of being logical and methodical in their journaling (Lamm et al., 2011). Personal relationships were not included in their reflections, and the reflections were not necessarily reflective but more of a recap of what occurred that day. Convergers stated that they enjoyed hands-on learning, but also appreciated scientific data and the background information on topics discussed (Lamm et al., 2011).

Smith and Rayfield (2017) examined how learning style can transition from being a student in the classroom to a student teacher. Overall, results showed after the student teacher experience, more students fell into the initiating style, which is a part of the accommodating style (Smith & Rayfield, 2017). The largest mean change for learning mode before and after the student teaching experience was active experimentation (doing). The researchers discovered no student scored exactly the same from pre- to post-test when given the learning style inventory, indicating there was change for all students' learning styles prior to and after student teaching (Smith & Rayfield, 2017). Based on these findings, Smith and Rayfield (2017) suggested learning styles can be a helpful tool in placing student teachers in cooperating schools, thus serving as a guide for student teachers to reach their full potential.

Sankey and Foster (2012) conducted a content analysis of award-winning educators and found 11 key elements that were similar across the teaching philosophies. Most educators in the study ranked as full professor, had a 26 to 75% teaching appointment, and all were teaching faculty within a college of agricultural and life sciences. The elements were student centeredness; instructional variabilities; build student rapport; conducive learning environment; professional teaching commitment; enthusiasm; expert in subject matter; role model; organization and clarity; provide learning opportunity; and technological integration (Sankey & Foster, 2012). However, they raise the question could a teacher actually identify these traits in the classroom. Sankey and Foster (2012) also stress the importance that if an element is not present in the philosophy, it probably is not being practiced in the classroom. Therefore, not practicing these critical teaching beliefs and attitudes could impact student achievement (Sankey & Foster, 2012).

Another study looked at the actual strategies educators used in the classroom to prepare students with applied skills employers deemed as important to enter the workforce (Rateau, Kauffman, & Cletzer, 2015). These strategies reflected the elements found in the teaching philosophy element found in Sankey and Foster's (2012) study. These strategies included: "(a) demonstrate an enthusiasm for student learning; (b) experiment actively with new ideas for educational practice; (c) approach teaching with a guiding mentality more than a directing mentality; (d) foster student ownership of learning; (e) stay abreast of new developments in recommended educational practices; and (f) invest time and resources to overcome barriers to change" (Rateau et al., 2015, p. 59). Rateau et al. (2015) claim these strategies help students gain

critical thinking, problem solving and teamwork skills by the educator incorporating these strategies into the classroom and ultimately their teaching philosophy.

Furthermore, it is critical to recognize the teaching faculties members' own learning style present in their teaching philosophy because one study indicated architecture students' learning styles can be changed by the influence of their teachers' own learning style (Tucker, 2008). Tucker (2008) cited other researchers who implied students with matching learning styles as their teachers have higher achievements in the classroom as opposed to a student with an opposing learning style. In this study, most teachers fell in the *Southern* dimension (converging and assimilating) of Kolb's Learning Cycle (Tucker, 2008). From the results of this study, Tucker (2008) claimed we might be preparing students to be academics verses practitioners with the shift of learning style that eventually matches the teachers. Therefore, it is critical for educators to be aware of their own learning style and how it is reflected in their teaching philosophy. Their own learning style may be influencing their teaching style and philosophy, which could either promote or inhibit some students' success in the classroom. Eventually, if not addressed, it could affect the success of the student past the classroom.

Purpose & Objectives

The purpose of this study was to explore if a faculty members' preferred learning style is expressed in his or her teaching philosophy statement. The following objectives guided this study:

1. Determine the learning style for each university teaching faculty;
2. Determine if personal learning style of university teaching faculty influences their teaching philosophy.

The American Association for Agricultural Education (AAAE) National Research Agenda Priority Area 4: Meaningful, Engaged Learning in All Environments indicated that, "understanding of learning and teaching environments could result in the development of present day best practices and research-based pedagogies" (Edgar, Retallick, & Jones, 2016, p. 39).

Methods

Using a pragmatistic approach, a convergent mixed methods design was used for this study (Creswell & Creswell, 2018). A quantitative instrument was used to measure university faculty members' preferred learning style. University faculty members submitted their teaching philosophy documents that were used for qualitative data analysis based on learning style themes.

University of Florida faculty members (N = 30) were voluntarily enrolled in teachers college course. The purpose of the course was to assist University of Florida faculty members engage in interdisciplinary efforts to improve teaching skills by engaging in best practices for learner-centered instruction. The course addressed a plethora of topics in teaching and learning, which included the duties and responsibilities of University of Florida teaching faculty, the tools for creating a well-developed teaching philosophy statement, and reflecting on instructional pedagogies used in the classroom. The faculty members met for 11 weekly, face-to-face meetings during the fall semester. Faculty members with teaching and learning expertise, as well as the Dean and Associate Deans, facilitated the meetings. Faculty members were expected to complete eight course assignments throughout the course. Some examples of course assignments included: (a) daily lesson plan, (b) course syllabi, (c) teaching philosophy statement, and (d) department and program goals. Twenty of the 30 faculty members who participated in the program consented to participating in this study. Thus, 67% of the participating faculty were represented in the study.

The faculty who participated in the study were mostly male (*f* = 13; 65%), at the Assistant Professor rank (*f* = 20; 100%), and held at least a 10% teaching appointment in the college (*f* = 20; 100%).

Instrumentation

University of Florida faculty members were asked to develop a teaching philosophy statement as an assignment for the course. Faculty members were asked to address the following questions in developing their teaching philosophy statement: (a) What do you teach?, (b) Why do you teach?, (c) How do you view students?, (d) How do you teach?, and (e) How do you know if you have been successful? The teaching philosophy statements submitted were each approximately one to two pages in length.

In addition to teaching philosophy statements, faculty members were asked to complete the Kolb Learning Style Inventory (LSI; Kolb, 2007). The instrument consists of 12-items and determines the participants' preferred learning style as either (a) accommodating, (b) diverging, (c) assimilating, or (d) converging (Kolb, 2007). The items measure how participants prefer learning experiences, either through concrete experiences (CE) or abstract conceptualization (AC). Further, participants are grouped based on how they deal with learning experiences ─ either through reflective observation (RO) or active experimentation (AE). The 12-items measure participants' agreement to a series of statements on a 4-point ranking scale ranging from 1 = *Least Like You* to 4 = *Most Like You*. Participants' are grouped into one of the four learning styles based on their total raw scores, which consists of a total score of 120. The reliability estimates were calculated *a priori* using Cronbach's alpha. The reliability estimates for the constructs of interest were $\alpha = .82$ for the concrete experiences score, $\alpha = .83$ for the abstract conceptualization score, $\alpha = .73$ for the reflective observation score, and $\alpha = .78$ for the active experimentation score.

Data Analysis

Quantitative data was collected and analyzed for scores based on how participants take in experience (AC minus CE), and how participants deal with experience (AE minus RO). Using these scores, participants were grouped into one of the four learning styles. Data was further analyzed using SPSS Statistics 25 to provide descriptive statistics on the learning styles of each university teaching faculty, thus providing further insight in the investigation of objective one. To analyze the qualitative piece, the 20 teaching philosophy statements were coded for key words, phrases, and sentences through a content analysis of learning styles using MAXQDA 2018. The characteristics of each learning style used in each philosophy were detailed in the literature review. A content analysis was chosen for objective two to understanding of the characteristics of each learning style in the faculty members teaching philosophy (Ary, Jacobs, & Sorensen, 2010). Content analyses are used to draw inferences and determine the frequency of themes in the piece of communication, and more specifically, teaching philosophies in this study (Riffe, Lacy, & Fico, 2005).

Two graduate students and an agricultural education faculty member analyzed each teaching philosophy statement by coding each learning style by its characteristics present. The first graduate student was a M.S. student with an undergraduate degree in agricultural education focused in teacher preperation. The second researcher was an M.S. student in agricultrual communication, and is now an agricultural communication lecturer in a university setting. The faculty member works directly with the teachers college course, and recognized the need to reduce personal bias. The two graduate students separately analyzed the data in order to lessen researcher bias and ensure the results were reliable (Ary et al., 2010). Both coders were familiar with Kolb's learning style, which served as the training of the coders (Ary et al., 2010). The coders analyzed four, randomly

selected philosophies together (20%) as part of the training to ensure inter-coder reliability (Lombard, Snyder-Duch, & Bracken, 2002).

After the learning styles presented in the teaching philosophy statements were identified by each coder, the two coders and faculty member went through each code to ensure congruency on identified learning styles. Using the teaching philosophy statements, coders determined each participants' learning style based on the aggregate number of learning styles identified in the teaching philosophy statements to determine themes. Participants who were exclusively coded as having two equally identified learning styles were reported as exhibiting both learning styles based on their teaching philosophy statement. Participants who were identified as having numerous learning styles without a rich concentration in one learning style in their teaching philosophy statement were identified as inconclusive. The qualitative data collected from the teaching philosophy statements and the quantitative data collected from the LSI were then compared in the findings section.

Findings

Learning Style Identification

For objective one, descriptive statistics were calculated to describe the learning style of each university teaching faculty member based on the Kolb LSI instrument. Table 1 shows the four learning styles for all participants. Among the sample (n = 20), 40% (f = 8) of the participants had an assimilating learning style, 35% (f = 7) had an accommodating learning style, and 25% (f = 5) had a converging learning style. It should be noted there were no diverging learning styles among the sample.

Table 1

Teaching Faculty Members' Preferred Learning Style (n = 20).

Learning Style	*f*	%
Assimilating	8	40%
Accommodating	7	35%
Converging	5	25%
Diverging	0	0%
Total	20	100%

Teaching Philosophy Statements

For objective two, qualitative data was collected and analyzed by coding based on each participants' teaching philosophy statement. Objective two was to determine if personal learning style of university teaching faculty influenced their teaching philosophy statement. The following analysis specifies which of the four learning styles that each of participants' aligned with based on the aggregate number learning style identified according to their teaching philosophy statement. Participants who may have had an equal number of learning styles identified within their teaching philosophy statement may be listed in more than one learning style. Participants whose teaching philosophy equally identified with multiple learning styles may be listed as inconclusive.

Accommodating. An accommodating learning style was the most frequently identified learning style based off sampled teaching philosophy statements**.** Participants 1, 4, 6, 8, 9, 12, 13, 18, and 19 were identified as accommodators based off their teaching philosophy statement. These participants discussed providing new experiences in the classroom by giving students hands on experiences. An overwhelming number of the participants indicated that new experiences, either in or outside of the classroom, provided an active learning environment that was conducive to solving real-world issues. Participants stated that the best way to "enable students" (Participant 13) to these new experiences were to "get their hands dirty," (Participant 12) and providing a "field oriented, hands-on" (Participant 4, 8, 18) approach in their lessons. Participant 8 went even further by sharing that they had found the best success in teaching by promoting a "learn by doing" (Participant 8) approach.

Many of these participants stated that they promoted learning through trial and error. Participant 9 went even further by stating that they encouraged their students to "think positive about failures but learn from mistakes" (Participant 9). Participant 1 shared that by providing this opportunity of failure to students, they believed that this created a "dynamic learning environment that challenges existing disciplinary boundaries" (Participant 1). Additionally, this participant shared that providing students the opportunity to experiment with new ideas, they found students were able to pursue their learning, "from a place of personal fulfillment."

Diverging. The second emerging learning style identified was a diverging learning style. Participants 1, 6, 9, 13, 14, and 18 were identified as divergent based off their teaching philosophy statement. These participants discussed the value of incorporating creative and open-minded dialogue with students to promote effective instruction. Participants stated that by allowing students to, "ask questions and explore [their] innate curiosity," (Participant 1) it has prompted students to be, "independent, creative [in] thought to develop research questions relevant to critical topics" (Participant 13). These two statements sum up the overall theme from the participants identified. Participant 6 summarized this teaching philosophy best by stating, "teaching is about student learning, and the development of creative teaching techniques." These statements can infer that participants value innovation, imaginativeness, and original thought processes from students. Another overall theme shared by these participants was their willingness to incorporate students of diverse backgrounds into their teaching. Participant 6 stated, "I recognize that students enter the classroom at different developmental levels and from diverse backgrounds." Participant 13 also shared a similar experience by stating, "I have had the pleasure to work with students with varying economic and ethnic backgrounds in English, Spanish, and Portuguese during my academic career." Participants reflected on their experience with students by sharing that, "learning their cultures and education paths" (Participant 9), has lead these participants "toward a life-long pursuit of knowledge" (Participant 1).

Assimilating. The third emerging learning style from participants' teaching philosophy statement was assimilating. Participants 7, 14, 16, and 17 were identified as assimilators based off their teaching philosophy statement. These participants shared they valued to help learners through "critical thinking skills," (Participant 7) and defining problems using inductive reasoning. This could easily be seen from participant 16, who shared "people learn very effectively when they are presenting their projects and findings and the critical feedback that is gotten from these activities stimulates the development of ideas." Participant 16 also stated they "will have students read literature and require them to write essays that demonstrate their knowledge on the subject but also on their ability to extrapolate from published experiments into designing new experiments that are the next steps in the field." From these statements, this participant appreciated learners who were able to critically analyze research and use thought to help define new problems.

Many participants shared an impersonal approach to their teaching. Participant 7 shared they form a contract, "between the student and it binds us in this agreement for the duration of the course." This statement alludes to the notion the instructor uses a formal, business-like teaching style with each student. Participant 14 shared their experience with working with students by stating, "it is the role of the student to actively pursue the learning of the body of knowledge." This approach to teaching alludes to idea that it is the student's responsibility to critically pursue their own learning, and that the engagement of the instructor is limited.

Converging. Another emerging theme was a converging learning style among some participants. While participants 7 and 17 showed a strong identification as an assimilator as previously mentioned, these participants were equally identified as convergent based on their teaching philosophy statement. This suggests these two instructors may be more fluid in their teaching philosophy. In one example, participant 7 mentioned their goal as an educator was, "to teach future agricultural leaders how to address the world's food and resource issues and to provide them with the skills they need to think critically about a problem." Since participant 7 mentions developing skills, they felt that students were able to, "solve problems" related to agricultural issues. When testing student knowledge about content, Participant 7 shared that it was crucial to "provide rigorous applications of the main concepts and themes taught throughout a section of the exam." For participant 7, it is important that the student can draw from various information sources to best solve a practical issue. As previously mentioned, this participant's daily engagement with students followed suit to an accommodator.

Inconclusive. A final theme identified was many participants were determined as having an inconclusive learning style based off their sampled teaching philosophy statements. Participants 2, 3, 5, 10, 11, 15, and 20's teaching philosophies fell into this theme. Participants in this group represented a wide variety of teaching philosophies that could not be connected to any specific learning style. Inconclusive participants work through all four phases of the learning cycle to provide flexibility in their teaching style. These participants showed a willingness to adapt their teaching to be effective to a wide variety of diverse learning styles in their classroom.

These participants showed a subsumed number of characteristics that could lead them towards an accommodating learning style based on their teaching philosophy statement. One participant shared, "I envision myself working on international internship opportunities that will allow University of Florida students to explore and broaden their horizons, grow as professionals and apply- back at home– their experiences learned abroad" (Participant 3). Another participant from this group shared a similar story when sharing, "I will certainly make sure the students are aware of any opportunities to engage in additional research or extension work outside the class" (Participant 5). A divergent learning style can be established from the inconclusive participants based on their teaching philosophy statement. Their instructional goals were to build, "broader perspectives" (Participant 3) from students. Inconclusive participants shared their teaching philosophy is to, "enhance the students' creativity" (Participant 5), "stimulate their energy and curiosity" (Participant 3), and promote, "inclusion of diverse thought and learning of personality styles" (Participant 11). These statements shared demonstrate participants' teaching philosophies deemed as inconclusive value unique student perspectives in their classroom.

Inconclusive participants incorporated several characteristics that could lead them towards an assimilating learning style based on their teaching philosophy statement. One participant shared "my approach is to foster critical thinking, questioning, and engagement" (Participant 3). One participant shared a similar view by sharing they stress the importance of, "effectively work in a group while developing strong arguments and critically evaluating scientific data" (Participant 15). Both participants shared they value students' ability to use critical thought processes. Inconclusive

participants showed a subsumed number of characteristics that could lead them toward a converging learning style based on their teaching philosophy statement. Many inconclusive participants shared their teaching should be both applicable and practical. These participants shared students should, "connect all topics covered in class to solve a problem" (Participant 2), "have a broad working knowledge of society's most critical issues" (Participant 11), and understand that "learning extends beyond the classroom" (Participant 15). Many of these participants shared utility of the lesson was an important aspect to their teaching.

Discussion

The purpose of this study was to explore if a faculty members' preferred learning style is expressed in his or her teaching philosophy statement. Participants were identified as having a preferred learning style using the Kolb LSI. University faculty presented an array of learning styles based on their teaching philosophy statement. Many were ruled as inconclusive, since no learning style could be definitively identified.

The first objective was to determine the learning style for each university teaching faculty. As described in the findings, no participants were initially identified as diverging based on the Kolb LSI. Findings from university teaching faculty were ruled most faculty members as either assimilators or accommodators based on the Kolb LSI. This finding may support previous research from Lamm et al. (2011), suggesting that faculty members ruled as assimilators may be more structured, logical, and methodical in their instruction. Additonally, those ruled as accommodators based on Kolb LSI may prefer being more engaged in lessons with students rather than through lecture (Lamm et al., 2011). These distinctions in learning styles suggest that the learning environment may play a role in their teaching practice, thus influencing their LSI score (Foster & Sankey, 2012).

The second objective was to determine if university teaching faculty members' personal learning style were expressed in their teaching philosophy statement. The findings from objective one are contradictory to many faculty members' teaching philosophy statement. Upon analysis of the findings from the teaching philosophy statement, several faculty members were identified as divergent. All teaching faculty that were found to be divergent based on their teaching philosophy statement were found to have also identified with another preferred learning style. Additionally, university teaching faculty who were ruled as inconclusive presented some leading characteristics of a divergent learning style. It can be concluded that while a diverging learning style may not be university faculty members' preferred learning style, instructors value divergent learning style characteristics in their classroom instruction. This finding supports characteristics of a well-written teaching philosophy statement outlined by Schonwetter et al. (2002), who stated that teaching methods and evaluation addressed in a teaching philosophy statement take into consideration the diversity of students. Teaching faculty appreciated the many perspectives that students could offer in the classroom, but recognized divergent learning as a secondary learning style in their classroom.

Conclusions & Recommendations

The findings revealed a large portion of university faculty were determined inconclusive based on their teaching philosophy statements. Schonwetter et al. (2002) explained that a well-written teaching philosophy statement addresses a wide variety of teacher and student interactions. Kolb (1984) stated that as teaching faculty address these various aspects of a teaching philosophy statement, they prefer to use the various aspects of the learning cycle. It can be concluded that university teaching faculty members deemed as inconclusive do not express their preferred learning style in their teaching philosophy. Additionally, this conclusion suggests that these faculty

members may use teaching strategies that tailor to a number of learning styles. The numerous learning styles presented in inconclusive teaching philosophy statements suggest that teaching faculty adapt their instruction to a number of learning styles. Kolb (1984) suggested that learning occurs best when a person must move through all four stages of the learning cycle. Sankey and Foster (2012) explained that teaching faculty who addressed various learning styles in their teaching philosophy statement may demonstrate the fundamentals for excellent and effective teaching characteristics. Teaching faculty ruled inconclusive are not strongly influenced by their preferred learning style, thus these university faculty members may have strong teaching skills.

Several teaching faculty were identified as exhibiting two learning styles based on their teaching philosophy statement. With the exception of one participant in this group, faculty members were identified as utilizing their preferred learning style identified from the LSI and at least one other learning style based on their teaching philosophy statement. Only one participant was identified with two learning styles based on their teaching philosophy statement, in which neither matched their preferred learning style from Kolb LSI. University teaching faculty in this group gravitate towards their preferred learning style and another learning style. It can be concluded that some university faculty members may use their preferred learning style to guide classroom instruction, but they also use a learning style that is adjacent to their preferred learning style based on Kolb's (1984) learning style inventory. Lamm et al. (2011) supports this conclusion, suggesting that teaching faculty in this group may vary instruction to complement their preferred learning style. This conclusion aligns with Kolb's (1984) learning style theory, which suggested learning styles are cyclical in nature. As a teaching faculty member moves through the learning cycle, they may have a tendency to reflect or act, or may prefer to feel or analyze during instruction.

University teaching faculty who were initially identified as having one learning style from the Kolb LSI were identified as having a completely different learning style based on their teaching philosophy statement. It can be concluded that some teaching faculty may be able to gravitate toward a learning style that may not be best for how they personally learn, but how they believe their students will learn the material best. This finding contradicts Schonwetter et al. (2002), who suggested a teaching philosophy is predisposed and rooted in the faculty members' own learning style. Conversely, two teaching faculty who were initially identified as having one preferred learning style were identified as having the same learning style in their teaching philosophy statement. This conclusion supports Schonwetter et al. (2002), suggesting that a persons' preferred learning style may indeed derive ones' teaching philosophy.

Based on these findings, instructors should implement an assortment of teaching methods that accommodate for many different learning styles in the classroom. Since a teaching philosophy guides what is occurring in the classroom, a teaching faculty member should incorporate multiple learning styles. If teaching philosophies are written to be more inclusive, then there is a stronger likelihood that instructors may use teaching practices that meet the needs of diverse learners. In addition to creating a learning environment that suits all learning styles to some degree, instructors should create meaningful learning experiences, which may be tailored to their preferred learning style. To make improvements in learners' engagement in the classroom, teaching faculty should consider utilizing teaching methods from all four learning style preferences to provide a deeper context for instructional material. By addressing all four learning styles, faculty teaching methods may help with knowledge transfer and developing competencies to enter the workforce successfully. Another recommendation is to develop a mentor program for new faculty to collaborate with experienced teaching faculty members in developing diverse teaching strategies that accommodate to all four learning styles. This mentor program may also be established for faculty members who do use all four learning styles well or those who are looking to improve their use of all four learning styles in the classroom. Finally, professional development workshops should

be conducted to help faculty members recognize other teaching methods that align with learning styles outside of their own. Professional development workshops should guide teaching faculty in creating comprehensive teaching philosophy statements through continual revisions to their teaching philosophy.

One of the limitations of this study is the small sample size. This study used an exploratory research design, thus the findings of this study cannot be generalized to all teaching faculty.

Nonetheless, future studies should observe if university faculty members' teaching philosophies accurately reflect how these instructors teach. Currently, limited research examines the relationship between faculty members' teaching philosophy and practical application in the classroom. Classroom observations may examine if teaching methods accurately reflect university teaching faculty members' preferred learning style. Moreover, future studies should examine if instructors' preferred learning style is expressed in teaching philosophies of faculty members at other universities and in other fields of interest other than agriculture. Different missions, values, and content areas at various universities could impact the diversity of learning styles present in teaching philosophies. Demographics of faculty members could play a role in their preferred learning style. Future research should determine if demographics of teaching faculty members are predictors of one's preferred learning style. Furthermore, future studies should investigate how teaching methods that tailor to all four learning styles impacts the knowledge transfer and competency development for the workforce.

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