

AN ABSTRACT OF THE THESIS OF

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Title: The Effect of Teacher Warmth and Gender on Student Learning and Teacher Evaluations

Abstract approved: \_\_\_\_\_

This study sought to examine the effect of teacher warmth and gender on learning in college students and their evaluations of teachers. A female teacher delivered a lecture to a group of students in a warm manner, and repeated the same lecture to another group of students in a cold manner. A male teacher also gave the lecture in a warm way to one group and in a cold way to another group. Participants took a quiz over the content of the lecture, completed a teacher evaluation, and filled out a demographic questionnaire. Results showed that teacher warmth and teacher gender had statistically significant effects on student learning, but there was not a significant interaction effect between them. Teacher warmth also had a statistically significant effect on teacher evaluations. Gender was not shown to have an effect on teacher evaluations, and there was not an interaction effect of teacher warmth and gender on teacher evaluations. These results have interesting implications for teachers who want to be more effective or receive higher evaluations.

*Keywords:* teacher effectiveness, teacher warmth, teacher gender, student learning, teacher evaluations

THE EFFECT OF TEACHER WARMTH AND GENDER ON  
STUDENT LEARNING AND TEACHER EVALUATIONS

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A Thesis

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by

Carolyn Elaine Moen

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Approved by the Dean of the Graduate  
School and Distance Education

## DEDICATION

To My Mother, Karen Moen

Thank you for using the life you live as the most effective teaching method to show me how to live and love well. Thank you for always believing in me, for being there when things are hard, for the sacrifices, for the late nights and early mornings, for the long phone calls, for the patience, and for the road trips.

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## CHAPTER 1

### INTRODUCTION

There is some disagreement on the subject of what characteristics make a good teacher. A good teacher is one who teaches effectively and increases students' knowledge, but there is some uncertainty about how to be most effective and how to best increase students' knowledge. As with many things in life, defining the attributes of a good teacher is not an easy task because there are many different conditions at work and no two teachers are the same (Heitzmann & Starpoli, 2001). The attributes that could be considered are almost limitless. One could examine the role of personality, educational background, physical appearance, or anything else on teacher effectiveness.

One attribute that is particularly interesting is teacher warmth toward students. Many teachers try to convey kindness and caring to their students in the hope of giving social support. Having warmth may make the learning environment more pleasant for both students and teachers, but it is unknown if it facilitates learning (Wheless & Potorti, 1989). It is important to note that if teacher warmth puts students at ease and makes the environment more enjoyable, it is valuable even if it does not increase learning. Students need to feel that the people around them care, and conveying care is valuable for the support it gives. However, being valuable and being a characteristic of a good teacher are two different things. It is important to make that distinction because a teacher's primary goal is to educate students. If conveying warmth makes a teacher better able to meet this goal, all teachers should aspire to convey warmth. If it does not, it is a matter of personal preference and should not be considered a necessary trait of a good teacher. When considering the role of teacher warmth, it is interesting to also look at the effect of



gender. It is possible that students come into a learning environment with different expectations for male and female teachers. Because of gender stereotypes, they may expect female teachers to be more caring than male teachers and they may respond differently to warm or cold men than to warm or cold women (Basow, 2006).

## **Literature Review**

### **Student Learning**

There are many factors that influence student learning. Stuford (2001) found that students who are actively engaged in the learning process are more likely to be higher academic achievers. These students evaluate what they learn and try to understand concepts on a deeper level. They tend to write in more detail because their thinking is more complex. Taylor-Sims (2012) found that motivation also plays an important role in college student learning. If students are motivated to learn, they tend to be higher achievers. Many factors can influence motivation. Some students have a love of knowledge, and they are motivated to learn because they value what they are learning. Some students are motivated to learn in order to achieve a goal. They know that they need to have a good understanding of the material in order to be successful. These students are motivated by the results of learning. Schmeck and Nguyen (1996) found that family environment also plays a role students' academic success. Students who come from families that encourage them to make their own decisions and offer guidance when needed tend to be the highest achieving. These students have the ability and confidence to do well on their own, and they have support when they need it.

### **Teacher Effectiveness**

According to Chen and Hoshower (2003), student ratings of teacher effectiveness is generally one of the most important factors that is used to evaluate teachers. It is given strong consideration, but it may not be the best way to evaluate teaching performance because students do not always take their evaluations seriously. Students are more likely to value teaching evaluations if they believe that their opinions will lead to an improvement in teaching. If students believe they have something to contribute, they are more likely to volunteer to complete a teacher evaluation. Basow and Montgomery (2005) found that students tend to rate female professors better on factors that relate to interpersonal competency. The subjects that teachers taught also played a role in how students rate them. Students tend to rate those who teach natural sciences as the least effective teachers. It was also found that students' ratings of teacher effectiveness did not match well with professors' self-evaluations and that students' responses were likely to be different depending on the way the questions were phrased.

### **Teacher Warmth**

According to Heitzmann and Starpoli (2001), there is much uncertainty about what characteristics make an effective teacher and if there even are characteristics that universally make a good teacher, but flexibility and warmth seem to be the best candidates. It is thought that warm teachers incite genuine interest in their students for the material they are studying. It does not just increase students' learning, but it increases students' desire to learn. Jennings and Greenberg (2009) proposed that an environment that is open and caring promotes learning. It is believed that students learn best when they feel safe and cared for. When teachers have a good understanding of the emotions and

needs of their students, they may also understand the best way to relate information to students.

Wheless and Potorti (1989) found that teachers who expressed warmth and caring toward students tended to foster student interest in learning and the subject matter. When students believe that a teacher cares about them, they are more interested in the subject they are learning. They become more excited about the class and they have a greater desire to learn. Increased interest may cause students to be more attentive in class and study more. If so, teacher warmth and caring may have an indirect effect on student learning. When looking at the effect of warmth on learning in ninth-graders attending college guidance sessions, Kleinfeld (1974) found that students tended to score better on a test of the content if the instructor had a warm presentation style. When considering college options, students may feel more at ease and trusting of an instructor who exhibits warmth.

Elmore and LaPointe (1975) found that if students perceived their professor as being caring, warm, and concerned about students, they were more likely to rate that professor as being an effective teacher. This was true even when the grades students received were taken into account. Even if students received the same grade, they rated more caring teachers as more effective teachers. This is interesting because the grades students receive are supposed to reflect student learning. If an effective teacher is one who teaches her students well, a change in the quality of teaching should be reflected in students' grades. It is unknown if students actually learned more from the caring teachers, but they believed these teachers were more effective. In a study that examined the effects of teacher warmth on students' evaluations, Best (2000) also found that students were

more likely to give teachers who expressed warmth better ratings on evaluations. They generally perceived warm teachers to be better teachers.

Similarly, Abrami, Perry, and Leventhal (1982) found that students rated teachers who they considered to be more likable as better teachers. This may mean that students learn better from teachers from whom they enjoy learning. Of course, it is also possible that students' ratings of teacher effectiveness reflect how much they like a teacher instead of how effective a teacher actually is. When evaluating teacher effectiveness based on student evaluations, there is always a risk of personal bias. In a study that examined the effect of teacher expressiveness on student evaluations, Basow (1990) found that students rated more expressive teachers better. Students not only rated expressive teachers as more enthusiastic, but they also rated them as more knowledgeable and more competent. This is interesting because the teachers delivered the same lecture using different vocal tones and mannerisms. If the content of the lecture is the same, the perceived knowledge of the instructor should be the same, but it was different.

Hall (1970) also found that students rated teachers from whom they enjoyed taking classes as more effective teachers even though they did not actually learn more from these teachers. It was found that students did not learn more or have better achievement when learning from a professor who fit their expectations for an ideal professor. Students learned the same amount from professors who did not fit their descriptions of what an ideal professor should be like as they did from professors who did. This implies that students are not good at judging characteristics of effective teachers. They are only good at judging how much they enjoy taking a class from a particular professor. This may reflect a belief among students that an effective teacher is

a good entertainer instead of one who increases student knowledge. This is why it is important to consider student learning when evaluating teachers instead of only looking at students' opinions.

Grant (1960) noted that teachers who express caring toward students may offer needed social support during college. In a time when many students are away from home for the first time, students need to feel that they are supported and cared for by the people around them. Students may have more respect for teachers who take the time to care about them not only as a student, but also as a person. Grossack (1955) found that students are more likely to express concerns to a professor who they viewed as warm and friendly than to one who they viewed as emotionally uninvolved. If students believed professors have a personal interest in their success, they are more likely to come to them for help. Students would not express concerns to a professor they believed did not care. This may be because they believed that professor would be less likely to help them. This is important because there are times when students need help and they should feel as though their professors will be responsive.

Voelkl (1995) found that eighth-graders who attended schools that were perceived to have a warm environment tended to have better achievement levels. It is thought that the higher achievement levels were actually a result of the higher participation levels that resulted from the warm environment. Students in a warm environment may have felt safe actively participating in learning. This led to more participation, which may have led to the higher achievement levels. While this study was conducted using eighth-graders, this trend may continue into college.

## **Teacher Gender**

In a study that compared student evaluations of male and female professors who were matched for experience, Basow and Silberg (1987) found that students tend to rate male professors as more effective than female professors. This was true even when student grades were similar. It is thought that because the career of college professor is traditionally considered to be a male occupation, students may hold the belief that women are inherently less effective. Students tended to rate male professors as better at interacting with students. They thought that the male professors were more available to answer questions and interact with students. This is interesting because these behaviors would fit the traditional female stereotype. It is possible that because students expected women to be more nurturing and willing to discuss issues with students, they were rated lower on these traits when they were similar to the men. Of course, it is also possible that male instructors were actually more available to students.

When seeking to find traits students considered desirable in professors, Freeman (1994) found that students tend to prefer professors who have both traditional masculine traits and traditional feminine traits. Desirable masculine traits include assertiveness and expertise. They want a teacher who is in control of the class and is confident and knowledgeable. They also want professors to exhibit the feminine traits of caring and warmth. They want teachers to listen and be responsive to their concerns. It was found that students preferred these traits in both male and female professors.

McKeachie and Lin (1971) claimed that a warm and caring teaching style is generally more effective for female teachers, but only more effective with female students for male teachers. It is believed that students expect women to express more

warmth so they respond well when teachers meet their expectations. Students may not have the same expectations for a male teacher so his level of warmth does not change his effectiveness except with female students who may be more responsive to a warm teaching approach. This study was done in 1971 and the findings may have been influenced by gender stereotypes that may no longer play a role in student learning. Current research is needed to test this claim.

In 2006, Basow found that male students were less likely to rate female professors as the best professors. Female students rated male and female professors as best equally often. When asked why a professor was best or worst, male students most commonly cited interpersonal traits as the reason a female professor was a good professor. They emphasized skills that involved being kind to students and expressing caring. This trend was not found in relation to male professors. It is thought that male students may be more likely to be influenced by gender stereotypes than female students. Male students may be especially prone to believing women should exhibit qualities that are traditionally associated with femininity. This may mean that students expect warmth from female instructors and respond negatively when their expectations are not met. If they do not have the same expectations for male instructors, they will not be as disappointed when male instructors lack warmth.

### **Research Questions**

This study has six main research questions:

1. Is there an effect of teacher warmth on student learning?
2. Is there an effect of teacher gender on student learning?
3. Is there an interaction effect of teacher warmth and gender on student learning?

4. Is there an effect of teacher warmth on student evaluations of teacher effectiveness?
5. Is there an effect of teacher gender on student evaluations of teacher effectiveness?
6. Is there an interaction effect of teacher warmth and gender on student evaluations of teacher effectiveness?



## CHAPTER 2

### METHOD

The purpose of this experimental study is to see if teacher warmth and teacher gender have an effect on student learning and teacher evaluations. There are two independent variables. The first independent variable is teacher warmth, which is how engaged and interactive teachers are. The second independent variable is teacher gender. There are also two dependent variables. One dependent variable is scores on a quiz given at the end of the teaching session over the material on which the teacher lectured. The other dependent variable is a teacher evaluation that students filled out after completing the quiz.

#### **Participants**

This study utilized an availability sample of 125 undergraduate students by using four class sections at a small-sized state university in the Midwestern United States. Participants were students who were enrolled in Developmental Psychology classes. The sample consisted of 30.6% men and 69.4% women. Ages ranged from 18 to 37, but most of them (91.9%) were between 18 and 22. The majority identified themselves as white (82.3%), but others also identified themselves as Hispanic or Latino (6.5%), black or African American (5.6%), Asian (2.4), Other (2.4), and Native American (0.8).

#### **Design and Instruments**

This study has an explanatory quantitative design. One male teacher and one female teacher gave lectures to two Developmental Psychology course sections each. After the lecture, students took a quiz over the content of the lecture and completed a

teacher evaluation and a demographic questionnaire. The lecture, quiz, teacher evaluation, and demographic questionnaire are described below.

**Lecture.** The content of the lecture was about equine assisted therapy, and the same PowerPoint presentation (see Appendix A) was used for all four conditions. The teachers explained what it is, how it is used, and talked about the results of a study that examined its efficacy in veterans with post-traumatic stress disorder. This topic was chosen because it was thought that students were unlikely to be familiar with it. The male and female teachers were both Experimental Psychology students in the last semester of a two-year Master of Science program. They are the same age and have similar educational backgrounds and personalities. The teachers practiced giving the lecture in both a cold and a warm manner to ensure similar levels of warmth. They both practiced each condition once and tried to mirror each other's tone and mannerisms. This took place in the same classroom as the experiment so that the practicing was as similar to the real conditions as possible.

**Student learning quiz.** In order to assess student learning, participants took a quiz at the end of the lecture over the material presented in the lecture (see Appendix B). All of the answers were displayed on the PowerPoint and orally stated during the lecture in every condition. The purpose of the quiz was to be similar to the kind of quiz that would be given in a college course. It consisted of ten multiple-choice questions, and students circled the answers they selected. Experienced professors reviewed and revised the quiz and believed it is similar to a typical college quiz and is appropriate for the purpose of this study.

**Teaching evaluation.** After the quiz was administered, participants filled out a teacher evaluation (see Appendix C). This measured how much they liked the teacher and how effective they thought the teacher was. Questions were similar to those on a typical teacher evaluation for university teachers. For each question, students rated their perceptions using a Likert scale. This questionnaire was also reviewed and revised by experienced professors who believed that it is comparable to the teaching evaluations typically given at the end of academic semesters.

**Demographic questionnaire.** After completing the quiz and the teacher evaluation, participants filled out a short demographic questionnaire (see Appendix D). It asked them to select their gender, age, year in school, and ethnic background. It also asked them to identify their majors and if they found the topic of equine assisted therapy to be interesting. This questionnaire had the important role of asking if students had ever had the teacher for a class before. If they said yes, their data were excluded from the study because they would probably already have an opinion of the teacher.

### **Procedure**

The Institutional Review Board officially approved this study before it began (see Appendix E), and participants gave their informed consent so that their data could be used in this study (see Appendix F). The instructors of four Developmental Psychology course sections agreed to have this study conducted at the beginning of class periods. Each class was assigned one of the four conditions of warm-female, warm-male, cold-female, and cold-male. Participants were not aware of the different conditions at the time of the experiment. One female teacher delivered the same lecture on equine assisted therapy to two different groups of participants. During the warm-female condition, the

teacher was engaging and interactive with students. She introduced herself in a friendly manner and smiled throughout the lecture. She made eye contact and delivered the lecture with an enthusiastic tone. In the warm-male condition, these same procedures were repeated with a male teacher.

In the cold-female condition, the female teacher introduced herself without smiling and continued to look solemn throughout the lecture. She delivered the same lecture without friendliness or unnecessary interactions with students, and she appeared uninterested and unenthusiastic about the subject matter. For the cold-male condition, these procedures were repeated with a male teacher. At the end of each lecture, participants completed the quiz, teacher evaluation, and demographic questionnaire. After all of the data were collected, SPSS was utilized to analyze the data.

## CHAPTER 3

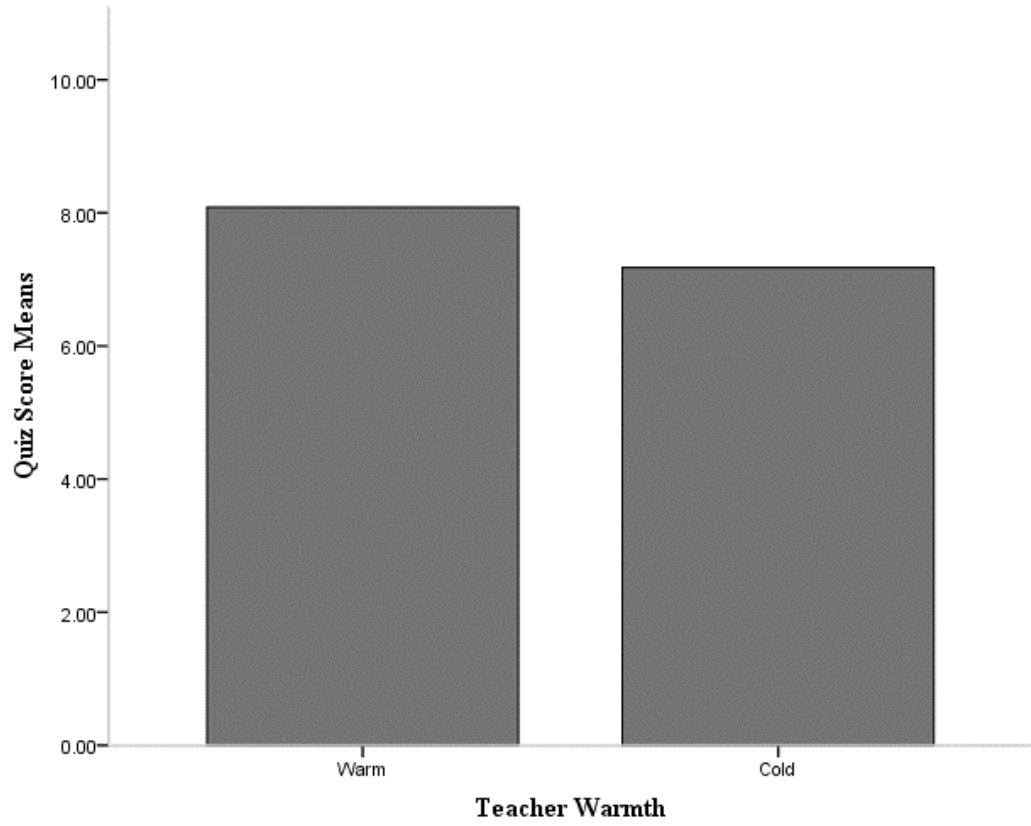
### RESULTS

#### Research Question One

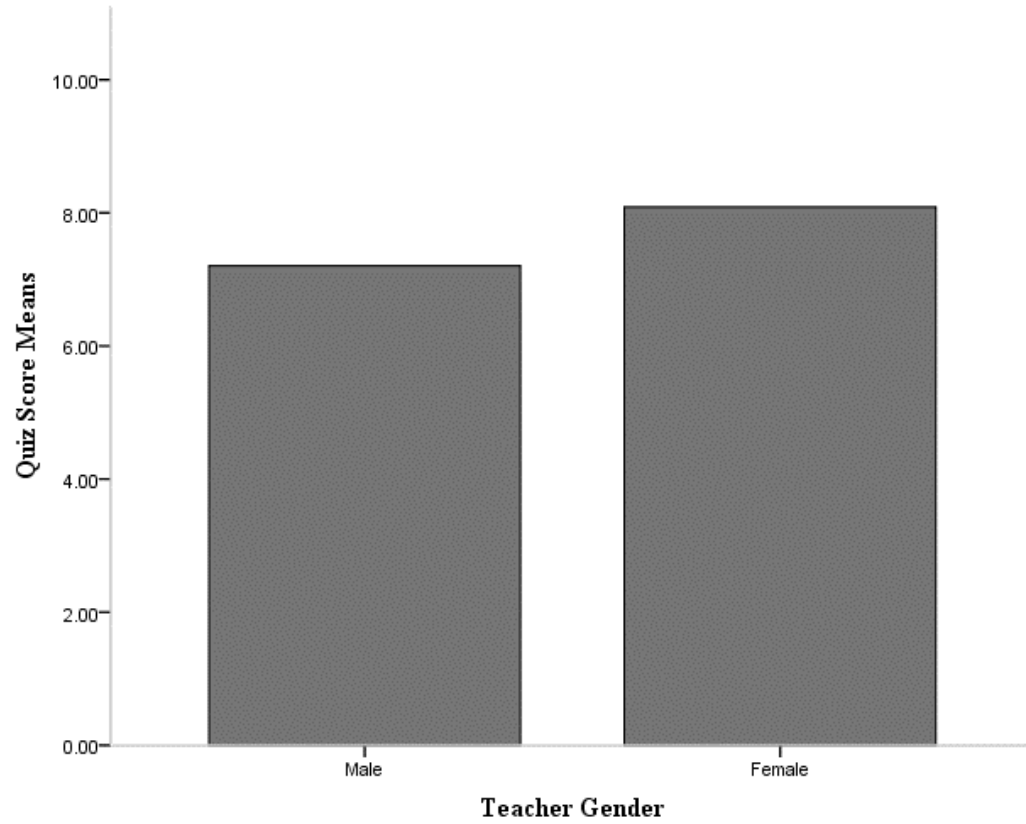
In order to test the research questions, two 2 X 2 Factorial Analysis of Variances (ANOVAs) were performed. One 2 X 2 Factorial ANOVA examined the effect of teacher warmth and teacher gender on student learning. The first research question wanted to know if teacher warmth has an effect on student learning. This research question was tested by using the main effect of a 2 X 2 Factorial ANOVA that compared the quiz scores of students who were in the warm condition to the quiz scores of students who were in the cold condition. There was a significant main effect of teacher warmth on quiz scores,  $F(1, 121) = 8.33, p < .01$ . This indicates that students in the warm condition ( $M = 8.09, SD = 1.55$ ) scored significantly higher on the quiz than students in the cold condition ( $M = 7.18, SD = 2.12$ ) (see Figure 1). This main effect answers the first research question and shows that there is an effect of teacher warmth on student learning in this study. Students in the warm condition answered a statistically significantly higher number of quiz questions correctly than students in the cold condition.

#### Research Question Two

The second research question was concerning if there is an effect of teacher gender on student learning. The main effect of teacher gender on quiz scores in a 2 X 2 Factorial ANOVA determined this. There was a significant main effect of teacher gender on quiz scores,  $F(1, 121) = 8.05, p < .01$ . This indicates that students in the female condition ( $M = 8.09, SD = 1.87$ ) scored significantly higher on the quiz than students in the male condition ( $M = 7.20, SD = 1.89$ ) (see Figure 2). This answers the second



*Figure 1.* Means of the quiz scores for participants in the warm and cold conditions.



*Figure 2.* Means of the quiz scores for the male and female conditions.

research question and shows that teacher gender does have an effect on student quiz scores in this study. Students who were in the female condition scored significantly higher on the quiz than students who were in the male condition.

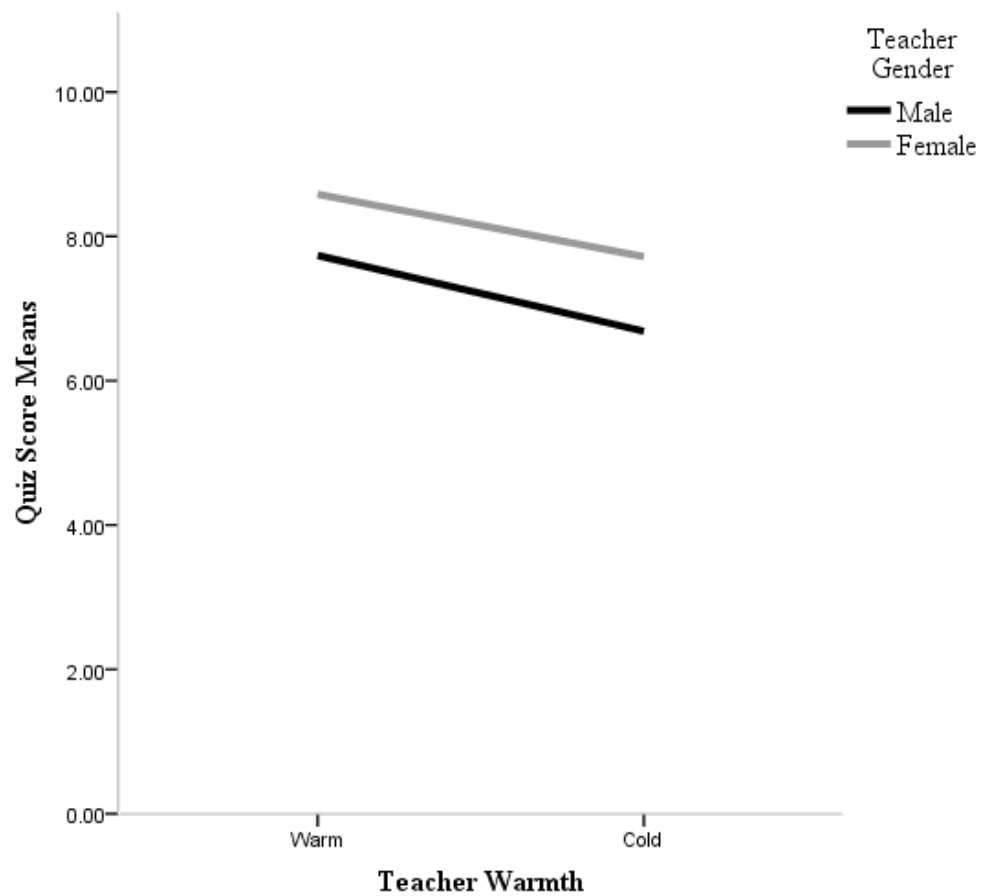
### **Research Question Three**

The third research question inquired if there was an interaction effect of teacher warmth and teacher gender on student quiz scores. The interaction effect of a 2 X 2 Factorial ANOVA determined the answer to this question. There was a non-significant interaction effect between teacher warmth and teacher gender on quiz scores,  $F(1, 121) = .08, p = .781$ . This indicates that participants' quiz scores in the warm and cold conditions were not affected differently by the gender of the teacher (see Figure 3). The answer to the third research question is that there is not a significant interaction effect of teacher warmth and teacher gender on student learning.

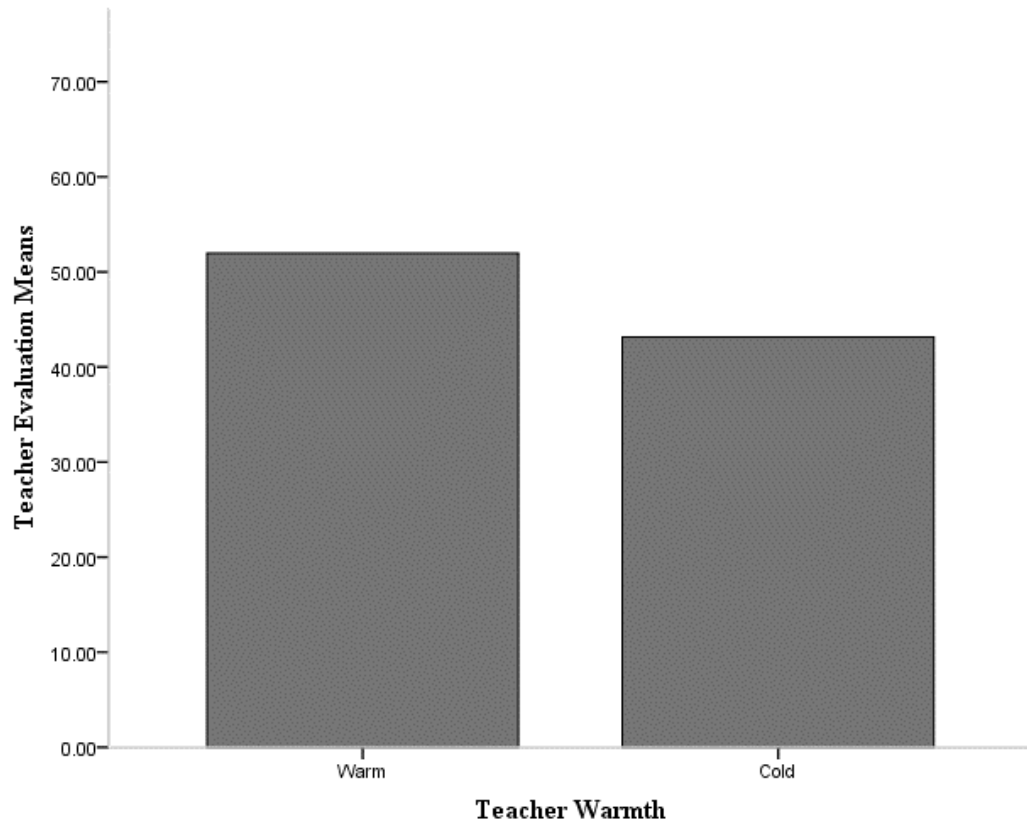
### **Research Question Four**

A second 2 X 2 Factorial ANOVA tested the effects of teacher warmth and teacher gender on teacher evaluations given by students. The fourth research question asked if teacher warmth has an effect on teacher evaluations, and the main effect for warmth of the 2 X 2 Factorial ANOVA determined this. There was a significant main effect of teacher warmth on teacher evaluations,  $F(1, 121) = 25.28, p < .001$ . This indicates that students in the warm condition ( $M = 51.97, SD = 8.92$ ) gave significantly higher teacher evaluations than students in the cold condition ( $M = 43.16, SD = 10.56$ ) (see Figure 4). This result answered the fourth research question and reveals that teacher warmth does have an effect on the teacher evaluations students gave during this study. Because the teacher evaluation assessed the students' opinions of how effective the





*Figure 3.* Means of the quiz scores for the male and female conditions by the warm and cold conditions.

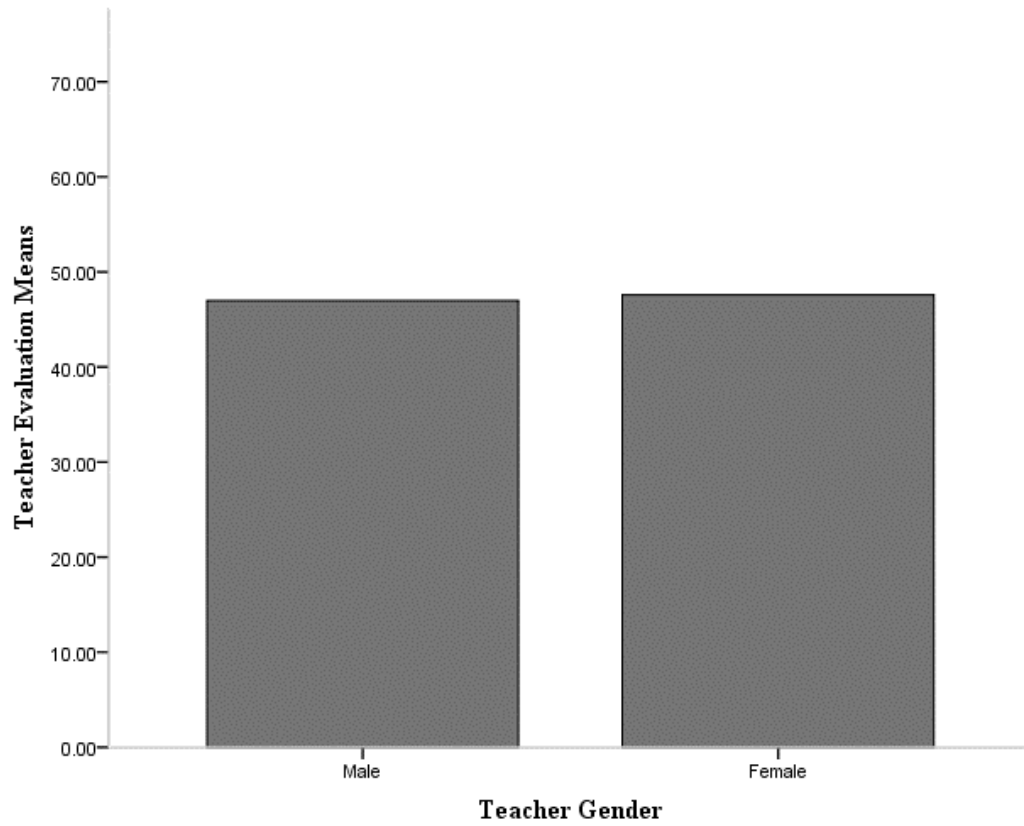


*Figure 4.* Means of the teacher evaluations for the warm and cold conditions.

teachers were, this result shows that students in this study believed that the teachers were more effective teachers when they acted in a warm manner than when they acted in a cold manner. Both the first research question and the fourth research question considered the effect of teacher warmth and compared students in the warm condition to students in the cold condition. Results for both the first research question and the fourth research question showed that there were significant main effects of teacher warmth on student learning and teacher evaluations in this study.

### **Research Question Five**

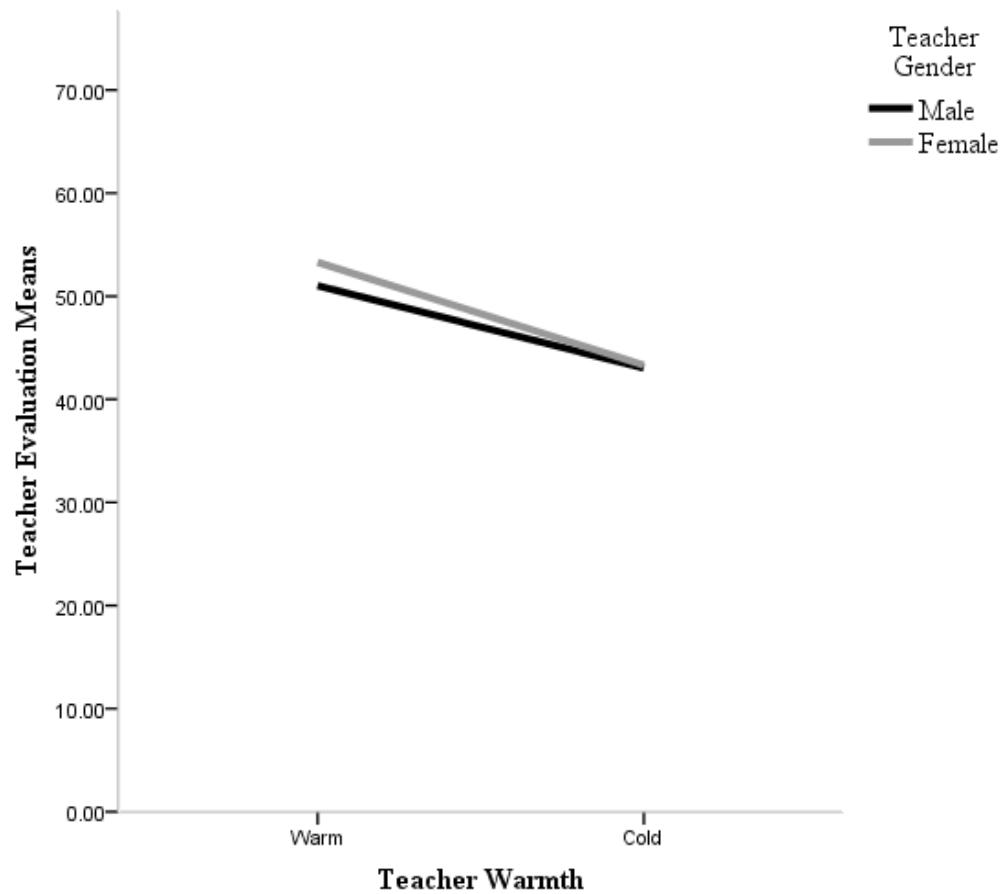
The fifth research question asked if the gender of the teacher has an effect on teacher evaluations. The main effect of a 2 X 2 Factorial ANOVA determined the answer to this research question. There was a non-significant main effect of teacher gender on teacher evaluations,  $F(1, 121) = .51, p = .478$ . This indicates that students in the female condition ( $M = 47.59, SD = 11.53$ ) gave similar teacher evaluations as students in the male condition ( $M = 46.97, SD = 10.13$ ) (see Figure 5). This answers the fourth research question by showing teacher gender does not have a significant effect on the teacher evaluations students gave in this study. This is in contrast to the results of the second research question. Both the second research question and the fourth research question were interested in the effect of teacher gender. The second research question examined teacher gender's effect on quiz scores, and the fourth research question examined teacher gender's effect on teacher evaluations. The results of the second research question were significant, but the results of the fourth were not significant. This shows teacher gender had a significant effect on student quiz scores, but teacher gender did not have a significant effect on teacher evaluations.



*Figure 5.* Means of the teacher evaluations for the male and female conditions.

### **Research Question Six**

The sixth research question asked if there is an interaction effect of teacher warmth and teacher gender on teacher evaluations. The interaction effect of the 2 X 2 Factorial ANOVA evaluating the effect of teacher warmth and teacher gender on teacher evaluations determined the outcome of this question. There was a non-significant interaction effect between teacher warmth and teacher gender on teacher evaluations,  $F(1, 121) = .306, p = .581$ . This indicates that participants' teacher evaluations in the warm and cold conditions were not affected differently by the gender of the teacher (see Figure 6). Both the third research question and the sixth research question were concerned with the interaction effect between teacher warmth and teacher gender, and neither of the interaction effects were significant in this study.



*Figure 6.* Means of the teacher evaluations of the male and female conditions by the warm and cold conditions.

## CHAPTER 4

### DISCUSSION

#### Research Question One

The first research question was supported. Teacher warmth did have an effect on student learning in this study. This implies that teachers who are warm are actually more effective teachers. It is possible that this effect can be attributed to the amount of attention students devote to the lecture. If teachers are warm and passionate about the content they are teaching, they are also implicitly sending the message the content is worth being excited about. Having a teacher who seems interested and passionate about the class may influence students to actively engage the material. Learning is no longer a burden on the students who are trying to force themselves to pay attention so that they can achieve a desired grade. If teachers and students are engaging the material, learning becomes enjoyable for the students and no longer feels like work. Having a teacher who is cold may have the opposite effect. Regardless of the content of the class, students may disengage their minds if teachers do not seem to care about what they are teaching. Coldness may implicitly tell students the course material is not worth being interested in. If the teacher does not care, then the students may not see any reason for them to care either.

This supports the research of Wheelless and Potorti (1989). They found that students are more likely to be actively involved in the learning process if their teachers are warm. It is thought that teacher warmth increases student interest because it signals to the students that the subject is worth mentally engaging. Students whose teachers interact more with them may be more likely to reciprocate that interaction. This results in more

student involvement, which results in more learning and deeper understanding. Research by Kleinfeld (1974) is in agreement because it found that students get better grades if their teachers have warm presentation styles. This shows that a warm presentation style enhances student learning, and warm teachers are actually more effective teachers.

Kleinfeld also found that students are more trusting of teachers who have warm presentation styles, which may be because they appear to be more genuine and earnest in their teaching. This may also play a role in student learning because students may be more accepting of what teachers say if they trust the teachers. If students do not believe their teachers are trustworthy, they may be more inclined to overly evaluate everything the teacher says. Healthy skepticism is a good thing and may enhance learning, but it could distract from learning if the students feel the need to constantly evaluate the teacher. If students believe they can trust their teachers, they are no longer distracted by evaluating the teacher and can focus on the course content.

### **Research Question Two**

Teacher gender was found to have an effect on student learning. As noted in the Limitations section below, the female teacher had more teaching experience than the male teacher. While this is a limitation of this study, both teachers rehearsed the lecture and delivered it very similarly. Because the lecture was the same and the answers to the questions on the quiz were stated by both teachers, it is reasonable to conclude that students paid more attention to the female teacher. One possible explanation for this finding is that students may pay more attention to female speakers. Both conditions were given the information they needed to answer the questions on the quiz, but those in the female condition were more receptive of that knowledge. It is possible that people in the



American culture are more trusting of women than they are of men. It is possible that this predisposition to trust women influenced participants to be more receptive of the content presented by a woman. It is also possible that this result is influenced by the fact that there were more women who participated in this study than men. The women may have felt a natural alliance to the female teacher, and this may have made them more receptive to what the female teacher had to say. This may have created an immediate false bond between the female teacher and the female students. It usually takes time to form an alliance and to build trust, but the female students may have bypassed the usual lengthy process, and established an immediate association based on gender. This association may have influenced them to pay more attention because they felt a need to be supportive of the person they feel an association with.

This finding is interesting in light of the research by Basow and Silberg (1987) who found that students are more likely to rate male teachers as better teachers. This shows that student perceptions may be incorrect when it comes to rating teachers. Of course, teacher evaluations are a measure of the student perceptions of the teachers' efficacy and how much students like them. It is possible that in some situations, female teachers are better teachers, but students' preconceptions about what makes a good teacher affects their evaluations. Freeman (1994) found that students prefer teachers who have both traditional masculine and traditional feminine traits. A teacher who is adaptive and multifaceted may be more appealing to more students and may be better able to effectively teach and relate to a greater percentage of students. Both of these studies looked at student evaluations of teacher performance instead of actual grades so more

research is required to determine if their findings would also apply to students' academic performance.

### **Research Question Three**

It was found that there is not an interaction effect of teacher warmth and teacher gender on student quiz scores. This means the gender of the teacher did not modify the effect of warmth on quiz scores. According to Freeman (1994), warmth is associated with a traditional female gender role and students expect female teachers to exhibit more warmth than male teachers. It seems reasonable to believe that students will respond negatively to a woman who is acting cold because it does not fit the traditional expectations for how a woman will act. The discrepancy may distract from the content of the lecture and result in lower quiz grades, but this was not found to be true in the current study.

It is possible that the traditional gender roles are no longer strongly adhered to by college students in America today. The expectations of how a woman should behave and what she is capable of doing have changed drastically in recent decades. The modern college student grew up in a world that is different than it was many years ago. They may no longer be surprised by a woman acting cold or a man acting warm. They may not even notice or believe that anything is unusual about that occurrence so it would not influence how they learn. It is also possible that students do still hold to the traditional beliefs about gender roles, but it does not have an effect on their learning. Even if a student thinks that the teacher is acting strange, the student could still be able to concentrate on the material being presented. For some students, the break from gender roles might even make the

presentation more interesting because it attracts their attention when something is different from expectations.

This finding is in contrast with the research of McKeachie and Lin that was done in 1971. As noted above, it is possible that gender expectations have changed since this research was conducted and that could explain why the current research contradicts the results. McKeachie and Lin found a warm presentation style is more effective for female teachers than for male teachers. The current study found a warm presentation style was not more effective for one gender than the other. It was more effective overall for both genders, but not for one gender more than the other. This discrepancy may represent a change in how both genders are viewed. Not only are women accepted when acting either warm or cold, but men are also accepted when acting either warm or cold. This is progressive because a high amount of warmth is not part of the traditional male gender role. The learning of participants in this study was not affected differently by a man acting warm than it was by a woman acting warm.

#### **Research Question Four**

It was found that there is a significant effect of teacher warmth on evaluations. This shows that students perceive teachers with a warm presentation style to be more effective teachers. This supports the research of Best (2000) who found that teachers who exhibited warm qualities received higher evaluations from students and were believed to be more effective teachers. Elmore and LaPointe (1975) found similar results, and they found warmth was a stronger predictor of evaluations of effectiveness than student learning. Regardless of actual student learning, warmer teachers were believed to be better teachers. These results may bring about more questions than answers because they

imply that students believe that teachers being warm is more important than the actual information they teach. It is possible that the primary role of a teacher is to connect with students and to inspire them to value the subject matter. This, in turn, may influence learning, but students seem to care less about learning than they do about the value of the knowledge. If teachers must convince students that the knowledge is valuable before students will be receptive of that knowledge, then teacher warmth may be an extremely valuable tool for teachers. This finding has interesting implications for teacher training and selection. It may be beneficial for teachers to have training in how to act appropriately warm toward students. Learning to be warm might be more prudent in a career as a teacher than learning other teaching techniques.

#### **Research Question Five**

Teacher gender did not have a significant effect on teacher evaluations. Participants did not perceive either gender as being a more effective teacher. This is in contrast to some previous research which found that students tend to rate men as more effective teachers. In 1987, Basow and Silberg found that students rated male teachers as more effective even when experience and content were matched. Their research was conducted many years ago, and the discrepancy between the two studies may be due to a change in the way that American college students view gender roles. The modern college student may view a man and a woman who deliver the same lecture as equal in ability. In 1987, students may have had a preconception that the man is more competent than the woman. This preconception remained in effect even if the teachers delivered similar lectures. However, there has also been some recent research to support the claim that men are perceived as being better teachers. In 2006, Basow found that male students were

more likely to rate male teachers as the best teachers, but there was no difference among female students. This shows female students may be less influenced by gender stereotypes than male students. This may not have shown an effect in the current research because the majority of participants were female. It is possible that results would be different if the gender of the participants were taken into account.

It is interesting that participants did not rate the female teacher as more effective than the male teacher because participants in the female condition had significantly higher quiz scores than those in the male condition. This means the students in the female condition actually learned more, but they did not believe that the female teacher was a better teacher. This possibly reveals a bias students may have of believing that men make better teachers. They may still have the perception that men are better teachers, but rated them equally because the woman was actually a more effective teacher. Actual effectiveness may have counteracted the perception making them appear equal. If this is true, it may show that women have to be better in order to be perceived as equal to men.

### **Research Question Six**

There was not a significant interaction effect between teacher warmth and teacher gender on teacher evaluations. This shows teacher warmth did not have a different effect on the evaluations of male and female teachers. The research of Freeman (1994) suggested that warmth is generally considered to be a feminine trait. It could be expected that students would anticipate warmth in the female condition more than in the male condition. If the female teacher did not meet their expectations, they may give a lower evaluation of her. Conversely, it seems that they may react neutrally to a male teacher who acts cold because it is closer to their expectations.

The lack of a significant interaction effect may be because warmth is considered to be desirable in both genders and expectations do not affect its desirability. Freeman (1994) found that students think that it is good for teachers to possess both traits that are considered feminine and traits that are considered masculine. Warmth is considered to be a feminine trait, and there is a higher expectation that women will act warm. Even though it goes against expectations for a man to act warm, it is still received in a positive way. This shows warmth is perceived as a positive trait for both male and female teachers. This finding contradicts the research of McKeachie and Lin (1971) who found a warm teaching style is more effective for female teachers than for male teachers. Students in the current study did not perceive there to be a difference in the effectiveness of a warm teaching style between genders.

### **Limitations**

Research participants from a small state school in the Midwest may not be representative of other populations in other places. It is important to note that student learning and evaluations of teacher effectiveness were measured immediately after the lectures were given. The results may be very different if the measures were taken at the end of a semester-long academic course. The fact that it was necessary to use two different people as teachers in order to evaluate the effect of teacher gender may have also influenced the results. While the teachers are similar in educational background and personalities, it is impossible to have two different people deliver the exact same lecture in exactly the same way. The female teacher was a Graduate Teaching Assistant with a year and a half of teaching experience and the male teacher did not have any formal teaching experience. The teachers practiced delivering the lecture and said similar things,

but there were inevitable differences. The results may also have been influenced by the fact that there were about twice as many women in the sample as men. The female students may view the male and female teachers differently, or they may have perceived the lecture topic differently.

### **Conclusions**

The results of this study are useful for teachers who want to know how to be more effective. Teacher warmth was shown to increase student learning and teacher evaluations. This shows warmth may contribute to making a teacher more effective and more likable. More research is needed to test the influence of teacher gender. Participants in the female condition had significantly higher quiz scores, but the female teacher had more teaching experience so this result may not be generalizable to other teachers. Regardless of that finding, evaluations of the genders were not significantly different even though the female condition had significantly higher quiz grades. Even though the female condition resulted in increased learning, students did not perceive the female teacher to be more effective. This may indicate that participants have a preconception about the efficacy of male and female teachers. Further research is needed to evaluate this.

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Appendix A  
Lecture PowerPoint

## A Study on Using Equine Assisted Therapy with Veterans Who Have Post-Traumatic Stress Disorder

## What is Post-Traumatic Stress Disorder?

- An anxiety disorder that can occur after a person experiences extreme trauma such as a life-threatening situation, sexual assault, extreme loss or injury, or other stressful situations.
- Symptoms include:
  - Repeated re-experiencing of the traumatic event.
  - Persistent avoidance of things associated with the traumatic event.
  - Hypervigilance and increased arousal.
  - Emotional numbness.
- Military veterans are at risk due to the unusually stressful situations they may have been in.

## What is Equine Assisted Therapy?

- Equine Assisted Therapy (EAT) is a type of psychotherapy that involves horses.
- Instead of talking with counselors, people in this type of therapy interact with and ride horses.
- It is thought to be more appealing to veterans who may be reluctant to talk about their feelings to a stranger.

## Need for Research

- EAT has had promising results with those who use it, but there is little empirical research on the subject.
- There is a need for more research.

## Previous Research: Beneficial to Those Without Mental Illness

- In one study, EAT was found to be beneficial to overall psychological well-being and reduced stress.
- This study examined 31 participants who had no history of mental illness.

## Previous Research: Beneficial to At Risk Children

- EAT has been shown to be effective with at risk children who have:
  - Attention Deficit/Hyperactivity Disorder (ADHD)
  - Post-Traumatic Stress Disorder (PTSD)
  - Mood Disorders
  - Depression
  - and Other Mental Disorders

### Previous Research: Beneficial to Veterans with PTSD

- One qualitative research study in 2011 suggested that EAT facilitated better understanding and creation of trusting relationships in veterans with PTSD.
- Some participants said:
  - "I can feel the ground under my feet. I haven't felt that in a long time. I feel present in the moment."
  - "I was able to be assertive without feeling guilty."
  - "I learned the difference between being assertive and being aggressive."
- This study lacks scientific weight because it is based on interviews instead of hard numbers.

### This Study

- Worked with an organization called Hooves for Heroes in Wylie, Texas.
- 10 Week Therapeutic Horsemanship Class.
- 16 veterans (8 women and 8 men).
- Ages 29-64.
- They served in Vietnam, Iraq, Afghanistan, Desert Storm and other locations.

### Questionnaires

- Both scales had participants answer each question by rating the severity of symptoms on a scale of 1 to 5.
- PTSD Checklist (PCL-C)
  - During the past week how satisfied have you been with your...
    - Social relationships?
    - Overall sense of wellbeing?
- Quality of Life Enjoyment and Satisfaction Questionnaire – Short Form (Q-LES-Q-SF)
  - Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?

### Results

- Questionnaires were administered to participants right before the program and again right after.
- For both questionnaires, there was a significant reduction in symptoms when comparing post-treatment to pre-treatment.

### Conclusion

- The results of this study are promising, but there are also some possible problems.
- Researchers did not have a similar group of individuals to test and compare the results to.
- Because of this, it is impossible to confidently say that the effect was due only to treatment and not the effects of time and other unknown factors.

## Appendix B

## Quiz

### Quiz

1. Which of the following is NOT a symptom of posttraumatic stress disorder (PTSD)?
  - A) Repeated reexperience of the event.
  - B) Emotional numbness.
  - C) Hypervigilance.
  - D) Irresistible compulsions.
  
2. What is special about the type of therapy discussed in the lecture?
  - A) It was based on the principles of B. F. Skinner.
  - B) It involved horsemanship classes.
  - C) It was a special kind of cognitive therapy.
  - D) It involved exposing people to anxiety producing conditions.
  
3. Previous research on this topic is best described as which of the following?
  - A) There have been many studies that show this is an effective form of treatment.
  - B) There have been some research that shows this is probably not a good form of treatment.
  - C) There has been very little research and most of the studies that have been done do not meet the standards of empirical research.
  - D) There is no other research on this topic. This is the first study to be conducted.
  
4. In this study, who were the people receiving treatment?
  - A) Children
  - B) Schizophrenics
  - C) Military veterans
  - D) Elderly adults
  
5. Which state did this treatment take place in?
  - A) Kansas
  - B) Oklahoma
  - C) Texas
  - D) Arkansas
  
6. How many people participated in treatment for this study?
  - A) 5 women and 5 men.
  - B) 8 women and 8 men.
  - C) 5 women and 8 men.
  - D) 8 women and 5 men.

7. How were symptoms measured?
  - A) Using sentences, participants wrote descriptions of their symptoms.
  - B) Using a list of symptoms, participants checked the boxes next to all the ones they had.
  - C) Using a professional, participants were examined by a nurse practitioner.
  - D) Using ratings, participants rated the severity of each symptom from 1-5.
  
8. When were symptoms measured?
  - A) Before treatment started and after it ended.
  - B) Before treatment started, half way through the program, and at the end.
  - C) Only at the end of treatment.
  - D) Half way through the program and at the end.
  
9. Results showed that:
  - A) Symptoms did not improve.
  - B) Symptoms improved by the end of treatment.
  - C) Symptoms improved in women, but not in men.
  - D) Symptoms improved in younger people, but not in older people.
  
10. What is one problem with the study that was mentioned in the lecture?
  - A) Results of people in this treatment were not compared to people who did not receive treatment.
  - B) Participants were all veterans.
  - C) Some participants did not finish the whole treatment.
  - D) There were not enough people in study.



## Appendix C

### Evaluation

### Evaluation

Rate your agreement with the following sentences by choosing an answer from 1 (Strongly Disagree) to 7 (Strongly Agree).

1. I learned a lot from this presentation.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

2. I would like to take a class from this teacher.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

3. I enjoyed this presentation.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

4. The study was explained clearly.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

5. I felt like this teacher cared about the students.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

6. This teacher was knowledgeable about the subject matter.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

7. This teacher was passionate about the subject matter.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

8. I think this teacher was likable.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

9. I would recommend this teacher to friends.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

10. I think this teacher was an effective teacher.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree

Additional comments: \_\_\_\_\_

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Appendix D  
Demographic Questionnaire

### Demographic Questionnaire

Answer the following questions about yourself.

1. What is your gender? Male \_\_\_\_ Female \_\_\_\_

2. What is your age? \_\_\_\_\_

3. What year are you in college?

Freshmen \_\_\_\_ Sophomore \_\_\_\_ Junior \_\_\_\_ Senior \_\_\_\_ Other (Specify): \_\_\_\_\_

4. What is your major? \_\_\_\_\_

5. What is your ethnicity?

Asian \_\_\_\_ Black or African American \_\_\_\_ Hispanic or Latino \_\_\_\_

Native American \_\_\_\_ Pacific Islander \_\_\_\_ White \_\_\_\_ Other (Specify): \_\_\_\_\_

6. Are you an international student?

Yes \_\_\_\_ No \_\_\_\_

7. Were you familiar with Equine-Assisted Therapy before this lecture?

Yes \_\_\_\_ No \_\_\_\_

8. Did you find the topic of Equine-Assisted Therapy to be interesting?

Yes \_\_\_\_ No \_\_\_\_

9. Have you had this instructor for a class before?

Yes \_\_\_\_ No \_\_\_\_

Appendix E

Institutional Review Board Approval Letter



February 19, 2014

Carolyn Moen  
Psychology  
Campus Box 4031  
Emporia, KS 66801

Dear Ms. Moen:

Your application for approval to use human subjects has been reviewed. I am pleased to inform you that your application was approved and you may begin your research as outlined in your application materials. Please reference the protocol number below when corresponding about this research study.

Title:	The Effect of Teacher Warmth and Gender on Student Learning and Teacher Evaluations
Protocol ID Number:	14052
Type of Review:	Expedited
Time Period:	02/01/2014--01/31/2015

If it is necessary to conduct research with subjects past this expiration date, it will be necessary to submit a request for a time extension. If the time period is longer than one year, you must submit an annual update. If there are any modifications to the original approved protocol, such as changes in survey instruments, changes in procedures, or changes to possible risks to subjects, you must submit a request for approval for modifications. The above requests should be submitted on the form Request for Time Extension, Annual Update, or Modification to Research Protocol. This form is available at [www.emporia.edu/research/irb.html](http://www.emporia.edu/research/irb.html).

Requests for extensions should be submitted at least 30 days before the expiration date. Annual updates should be submitted within 30 days after each 12-month period. Modifications should be submitted as soon as it becomes evident that changes have occurred or will need to be made.

On behalf of the Institutional Review Board, I wish you success with your research project. If I can help you in any way, do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive that reads 'Michael Butler'.

Dr. Michael Butler  
Institutional Review Board

pf  
cc: Dr. Pamelyn MacDonald

An Equal Opportunity Employer

Appendix F  
Informed Consent Document



### Informed Consent Document

The Department of Psychology at Emporia State University supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subjected to reprimand or any other form of reproach. Likewise, if you choose not to participate, you will not be subjected to reprimand or any other form of reproach.

Participants will observe a lecture. After the lecture, they will be given a short quiz over the content of the lecture and a questionnaire about their thoughts. They will then fill out a demographical survey to give researchers some basic information about participants. The total time it will take to participate will be about 20 minutes.

There are no anticipated physical or psychological risks involved in participation, and no personal information about participants will be reported.

If you have any questions or concerns, contact Carolyn Moen at [cmoen@g.emporia.edu](mailto:cmoen@g.emporia.edu).

"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask any questions I had concerning the procedures and possible risks involved. I understand the potential risks involved and I assume them voluntarily. I likewise understand that I can withdraw from the study at any time without being subjected to reproach."

\_\_\_\_\_  
Subject

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent or Guardian (if subject is a minor)

\_\_\_\_\_  
Date

I, Carolyn Moen, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author. I also agree to permit the Graduate School at Emporia State University to digitized and place this thesis in the ESU institutional repository.

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Signature of Author

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Date

The Effect of Teacher Warmth and Gender on  
Student Learning and Teacher Evaluations  
Title of Thesis

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Signature of Graduate Office Staff Member

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Date Received