# Teacher-Centered Versus Learner -Centered Teaching Style

**Ahmed Khaled Ahmed, Al Ain University of Science and Technology College of Education**

## ABSTRACT

*The purpose of this exploratory study was to examine and identify the type of teaching style education instructors at a mid-sized, publicly funded Midwestern University. Participants of the study were selected from among graduate education instructors from four departments. The selected four departments for the study offered doctoral, specialist, and master's degree programs. PALS measure (Conti, 1989) was used to assess the education instructors' teaching style. Findings of this study indicated that there were two types of teaching style among graduate education instructors at the Midwestern University. Yet, the tendency was geared toward learner-centered rather than teacher-centered teaching style. The overall mean score of this study was 144.55 with standard deviation 16.62 which was not that far off from PALS's mean score of 146 with a standard deviation 20. Furthermore, there no significant relationship found between the instructor's age and his/ her teaching style. Likewise, there was no significant relationship found between the instructor's teaching style and the overall years of teaching experience or the teaching experience at the Midwestern University. It is recommended that further research be conucted using a bigger sample to identify the teaching style of education at Arab universities.*

*Keywords: Teacher-centered, learner-centered, teaching style, learning.*

## INTRODUCTION

For many years, the traditional teaching style or specifically, teacher-centered instruction has been dominant in higher education in North America. In a traditional classroom, students become passive learners, or rather just recipients of teachers' knowledge and wisdom. They have no control over their own learning. Teachers make all the decisions concerning the curriculum, teaching methods, and the different forms of assessment. Duckworth (2009) asserts that teacher-centered learning actually prevents students' educational growth. In contrast, in a learner-centered classroom, students are actively learning and they have greater input into what they learn, how they learn it, and when they learn it. This means that students take responsibility of their own learning and are directly involved in the learning process. Learner-centered teaching style focuses on how students learn instead of how teachers teach (Weimer, 2002, and Wohlfarth et.al, 2008). In a learner-centered classroom, teachers abandoned lecture notes and power point presentations for a more active, engaging, collaborative style of teaching (Wohlfarth et.al, 2008).

During the last few decades, teacher-centered teaching style has been replaced by learner-centered teaching style in higher education (McCombs & Whistler, 1997; Weimer, 2002). Learner-centered instruction is most suitable for the more autonomous, and more self-directed learners who not only participate in what, how, and when to learn, but also construct their own learning experiences. The learner-centered approach reflects and is rooted in constructivist philosophy of teaching (Brown, 2008; McCombs & Whistler, 1997; Weimer, 2002, and Schuh, 2003). In Constructivism, the learners are learning by doing and

experiencing rather than depending on the teachers' wisdom and expertise to transmit knowledge (Brown, 2008). Constructivism was strongly influenced by the writings of John Dewey who emphasized learning by doing and direct experience. The purpose of this exploratory study was to examine and identify the type of teaching style education instructors employ in their classrooms.

## LITERATURE REVIEW

Teaching style was described by Grasha (1996) as those enduring personal qualities and behaviors that appear in how educators conduct their classes. Conti (1979, 1983, 1985, 1989, and 2004) defines the term teaching style as the distinct qualities exhibited by a teacher that are consistent from situation to situation regardless of the content being taught. Similarly, Dupin-Bryant (2004) defines learner-centered teaching style as "a style of instruction that is responsive, collaborative, problem-centered, and democratic in which both students and the instructor decide how, what, and when learning occurs" (p.42). On the other hand, teacher-centered teaching style is considered as "a style of instruction that is formal, controlled, and autocratic in which the instructor directs how, what, and when students learn" (p.42). Teaching style is made up of a range of behaviors that a teacher comfortably used consistently over time, situation, and content (Elliott, 1996).

### Principles of Adult Learning Scale

For his doctoral dissertation, Conti (1979) developed and validated an instrument capable of measuring the degree to which adult education practitioners accept and adhere to the adult learning principles that are congruent with the collaborative teaching learning mode" (p. 164). Conti (1989) identified two fundamental teaching styles, which are 1.) a responsive, collaborative, learner-centered mode and 2.) a controlling, teacher-centered mode. The collaborative mode was defined as a learner-centered method of instruction in which authority for curriculum formation is shared by the learner and the practitioner (Conti, 1982).

For the purpose of this study, PALS was selected to measure the teaching style (teacher-centered or learner-centered) of Education instructors at a mid-sized, publicly funded Midwestern University in the U.S. Since Conti developed and validated PALS in the late 1970s and early 1980s, the instrument has been used in several research studies (e.g. Clow, 1986; Wilson, 1994; Miglietti & Strange, 1998; Wang, 2004). Results of these studies show a strong preference for the teacher-centered approach in community colleges and university settings, even though the learner-centered approach is advocated in the adult education literature. Teachers who prefer the teacher-centered approach act "as the managers of the classroom conditions which they have determined as necessary to bring about desired behavioral changes in the student" (Conti & Welborn, 1986, p.20). The teacher solely determines the goals, outcomes, methods of instruction, and evaluation of the class with little or no input from the students. The teacher is the only authority in the classroom and learning in this case is in contrast with learner-centered approach.

In an earlier study, Miglietti (1994) concluded that a learner-centered teaching style, as measured by the Principles of Adult Learning Scale accounted for significant differences with respect to grades, sense of accomplishment, and overall course satisfaction. Students in learner-centered classes had higher grades, reported a greater sense of accomplishment, and overall course satisfaction than those in teacher-centered classes. These results support the majority of recommendations derived from research in adult education. It would appear that learner-centered teaching approach is the most effective type of teaching style.

The first research using the Principles of Adult Learning Scale (PALS) relating teaching style to student learning was conducted with adult basic education students in south Texas (Conti, 1985). In this study,

statistical evidence indicated that the teacher's style had a significant influence on the degree of academic gains of the students. However, these gains were not consistent with the general adult education literature; that is, the students of the teachers who practiced the collaborative, learner-centered mode did not always have the highest degree of achievement. In the classes preparing students to take the General Educational Development (GED) test, the teacher-centered approach was most effective. These findings seemed to contradict the conventional wisdom in the adult education literature that the collaborative mode is generally the most effective means for teaching adults. However, in the English as a second language (ESL) and the basic level classes (beginners' level in basic skills such as listening, speaking, reading and writing in English), the findings were consistent with the general adult education literature.

Conti and Wellborn (1986) conducted another study to examine the relationship of teaching style to academic achievement for allied health professionals taking credit classes in a nontraditional format. The subjects in this study were eighteen teachers and 256 students. Teaching style was found to be significantly related to student achievement. The students of the teachers practicing the learner-centered approach achieved at a higher level than the group average. Again, the results supported the use of the collaborative, learner-centered approach as an effective means of teaching adults. It seems that there are conflicting findings of the studies conducted using the PALS. This may be due to the sample used for each study.

**Teacher-Centered vs. Learner-Centered Teaching Style**

Learner centered" is the perspective which focuses on the learners' experiences, perspectives, backgrounds, talents, interests, capacities, and needs. It creates a learning environment conducive to learning and promotes the highest levels of motivation, learning, and achievement for all learners (McCombs & Whisler, 1997, p. 9). Weimer (2002) proposed five areas that needed to change in order to achieve learner-centered teaching. These areas are: the choice of content, the instructor's role, responsibility for learning, the process of assessment, and the power relationship between teacher and learners. Students needed to have ownership of their own learning, contribute to the design of curriculum, and the responsibility for some levels for instruction. Similarly, Bain (2004) identified several traits of instructors who employ learner-centered instruction. Among these characteristics are that instructors touch the lives of theirs students, they place a strong emphasis on student learning and outcomes by using varied forms of assessment, and the effect on career goals.

Huba and Freed (2000) described teacher-centered learning as: students passively receive information, emphasis is on acquisition of knowledge, and teacher's role is to be primary information giver and primary and evaluator. There is no room for student's personal growth. Liu, Qiao and Liu (2006) reports that while learner-centered language teaching has been advocated in higher education in recent years, teacher-centered teaching styles may be still dominant in actual practice. Results of their study show that most instructors still use traditional, teacher-centered styles in university settings despite the call for a paradigm shift to learner-centered ones.

Brown (2008) claimed that student-centered learning approach gives students ownership over their learning and helps them make necessary decisions and value judgments about the relevance of the content and the methods of teaching to their own lives and interests. Wolk (2010) also reports that in student-centered learning, Students play a significant role in designing their own curriculums. The teacher plays the role of a facilitator or guide who helps students achieve their goals. In their article Ng and Lai (2012) presented an exploratory study that examined whether a wiki-based project could foster student-centered learning. They concluded that wiki can facilitate student-centered activities. The article by Hannum and McCombs (2008) describe how Learner-Centered Psychological Principles (LCPs) can be used to define not only new design

principles for distance learning but also a new educational paradigm. Saulnier, Landry, and Wagner (2008) concluded in their study that learner-centered approach contributed to the construction of educational activities and provided for greater student learning and a more authentic student assessment.

Findings of Walsh and Vandiver (2007) study indicated that students performed better academically because they had a say in what they learned, and the teachers only acted as facilitators in order to allow the students to learn actively. Wohlfarth, and et.al (2008) examined the idea that the learner-centered paradigm departs from traditional teaching models by focusing on students more than teachers and learning more than teaching. Graduate students in learner-centered classrooms were surveyed about perceptions of their experiences in relation to the key dimensions of the learner-centered paradigm and noted that the approach contributed to their feeling respected as learners, developed their critical thinking skills, and encouraged their self-directedness. The overall findings, graduate students in learning-centered classrooms agreed that their classroom experiences were indeed learner-centered, as described by Weimer (2002). Furthermore, qualitative data collected, in the form of student quotes, strongly supported the move to a learner-centered paradigm as a positive shift. From the review of literature, the present study attempted to identify the teaching style of education instructors at a Midwestern University in the U.S. The Methodology of the study will be discussed below.

## METHODOLOGY

The purpose of this exploratory study was to examine and identify the teaching style of education instructors at a mid-sized, publicly funded Midwestern University. The research questions of this study are:

1. What are the demographic characteristics of education instructors as they relate to gender, age, position, and years of teaching experiences?
2. Is there a significant difference in the mean scores on The Principles of Adult Learning Scale (PALS) among education instructors?
3. Is there a significant difference in the mean scores between male and female education instructors on the Principles of Adult Learning Scale (PALS)?
4. Is there a relationship between the instructors' teaching styles and their age?
5. Is there a relationship between the instructors' teaching styles and the overall years of teaching experience and their experience at the Midwestern University?

In order to answer these research questions, the participants of the study were selected, the methods for gathering data, and the statistical design were decided. This study used a quantitative research methodology.

**Participants of the study**

Participants of this study were selected from among graduate education instructors from four departments at a mid-sized, publicly funded Midwestern University. The sample size was 22 instructors. These instructors were teaching graduate classes at the Department of Educational Leadership, the Department of Educational Studies, the Department of Special Education, and the Department of Elementary Education. Teachers' College at the Midwestern University has six academic departments. The selected four departments for the study offer doctoral, specialist, and master's degree programs. This explains the small sample size.

The criteria for selecting the participants were as follow: a) participants had to be instructors at one of the four previously mentioned departments which prepare teachers, they had to be instructors of adults (graduate students), and they were willing to volunteer for the study. Out of the 22 participants, there were

14 males and 8 females.    The researcher contacted these participants personally after   they expressed their willingness to participate in the study.    A cover letter was attached to the questionnaires informing the participants of the purpose of the study, the confidentiality of the results, and their choice to volunteer or decline participation in the study.    The participants were assured that their identity will be kept confidential.

**Instrumentation**

In order to assess the instructors' teaching style, the Principles of Adult Learning Scale (PALS) was used.    PALS was developed by Gary Conti (1979, 1985, 1989, 1990, and 2004).    This forty-four-item instrument uses a modified Likert scale, can be completed in less than fifteen minutes, and can be self scored. There are six scoring options on each item, ranging in value from 0 (low) to 5 (high).    The total score on PALS gives an indication of the instructor's overall teaching style.    Higher scores (above 145) on PALS reflect a learner-centered approach, in which authority for curriculum formation is shared by the learner and the facilitator.    Low scores (below 146) on PALS reflect a preference for the teacher-centered approach in which authority for curricula formation resides with the instructor.    Scores near the mean indicate a combination of teaching behaviors that draws from both the learner-centered and the teacher-centered approaches.    Thus, the PALS score indicates the instructor's overall teaching style and the strength of the support for this style.

The overall PALS score can be broken down into seven different factors.    These factors are the basic elements that make up the instructor's general instruction mode.    High scores in each area represent support for the concept indicated in the factor name.    Low scores convey support of the opposite concept.    Factor scores are determined by adding up the points for each item in the factor (Conti, 1989, p.8).    Factor one is Learner-Centered Activities.    This factor is made up of 12 negative items (2, 4, 11, 12, 13, 16, 19, 21, 29, 30, 38, and 40) and has a maximum possible score of 60.    Those who support a teacher-centered mode of instruction favor formal testing over informal evaluation techniques, whereas those who support the collaborative mode practice behaviors which encourage students to take responsibility for their own learning (Conti, 1989).    The second factor is Personalizing Instruction.    This factor contains six positive items (3, 17, 24, 32, 35, and 42) and three negative items (9, 37, and 41).    The maximum score is 45 and instructors who score high on this factor employ a number of techniques that personalize learning to meet the unique needs of each student.

The third factor, Relating to Experience, consists of six positive items (14, 31, 34, 39, 43, and 44) with a total possible score of 30.    Teachers who support Factor 3 plan learning activities which take into account prior experience and encourage students to make learning relevant to current experiences.    Factor 4 is Assessing Student Needs and is comprised of four positive items (5, 8, 23, and 25).    The maximum score is 20 and instructors who score high in this area, find out what each student wants and needs to know.    This is accomplished through individual conferences and informal counseling.    The fifth factor, Climate Building, also contains four positive items (18, 20, 22, and 28) with a maximum score of 20.    Teachers who score high on Factor 5 set a friendly and favorable climate, and dialogue and interaction with other students are encouraged.    Taking risks is also encouraged and errors are seen as part of the learning process.    The sixth factor is Participation in the Learning Process and contains four positive items (1, 10, 15, and 36).    The maximum score possible is 20 and instructors who score high on Factor 6 have the students identify the problems that they wish to solve and allow students to participate in making decisions about the topics that will be covered in class.    The last factor (Factor 7) contains five negative items (6, 7, 26, 27, and 23) and measures Flexibility for Personal Development.    The maximum score is 25 and those who score high on Factor 7 view themselves as facilitators rather than providers of knowledge.    Flexibility is maintained by

adjusting the classroom environment and curricular content to meet the changing needs of the students.

Construct validity of PALS items, that is, whether positive items were congruent with the collaborative (learner-centered) mode of instruction, was determined by the testimony of juries of major adult educators and later verified by factor analysis (Conti, 1983, -Cited by Miglietti, 1994). "Criterion-related validity was established by comparing PALS to Flanders Interaction Analysis Categories (FIAC) which also measures the constructs of initiating the responsive behaviors in the classroom" (Conti, 1985, p.222). Correlations on the Teacher Question Ratio, Teacher Response Ratio, and Pupil Initiation Ratio confirmed the congruence between PALS and the FIAC (Conti, 1979). Content validity of PALS, that is, whether the instrument is consistent with adult learning principles, was established by "correlating each item in PALS to the criterion measure of total score" (Conti, 1985b, p. 222). The reliability of PALS was determined by the test-retest method which established a reliability coefficient of .93 (Conti, 1979, 1985b). The instrument has also been tested for social desirability of items and for clarity of items interpretation (Conti, 1985b, cited by Miglietti, 1994).

Demographic data for instructors was gathered through the use of a Personal Data Questionnaire prepared by the researcher. The personal data questionnaire includes information related to participants' gender, age, position, overall years of teaching experience, and years of teaching at the Midwestern University. After receiving the responses from the instructors, the researcher entered the data into a data base for statistical analysis. A statistical package called "SPASS" was used to analyze the data gathered. Data collected from both questionnaires (PALS and Personal data) was analyzed using the frequencies, means and correlations. This simple statistical design was found appropriate for the type of data gathered. This kind of data analysis was used to answer these five research questions.

## RESULTS AND DISCUSSION

The results of this study will be reported in the order of the research questions. To answer the first research question, tables (1), (2), (3), (4), and (5) were used to report the demographic data of the participants. The first question reads:

1. What are the demographic characteristics of education instructors as they relate to gender, age, position, and years of teaching experiences?

Table (1) gives general information on biographic data which are detailed in the other four tables in the following order: (2) gender (3) age (4) overall years of teaching experience, and (5) years of teaching experience at the Midwestern University.

**Table 1: General Bio-Data**

|  | Gender of Resp. | Age | Years of Exp. | MU.Exp. | Position |
|---|---|---|---|---|---|
| N | 22 | 22 | 22 | 22 | 22 |
| Mean | 1.36 | 5.32 | 4.68 | 14.95 | 1.82 |
| Std. Dev..49 | 1.78 | 2.08 | 12.04 | .91 | |

**Table 2: Gender of Respondents**

|  | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| male | 14 | 63.6 | 63.6 |
| female | 8 | 36.4 | 100.0 |
| Total | 22 | 100.0 | 100.0 |

**Table 3: Age of Respondent**

|  | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 31-36 | 2 | 9.1 | 9.1 |
| 37-42 | 1 | 4.5 | 13.6 |
| 43-48 | 4 | 18.2 | 31.8 |
| 49-54 | 5 | 22.7 | 54.5 |
| 55-60 | 4 | 18.2 | 72.7 |
| 61-66 | 3 | 13.6 | 86.4 |
| 67-72 | 3 | 13.6 | 100.0 |
| Total | 22 | 100.0 |  |

**Table 4: Overall Years of Teaching Experience**

|  | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1-5 | 1 | 4.5 | 4.5 |
| 6-11 | 3 | 13.6 | 18.2 |
| 12-17 | 5 | 22.7 | 40.9 |
| 18-23 | 1 | 4.5 | 45.9 |
| 24-29 | 1 | 4.5 | 50.0 |
| 30-35 | 5 | 22.7 | 72.7 |
| 36+ | 6 | 27.3 | 100.0 |
| Total | 22 | 100.0 |  |

**Table 5: Years of Teaching Experience at Midwestern University**

| Years | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| 1 | 2 | 9.1 | 9.1 |
| 2 | 1 | 4.5 | 13.6 |
| 4 | 1 | 4.5 | 18.2 |
| 5 | 4 | 18.2 | 36.4 |
| 6 | 1 | 4.5 | 40.9 |
| 7 | 3 | 13.6 | 54.5 |
| 23 | 2 | 9.1 | 63.6 |
| 25 | 1 | 4.5 | 68.2 |
| 26 | 2 | 9.1 | 77.3 |
| 27 | 1 | 4.5 | 81.8 |
| 28 | 1 | 4.5 | 86.4 |
| 29 | 1 | 4.5 | 90.9 |
| 30 | 1 | 4.5 | 95.5 |
| 37 | 1 | 4.5 | 100.0 |
| Total | 22 | 100.0 |  |

The sample size of this study was 22 instructors selected from four departments at Midwestern University Teachers College. Out of the 22 participants, there were 14 males and 8 females (table 1), with an average age ranging between 49-54 as shown in (table 3). Table (2) gives the means and standard deviation of biographic data. Table (4) provides information related to the number of instructors overall years of teaching experience. Among the participants, there was 1 instructor who has between 1-5 years teaching experience, three instructors have between 6-11 years, five between 12-17 years teaching experience, one between 18-23 years, one between 24-29 years of experience, 5 between 30-35 years of teaching experience, and 6 instructors who had 36 years or more teaching experience . There were 11 professors, 4 associate professors, and 7 assistant professors. Table (5) reports on the

number of years of teaching experience the instructor has had at the Midwestern University. The frequency on table (5) represents the number of instructors who had the corresponding years of teaching experience. For example, there was one instructor who served 37 years at the Midwestern University and two instructors who served one year at the university.

The second research question of this study deals with the difference in the mean scores on the PALS among the instructors. Before analyzing the results found, it is imperative to establish the norms for interpreting these results. PALS has been used extensively by researchers in the field of adult education. Results from several research studies with different groups have been analyzed and norms have been established by Gary Conti (1978, 1979, 1985, and 1986). According to Conti (1985), the normative mean for the summed score on all 44 items on PALS was 146 and a standard deviation of 20 which remained consistent across various groups that practice adult education. The PALS was made up of seven factors which also have established normative mean score and standard deviations. These factors, their normative mean scores, and normative standard deviations were:

1. Learner-Centered Activities                Mean = 38          Std Dev = 8.3
2. Personalizing Instruction                   Mean = 31          Std Dev = 6.8
3. Relating to Experience                      Mean = 21          Std Dev = 4.9
4. Assessing Student Needs                     Mean = 14          Std Dev = 3.6
5. Climate Building                            Mean = 16          Std Dev = 3.0
6. Participation in the Learning Process       Mean = 13          Std Dev = 3.5
7. Flexibility for Personal development        Mean = 13          Std Dev = 3.9

**The second research questions reads:**

2. Is there a significant difference in the mean scores on The Principles of Adult Learning Scale (PALS) among education instructors?

To answer this question, the mean scores and standard deviations of the instructors' scores on PALS were calculated. As it is shown in table (6), out of 22 participants of the current study, 9 participants scored above the mean score which will be called group one and 13 participants scored below the mean score which will be called group two. The mean score for the participants who scored high was 159.89 with standard deviation 10.72, which means that their style is learner-centered teaching style. The mean score for the participants who scored low was 133.92 with standard deviation 10.40, which means that their style is teacher-centered teaching style. The total mean score of all 22 participants was 144.55 with standard deviation 16.62, which means that the instructors' teaching style is closer to learner-centered teaching style than to teacher-centered teaching style. If the sample was bigger than the sample used, the mean score would have been larger. The overall teaching style of the instructors at the Midwestern University education instructors was more learner-centered than teacher-center teaching style, despite the variation in the mean scores of the sample. Concerning the participants' sub-scores on the PALS, there were seven factors to consider. The results in table (6) are organized by mean scores of each group of participants on the PALS and the sub-scores of other seven factors.

#### Table 6: The mean of Sub-scores on PALS

| High vs Low on PALS | | PALS | Learn.-Cent. | Pers. Inst. | Rel. Exp. |
|---|---|---|---|---|---|
| low | Mean | 133.92 | 40.46 | 24.85 | 19.15 |
| | N | 13 | 13 | 13 | 13 |
| | Std.Dev | 10.40 | 6.06 | 5.67 | 3.87 |
| high | Mean | 159.89 | 44.22 | 30.44 | 24.33 |
| | N | 9 | 9 | 9 | 9 |
| | Std.Dev | 10.72 | 9.39 | 5.25 | 3.71 |
| Total | Mean | 144.55 | 42.00 | 27.14 | 21.27 |
| | N | 22 | 22 | 22 | 22 |
| | Std.Dev | 16.62 | 7.63 | 6.07 | 4.54 |

#### Table 7:...Continued.......

| High vs Low on PALS | | Ass.S.Needs | Climate B. | Part. | Pers. Dev |
|---|---|---|---|---|---|
| low | Mean | 11.38 | 14.85 | 10.46 | 12.77 |
| | N | 13 | 13 | 13 | 13 |
| | Std.Dev | 2.53 | 2.85 | 3.93 | 3.00 |
| high | Mean | 13.56 | 18.11 | 14.00 | 15.22 |
| | N | 9 | 9 | 9 | 9 |
| | Std.Dev | 2.40 | 0.78 | 2.45 | 2.95 |
| Total | Mean | 12.27 | 16.18 | 11.91 | 13.77 |
| | N | 22 | 22 | 22 | 22 |
| | Std.Dev | 2.66 | 2.75 | 3.78 | 3.16 |

From the results presented in table (6), it is evident that there are two types of teaching styles among education instructors at the Midwestern University. Yet, the tendency is geared toward learner-centered rather than teacher-centered teaching style. This finding contradicts earlier studies conducted using PALS (e.g. Clow, 1986; Wilson, 1994; Miglietti & Strange, 1998; Wang, 2004, Liu, Qiao, Liu, 2006). Results of these studies tend to favor teacher-centered teaching styles over learner-centered teaching style in community college and university setting. For the present study, the overall mean score is 144.55 with standard deviation 16.62, which is not that far off from PALS mean score of 146 with standard deviation 20. If the sample of participants was bigger, this result would certainly be expected. This is also true with the means of the seven factors of PALS. While the overall score indicates the instructor's general style, the factor scores identify specific elements that make up this style. High scores on each factor represent support of the concept implied in the factor title. Low scores indicate support of the opposite concept. For example, a high score on factor 6 indicates a teaching style that gives learners many choices in how to achieve learning goals once the curriculum has been set and that encourages the students to take responsibility for their learning activities. A low score on factor 6 indicates a style in which the teacher defines and directs the exact learning activities that each student undertakes to accomplish the learning goals. Factor scores are calculated by adding the responses for each of item in the factor. The mean scores on PALS tend to strongly correlate with the mean scores on the seven factors. This means that instructors who scored high on PALS also scored high on the seven factors. Likewise, those instructors who scored low on PALS would also score low on the seven factors.

To investigate the relationship between the instructor's gender and his/her teaching style, Pearson Correlation Coefficient was used. The third research question of this study is:
3. Is there a significant difference in the mean scores between male and female education instructors on the Principles of Adult Learning Scale (PALS)?

The significance level was set at 0.01 which is highly significant and at 0.05 which is significant using Pearson Correlation Coefficient (p < .05 and p < .01).   Table (7) presents results of the instructor's gender, age, and years of teaching experience as they relate to the instructor's teaching style.   The first finding indicated that there was no significant relationship between the instructor's teaching style and the instructor's gender. So, there was no statistical significant difference between male and female in the type of teaching style instructors employ in their classrooms.   Consequently, there were no significant relationships between the instructor's gender and the seven factors of PALS.   This also means that there was no statistical significant difference between male and female on the seven sub-scores of PALS.   This finding was contradictory to the findings of other researchers (Starbuck, 2003; Basow, 1995, and Lacey, Saleh, and Gorman, 1998)   who found significant differences in the teaching styles of male and female instructors. They concluded that women were significantly more likely to use small group discussions, while men were more likely to use lecturing.   Furthermore, male instructors' teaching styles tend to be more dominant and exacting, while female's styles were more informal and open toward students and their ideas.

To investigate the relationship between the instructors' teaching style and their age, overall teaching experience, and their teaching experience at the Midwestern University, Pearson Correlation Coefficient was used.   Results in table (7) are used o answer research questions 4 and 5.   The two questions are:

4.   Is there a relationship between instructors' teaching style and their age?
5.   Is there a relationship between the instructors' teaching style and the overall years of teaching experience and their experience at the Midwestern University?

**Table 8: Correlations**

|  | PALS | L.Cen | Per.In | Re. EX |
|---|---|---|---|---|
| Gender | P. Corr. | -.142 | 0.000 | -0.097 |
|  | sig.(2-tail) | .529 | 1.000 | 0.667 |
|  | N | 22 | 22 | 22 |
| Age | P.Corr. | .405 | .354 | .352 |
|  | sig. (2-T) | .061 | .106 | .108 |
|  | N | 22 | 22 | 22 |
| Years of teaching Exp. | .335 | .291 | .257 | .282 |
|  | Sig(2-T) | .128 | .188 | .249 |
|  | N | 22 | 22 | 22 |
| Years at Mid Univ | .314 | .505* | .239 | .132 |
|  | Sig. (2-T) | .155 | .016 | .285 |
|  | N | 22 | 22 | 22 |

**Table 9: continued**

|  |  | Ass.N. | C.B | Part. | P.Dev. |
|---|---|---|---|---|---|
| Gender | Pearson | -.007 | -.156 | -.058 | -.097 |
|  | Sig.(2-T) | .977 | .487 | .797 | .666 |
|  | N | 22 | 22 | 22 | 22 |
| Age | Pearson | -.009 | .094 | .132 | .157 |
|  | Sig. (2-T) | .968 | .676 | .559 | .485 |
|  | N | 22 | 22 | 22 | 22 |
|  | Years of Teach Pearson | .120 | .060 | .081 | -.091 |
|  | Sig. (2-T) | .595 | .789 | .720 | .686 |
|  | N | 22 | 22 | 22 | 22 |
|  | Years at Mid.Univ | -.040 | -.051 | -.049 | -.080 |
|  | Sig. (2-T) | .860 | .820 | .828 | .722 |
|  | N |  | 22 | 22 | 22 |

Concerning the relationship between the instructor's age and the type of teaching style he/she employs in the classroom, there is no significant relationship found between the two. This means that there is no significant statistical difference in the instructor teaching style because of his/her age. When age of the instructor was correlated with the mean scores on PALS, there were no significant relationships found. Likewise, years of teaching experiences did not correlate with the scores on PALS either. This means that there was no significant relationship found between the instructors' teaching style and years of teaching experience. As a result, years of teaching experience did not have any effect on the type of teaching style the instructor had.

When the years of teaching at the Midwestern University was correlated with the mean scores on PALS, there was no significant relationship found. This means that there were no significant statistical differences in the instructors' teaching styles because of the number of years they have been teaching at the Midwestern University. There was also no relationship found between the years of teaching experience and the seven sub-scores on PALS. The only relationship found was that between the number of years the instructor had at the Midwestern University and the learner-centered sub-score of PALS. Factor 1: Learner-Centered was strongly correlated at .505 with the number of years teaching at the Midwestern University. This means that despite the fact that the relationship between the type of teaching style and the number of years at the Midwestern University was not significant; instructors had a tendency toward learner-centered activities. High scores indicate an emphasis on informal evaluation techniques, on classroom behaviors that encourage students to take initiating actions, and on having students take responsibility for their own learning (Conti, 1989). I believe that most instructors in the sample of this study fit that pattern. The only limitation of this study was that the sample was small. This study was an exploratory study to identify the teaching style of education instructors at the Midwestern University in relation to other factors such as gender, age, and years of teaching experience. If the sample of the study was bigger and was selected from other colleges at the Midwestern University, results could have been significantly different. After discussing the results, implications, and recommendations will be presented.

**CONCLUSION**

The first implication of this exploratory study is to recommend that further research with a larger sample to be conducted. Identifying education instructors' teaching styles will make them aware of the type of teaching style they employ in their classrooms. This awareness can make them modify or improve on their practice. This will in turn help heir students learn better and become active participants in the teaching learning exchange. In addition, they can provide their students with a model of good practice. Findings of this study correspond with a growing body of research which emphasizes the fact that learner-centered style is replacing the traditional teacher-centered teaching style. Shifting the focus from teaching to learning and from the teacher to the learner is the core of the effective educational process and fulfills Dewey's vision of empowering the learners. These findings can help education instructors provide a proper teaching model, a learner-centered model which can improve teacher education preparation practices.

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