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Defensive Communication Between Professors and Students and Its Effects on Student Outcomes

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DEFENSIVE COMMUNICATION BETWEEN PROFESSORS AND STUDENTS AND ITS EFFECTS ON STUDENT OUTCOMES

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ABSTRACT

This study investigated the relationship between defensive communication and student outcomes in college classrooms. The researcher hypothesized that students would perceive a greater defensive climate in classes taught by their least favorite professors, and that the defensive climate would encourage the use of coping mechanisms. Defensive communication was also hypothesized to negatively affect student grades, attendance, and course satisfaction and to increase student burnout. Surveys were administered to college students, and results supported all hypotheses. Findings showed that students linked defensive attributes to their least favorite professors more frequently than they did to their favorite professors, and they reported using more coping mechanisms in defensive classrooms. Student grades were lower in defensive classrooms, and the students skipped those classes more frequently. They reported lower satisfaction with courses in which defensive communication took place and also reported greater feelings of burnout.

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INTRODUCTION

We communicate with others for a variety of purposes: to obtain information, to gain approval, to persuade, and to correct behavior, among others. We begin our dialogues with specific outcomes in mind and can become frustrated when those outcomes do not occur. As our frustration increases, our communication can become dysfunctional, and we may be incapable of communicating effectively. There are many types of dysfunctional communication, but the four that display the most negative affect include criticism, contempt, defensiveness and stonewalling (Rowland & Perlman, 2009).

These four types of miscommunication are what Gottman (1993) calls the "four horsemen of the apocalypse." His research on communication led him to conclude that of all the types of dysfunctional communication, these four are the most destructive in relationships. Gottman (1993) also found that these four conversation barriers tend to surface in a pattern during heated conversations: "criticism leads to contempt, which leads to defensiveness, which leads to stonewalling" (p. 62).

Based on Gottman's pattern, one can assume that defensiveness is simply a response when individuals are provoked; however, studies show that both individuals in a defensive conversation share responsibility for any defensive behavior exhibited (Stamp, Vangelisti & Daly, 1992). Stamp et al., (1992) found that the source of defensiveness is neither internal nor external, but rather occurs when two individuals come together and interact. Their study included two perspectives on defensive communication. One approach viewed defensiveness as a response to communication, and stated that people make others defensive by the way they communicate, which is consistent with Gottman's pattern. The other approach was psychological, and assumed that defensive states reflect sensitive internal flaws within the

defensive person. Following this approach, Becker, Ellevold and Stamp (2008) found that one's sensitivity to internal flaws increases each time they surface in conversation. They also found that people become sensitive to the flaws of those whom they love and internalize those flaws as their own. When this happens, people feel personally attacked when their loved ones are criticized, which results in defensive behaviors (Becker et al., 2008).

Much of the defensive communication literature focuses on defensiveness in the context of intimate relationships and its effects on relationship outcomes. More recently, the focus has begun to shift to situations that are more public in nature. One of these environments includes the college classroom and focuses on professor/student relationships. Rosenfeld (1983) found that greater defensive communication in the classroom had a strong correlation with coping mechanism usage by the students taking the course.

The purpose of this study is to expand on Rosenfeld's findings and determine other negative classroom outcomes associated with defensive communication. Variables that will be tested include student grades, attendance, course satisfaction and burnout.

LITERATURE REVIEW

Why is defensiveness considered a type of dysfunctional communication? Gibb (1961) and Baker (1980) state that defensive individuals distort the messages that they receive, and as defensiveness increases, the individuals become less able to accurately interpret what others are trying to say. Most defensive communication literature credits perceived threat as the catalyst of defensive behavior, and we become aware of those perceptions as the brain processes incoming information.

According to Baker (1980), there are a number of different ways that information enters and is processed within the brain. Information that is consistent with one's point of view is processed as it is, without corrections, while information that is inconsistent can be rejected, altered to fit our point of view, or allowed to enter without being altered (Baker, 1980). If information contrary to one's point of view enters unchanged, the brain either represses it or alters that person's point of view to fit the new information. However, Baker (1980) stated that:

> Our basic beliefs, values, and attitudes become so entwined with our total mental system that a change in one area has a complex carry-over effect on countless other related areas. Thus, changing beliefs and attitudes which are most strongly held requires major restructuring of the mind. Human nature is such that changing of previous beliefs is the alternative which is usually the least likely to occur. In other words, the mind would rather *avoid* the uncomfortable state of mental dissonance and threat of change than to entertain information which might prove that incorrect thoughts and assumptions have previously been held. Stated simply, we would often rather be wrong than change our minds. (p. 34)

In other words, we become defensive when someone confronts us with a view that differs from our own, because we perceive the possibility of change as a threat. The reason for defensiveness is a difference between reality and our perceptions, and also the difference between the perceptions of different people (Stamp, Vangelisti, & Daly, 1992). The way that we perceive feedback from others plays a role in whether or not we discount the message, and in our defensiveness we tend to produce negative thoughts and to attack sources of messages that we find threatening (Knight Lapinski & Boster, 2001).

In addition to perceiving different views as a threat, Rogers (1961) stated that our "natural tendency to judge, evaluate, approve or disapprove" (p. 330) what others say or think can also put us on edge. According to Rogers (1961), when we judge or evaluate something, we do so based on our own perceptions, not others'. To prevent defensiveness, we must fully understand another's perspective without judging it based on how we perceive the world; defensiveness decreases when others perceive that we are simply trying to understand them, not judge them (Rogers, 1961). The problem people face when trying to do this, however, is that emotions generally become involved before understanding can happen. We are more likely to judge others when we become angry, and stronger feelings in an argument decrease the likelihood that the discussion will even remain about the same issue (Rogers, 1961). According to Rogers (1961), defensive discussions generally result in the two individuals arguing about two different ideas, opinions or feelings, rather than the same one. If they could remove their emotions from the discussion, defensiveness would decrease, and understanding would be reached. If they were able to fully understand the other's point of view, their own would be slightly altered, allowing them to acknowledge that both views have merit (Rogers, 1961). In other words, neither view is 100% correct.

The physical and psychological descriptions of someone who feels defensive are much different than those felt by someone who feels understood. According to Gordon (1988), those who are defensive tend to feel tense, discomforted, gripped by the situation, and mentally confused. The individual may feel uptight, and may want to strike out at the person triggering the defensive emotions. He or she may also display defensive whining, which is nonverbal, and "includes indignation and self-righteousness" (Gottman, 1994). Gordon (1988) stated that "extreme defensiveness entails an implosion, a turning-in upon the self, a contraction of one's

psychological and physical self, with the possibility of ultimate outward explosion" (p. 61). Those who feel understood, on the other hand, feel awakened and empowered and are more likely to be physically, mentally and emotionally able to communicate effectively (Gordon, 1988). Gordon (1988) compared feeling understood to a "mountaintop experience," and compared feeling defensive to feeling pushed off a cliff. He also found that the positive and negative feelings associated with feeling either understood or defensive extends to other people and humanity in general. In other words, people feel the same way about the world as they do about the people with whom they speak.

Gibb's Climates

Gibb (1961) identified six catalysts of defensiveness and six approaches that infer support. By combining opposites from each category, he came up with six pairs, which he called "climates." The six defensive climates include evaluation, control, strategy, neutrality, superiority, and certainty. The six supportive climates include description, problem orientation, spontaneity, empathy, equality, and provisionalism.

The first defensive climate is evaluation. When people evaluate others, they make judgments about them (Gibb, 1961). Judgments do not always have to be negative, but they cause defensiveness nonetheless. Paired with evaluation is description, which is a genuine request for information. According to Gibb (1961), description avoids overtone, thus making it a supportive climate rather than a negative one. The second defensive climate is control, and this manifests itself when people try to change others' attitudes or influence their behavior. When this happens, those being controlled suspect that hidden motives are involved and increase their defensive resistance (Gibb, 1961). Paired with control is problem orientation, which Gibb

(1961) described as "defining a mutual problem and seeking its solution." In this case, there is "no predetermined solution, attitude, or method to impose" (Gibb, 1961).

The third defensive climate is strategy, in which a person tries to manipulate someone else. Baker (1980) stated that the speaker must refrain from trying to make the listener conform and must make it clear that no hidden agenda exists. Acts that are spontaneous appear free of deception, and thus make the listener less defensive (Gibb, 1961). The fourth defensive climate is neutrality, which manifests itself when speakers give the impression that they do not care about the listeners. Neutral speakers may convey a lack of warmth, a lack of sharing, or inattentiveness toward their listeners (Becker et al., 2008). According to Gibb (1961), the listeners interpret neutrality as rejection, and become defensive as a result. The opposite of neutrality is empathy. Speakers showing this supportive climate do not make an effort to change their listeners, and they become less defensive because they sense that the speakers care about them (Gibb, 1961).

Speakers who make others feel inadequate behave within the defensive climate of superiority. The problem with this climate is that the listeners focus on their inadequate feelings, rather than listening to the speaker's message (Gibb, 1961). Paired with superiority is equality. According to Gibb (1961), though differences exist between people, "low defense communicators seem to attach little importance to these distinctions," and this places them within the equality climate. The final defensive climate is certainty. This climate is reserved for speakers who seem to know everything and always want to win arguments. Gibb (1961) stated that speakers within the certainty climate think of their own ideas as "truths to be defended," and do defend their ideas at all costs. Paired with certainty is the supportive climate of provisionalism. Speakers with this approach decrease defensiveness by focusing on solving a

problem with the best solution, regardless of where that solution comes from (Gibb, 1961). Overall, successful communicators behave in ways that allow listeners to express their ideas openly and consider their opinions without passing judgment.

Reconceptualizing Gibb's Climates

Gibb's work has always been the heart of defensive communication literature. An interesting note about his work, however, is that Gibb does not offer empirical support for his defensive and supportive climates. Fifty years after publishing his work, Forward, Czech, and Lee (2011) tested Gibb's six climate pairs, and found that many of Gibb's climates overlapped. Forward et al., (2011) reconceptualized Gibb's work into a new 2 x 2 matrix, which incorporated many of Gibb's dimensions into only four factors: collaboration, descriptive orientation, authoritarianism and manipulation. In this model, collaboration and descriptive orientation are supportive factors, while authoritarianism and manipulation are defensive factors.

FIGURE I
RECONCEPTUALIZATION OF GIBBS' CLIMATES

Orientation	**Supportive**	**Defensive**
Task	Collaboration (Provisionalism, equality, spontaneity, empathy)	Authoritarian (Control, certainty, superiority)
People	Descriptive (Description, problem orientation)	Manipulation (Strategy, neutrality)

Collaboration combined Gibb's supportive climates of provisionalism, equality, spontaneity and empathy (Forward et al., 2011). Forward et al., (2011) paired collaboration with authoritarianism, which included Gibb's defensive climates of control, certainty and superiority. Collaboration and authoritarianism are paired because they both involve tasks. Descriptive orientation combined Gibb's supportive climates of description and problem orientation (Forward et al., 2011). Forward et al., (2011) paired descriptive orientation with manipulation, which included Gibb's defensives climates of strategy and neutrality. Descriptive orientation and manipulation are paired because they both involve people.

Degrees of Defensiveness

The works by both Gibb and Forward et al., provided insight into the types of behavior that trigger defensiveness, but the works did not discuss varying degrees of defensiveness. Holland (1967) found that the extent of one's defensiveness is based on a number of variables, but concluded that tractability – the extent to which something can be controlled – was the major predictor of the degree of defensive behavior. Holland (1967) placed inanimate objects at the low end of the scale, because they are fairly easy to control. Following inanimate objects, he placed animals, because they are also fairly controllable. Continuing up the defensiveness scale, Holland (1967) placed children and ended with adults. His reasoning behind this was that children are sometimes controllable, while adults are fairly unpredictable.

In addition to creating this scale, Holland (1967) also created another scale in which he ranked types of communication as more or less defense-provoking. He termed the most defensive type of communication "ritualized communication." This type of communication is what one thinks of when they think of small talk. The reason why this is the most defensive type

is that people engaged in such communication typically do not know the other person very well, so the communication is very impersonal, and it is easy to make quick judgments; in these situations, people have to know and follow the social rules of what is and is not appropriate topics for conversation (Holland, 1967). This pressure can cause defensiveness, especially if the people interacting are unsure of what the social rules are. The next type of communication – persuasive communication – is less defensive than ritualized communication. In this type, the speaker pays more attention to listener feedback because the speaker is typically trying to accomplish something (Holland, 1967). This added attention gives the speaker small insights into the character of the listener, which does not occur during ritualized communication.

A third type of communication is cooperative communication (Holland, 1967). In this type, people try to reach an agreement on a project, idea, plan of action, etc., making it less defensive than persuasive communication. Holland's (1967) final – and least defensive – type of communication is intimate communication. In this type, people are "defined as having no other purpose than knowing another person and making oneself known to that person. It must, therefore, be free of ulterior or impersonal motivation" (p. 153).

Many studies have concluded similar findings to Holland's intimate communication type. Stamp et al. (1992) found that those communicating intimately are less likely to feel attacked by those who they know well and like, and thus display lower amounts of defensive behavior than those who do not know each other well. Their study also found that people are more likely to admit having a flaw to someone who they know well and like. Baker (1980) found that people are more likely to change their point of view – and thus be less defensive – if they like the person they are communicating with, and Becker et al., (2008) found that even if someone does not

admit a flaw during a defensive episode, he or she is more likely to admit it later in order to repair a close relationship.

Strategies to Prevent Defensiveness

Those needing to repair a relationship after a defensive episode can use a number of different strategies, including metacommunication, apologetic communication, partner-centered communication and avoidance (Becker et al., 2008). With metacommunication, partners talk directly about the problems they experienced in the past. With apologetic communication, one of the individuals takes responsibility for the defensive episode. In partner-centered preventative communication, people talk about how to prevent defensiveness in the future. Those who use avoidance spend some time apart in order to calm down before returning to their conversation. For those who use avoidance as a repair mechanism, it is important to keep in mind that long-term avoidance without solving the problem harms the relationship; avoidance is only helpful if it is short-term (Becker et al., 2008).

Not only is it important to resolve conflict quickly in order to repair relationships, but it is also important to use some form of repair strategy quickly in order to prevent future defensive episodes. Becker et al. (2008) found that previous defensive episodes can make future defensive conversations more intense and that settings in which people had frequent defensive episodes made the people more likely to become defensive again. Findings by Stamp et al. (1992) agreed that defensiveness arises from repeated interactions in certain contexts with others and restated that it is the result of perceptions.

Objective versus Subjective Perceptions

Because no one perceives things in exactly the same manner, why is it that people are not defensive all the time? Work by Haney (1979) found that our perceptions of matters as subjective or objective determines defensive episodes. As long as we know that differences in points of view or values are only opinions, then we can accept another's beliefs because they do not threaten how we see the world (Haney, 1979); however, we do become defensive when people differ in objective matters, because the differences do threaten how we see the world (Haney, 1979). Haney (1979) found that we become defensive when we begin to treat subjective matters as objective. The problem with this is that no one learns about subjective matters in the same way and cannot measure them, and this makes it easy to attack others' perceptions and trigger defensiveness (Haney, 1979).

Other Effects of Defensive Communication

In addition to causing problems in relationships, defensiveness has side effects that manifest themselves in other areas. Alexander (1973) found that families with deviant children who run away have more defensive interactions between the parents and the children than families whose children are not deviant. While at work, defensiveness between workers and bosses causes a low-quality relationship that increases worker burnout (Becker, Halbesleben & O'Hair, 2005). Defensiveness even affects people at a cultural level. Vaes and Wicklund (2002) found that those who live in a multilingual culture prefer their native tongue over other languages if they feel that their culture is being threatened. Vaes and Wicklund (2002) explained that this happens because their native tongue supports their worldview and found that people are

more receptive of other languages and worldviews if their own culture and perceptions are not threatened.

Defensiveness in the Classroom Setting

In addition to these other effects of defensive communication, Rosenfeld (1983) found that college students viewed classes with a supportive climate as more favorable than classes with a defensive climate. He also found that students in college classrooms were more likely to use coping mechanisms in disliked classes than they were in liked classes, and that students reported that the professors teaching the disliked classes fostered a defensive classroom climate more often than a supportive one.

Given the stress that professors and students often face in response to grades, tests, papers and other assigned projects, it is easy for defensive communication to begin. Multiple manners of communication – such as question and answer approaches, lectures and discussions – are only a few of the ways that defensiveness can arise while classes are in session. Outside of class, emails are sent between professors and students, small talk is made, and students seek additional help with their professors during office hours or before and after class. Any of these instances at any moment may spark a defensive conversation by simply creating an environment where people feel compelled to interact.

As a result of their defensiveness, students resort to using coping mechanisms both during and after class. Coping behaviors may include skipping class, complaining about the professor, cheating on tests or assignments, or resisting the professor's influence. Not only do the students vary on which coping mechanisms they use, but they also vary to the extent in which the mechanism manifests itself in their behavior.

Current Study

The purpose of this study is to expand upon Rosenfeld's findings and determine how defensive communication between professors and students at colleges and universities affects student outcomes in the classroom. Variables were added to Rosenfeld's classroom climate questionnaires in order to measure differences between student grades, classroom attendance and perceived burnout in classes taught by favorite and least favorite professors. Since the questionnaires were expanded, the following hypotheses were tested to verify consistency with Rosenfeld's findings:

H1: Favorite professors will exhibit more supportive behaviors than least favorite professors; likewise, least favorite professors will exhibit more defensive behaviors than favorite professors.

H2: Students will resort to greater numbers and frequencies of coping mechanisms in classes with a higher defensive climate than in classes with a supportive climate.

In order to examine student outcomes as they relate to the first two hypotheses, the following hypotheses will also be tested:

H3: Grades will be negatively affected by defensive communication.

H4: Classroom attendance will be lower in defensive classrooms than in supportive classrooms.

H5: Students will report greater course satisfaction and less burnout in supportive classrooms than in defensive classrooms.

METHODOLOGY

Participants

The participants (N=198) from this study were students enrolled in courses at a college or university. Of the respondents, 183 were from a four year state college or university, 11 were from a private college, and one was from a two year community college. Freshmen made up 24 of the respondents, 31 were sophomores, 50 were juniors, 83 were seniors, and 7 were graduate students. Of the respondents, 47 were male and 148 were female, and ages ranged from 18 to 29 years old. The average cumulative grade point average was 3.55. Participation was voluntary, and there were no incentives offered for taking the survey. All responses were anonymous.

Procedure

Permission to implement the survey was requested from the Institutional Review Board (IRB). The form and other materials submitted for IRB approval are included in Appendix A.

After receiving IRB approval, participants were recruited through email and Facebook invitations by the researcher. Three psychology faculty at the University of Northern Iowa (UNI) also distributed the survey invitation to their classes via email. The email included a formal invitation to take the survey and explained the research purpose of the study. Students clicked on the online link available in the email to access the survey. With the anonymous nature of the survey, it was impossible to determine if a specific student took the survey or not.

Before students began answering survey questions, they encountered a message with information pertaining to the survey's purpose, potential risks of participation, and a statement declaring informed consent. By selecting "I agree," students acknowledged that they read the informed consent page and were aware of the potential risks involved in participating. Students had to select "I agree" in order to move on to the first survey questions, which provided basic

demographic information. Participants then filled out two classroom climate questionnaires that allowed students to assess a particular classroom experience with their favorite professor. The first questionnaire was designed to measure supportive versus defensive climates related to the professor, and the second questionnaire was designed to measure coping mechanisms used by the student in the classroom. After completing the sections regarding their favorite professor, the students then completed the same two questionnaires to assess a particular classroom experience with their least favorite professor.

Instrumentation

The survey was administered using Qualtrics online survey platform through UNI. The complete Classroom Climate Questionnaire is located in Appendix B. The sections of the questionnaire that focused on supportive versus defensive climates related to professors was composed of 23 questions and had a response format that consisted of a five-point scale. Participants responded with a 5 ("Strongly Agree") when they felt that the behavior indicated described their professor and with a 1 ("Strongly Disagree") when they felt that the behavior indicated did not describe their professor. Questions 1, 4, 5, 6, 9, 12, 14, 16, 18, 19, 20, 21, 22 and 23 described behaviors that help to generate a supportive climate, and questions 2, 3, 7, 8, 10, 11, 13, 15, and 17 described behaviors that can generate a defensive climate.

The sections of the questionnaire that focused on student coping mechanisms consisted of 15 items with a bi-polar format. The extreme left side of the scale indicated that students did display a particular coping mechanism, while the extreme right side of the scale indicated that students did not. The last few items on this questionnaire focused on student reflection of the course – such as burnout and course satisfaction – rather than on specific coping mechanisms.

In addition to filling out the adapted questionnaires, students were also asked to provide basic information about their courses and professors in question. These questions are also located in Appendix B. Data were obtained regarding the type of class (lecture, discussion, etc.), how frequently the class met, the grade they received in the class, the number of times they skipped the class, and how frequently they corresponded with the professor by email, among other items.

The hypothesis that greater defensive communication between professors and students leads to poorer student outcomes was tested by comparing the results obtained from the surveys for both favorite and least favorite professors. T tests were performed for each item to determine classroom climate and coping mechanism differences between classes taken with favorite and least favorite professors, and those differences were then compared to the items relating to student outcomes and behaviors.

RESULTS

Many of the demographic questions that students responded to were multiple choice in nature, and the answer choices were coded for data analysis. For example, students responded to "How often did this class meet?" for both their favorite and least favorite professor. The possible responses included "Once a week," "Twice a week," and "Three + times a week." These answers were coded as "1," "2," and "3" respectively. Other questions such as "What year are you in school?" "What type of institution do you attend?" and "How frequently did you email the professor?" were similarly coded.

The questions that represented professor behavior reflected either supportive or defensive traits. In order differentiate the supportive versus defensive scores, a number of items were re-coded so that professors would receive an overall "supportiveness" score rather than separate

supportive and defensive scores. Questions 2, 3, 7, 8, 10, 11, 13, 15, and 17 represented defensive behaviors, so the scores for these variables were reversed (keeping in mind that these questions appeared twice on the survey – once for favorite professors and once for least favorite professors). This meant that high scores in these defensive categories became low scores (to reflect low support) and low scores in these defensive categories became high scores (to reflect greater support).

This type of recoding was also done for two variables on the coping mechanisms sections of the questionnaire (the first in response to the class taught by the favorite professor and the second in response to the class taught by the least favorite professor). For most of the variables, a student who heavily used a coping mechanism received a score of 1, while a student who never used a coping mechanism received a score of 7; for two of the two variables, however, the numbers were reversed. These variables include "I took risks in this class/I did not take risks in this class" and "I daydreamed in this class/I did not daydream in this class." These two variables were re-coded so that the scores reflected student behavior similarly to the scores of the other variables.

Participants reported classes that ranged from a few students up to 200 students. Classes were most frequently lecture or discussion-based, but other types of classes were also reported. Participants were majoring in a variety of fields, but the two majors that were best represented were Biology and Psychology.

Following Rosenfeld's (1983) presentation, Table 1 shows the results obtained for reported professor behaviors. Twenty one (21) out of the 23 *t* tests conducted in this study were significant (compared to Rosenfeld's study where only found 14 out of 19 *t* tests were significant). The two tests that were not significant in the current study were behaviors that

create a defensive climate between professors and students. As a result, a professor who is "very certain of his/her ideas" and "hardly ever changes his/her mind" may just as easily be a student's favorite professor as a student's least favorite professor.

The scores that each professor received for their supportive versus defensive behaviors were combined into an overall score for "supportiveness." Total scores were calculated by adding the response option numbers for the 23 questions; total scores could fall between 23 (in which case a professor only receives scores of "1") and 115 (in which case a professor only receives scores of "5". The total scores for the favorite professors and least favorite professors were averaged. The supportiveness value of the average favorite professor was 93.9, and the supportiveness value of the average least favorite professor was 59.8. Though individual behaviors vary from person to person, these average scores show a large difference in student perception of supportive professor behaviors between favorite and least favorite professors. The difference between these scores is statistically significant ($p < .000$).

TABLE I
PROFESSOR BEHAVIORS

	Favorite $\bar{X}$ / SD	Least Favorite $\bar{X}$ / SD	*t*	Sig.
1. My professor helps me understand the reasons for his/her opinions	4.46/.59	2.31/1.03	25.62	.000*
2. My professor has favorite students	3.34/1.07	2.61/1.23	6.21	.000*
3. My professor is neutral and detached when a dispute arises	2.58/1.08	3.47/1.00	-7.41	.000*
4. My professor is straightforward and honest	4.66/.52	3.23/1.13	15.04	.000*
5. My professor makes me feel he/she is interested in the problems I face	4.57/.65	2.18/1.04	24.93	.000*
6. My professor focuses his/her attention on the problems which have to be solved	4.47/.62	2.72/1.10	18.22	.000*
7. My professor uses "psychology" on us, that is, manipulates us	4.02/.98	3.05/1.12	8.60	.000*
8. My professor is very certain of his/her ideas	1.97/.85	1.73/.90	2.49	.014

9. My professor can see the subject we're studying as we see it	4.34/.73	2.02/.93	25.11	.000*
10. My professor judges us by what kind of motives and values we have	3.70/1.16	2.92/1.06	6.55	.000*
11. My professor makes us feel we are not intelligent	4.73/.57	2.41/1.22	24.11	.000*
12. My professor can change subjects as questions are asked	3.57/1.16	3.09/1.01	3.60	.000*
13. My professor frequently does not tell his/her purpose for an assignment	4.24/.80	2.55/1.12	16.53	.000*
14. My professor makes me feel he/she understands me	4.43/.55	1.99/.81	29.93	.000*
15. My professor doesn't like to discuss controversial ideas	4.17/.73	3.38/.99	8.07	.000*
16. My professor treats us as equals with him/her	4.19/.79	2.10/.92	21.91	.000*
17. My professor hardly ever changes his/her mind	3.04/.85	2.77/1.25	2.32	.022
18. My professor is approachable	4.80/.52	2.51/1.15	24.47	.000*
19. My professor shows warmth towards students	4.60/.68	2.34/1.03	24.35	.000*
20. My professor understands that I have commitments outside of class	4.44/.65	2.45/1.10	20.61	.000*
21. My professor gives me grades that reflect my effort	4.50/.67	2.65/1.10	18.92	.000*
22. My professor gives me grades that reflect my performance	4.52/.62	2.93/1.15	15.19	.000*
23. My professor offers feedback or explanations for the grades that I receive	4.46/.70	2.38/1.16	18.71	.000*
Total Σ	93.90/7.25	59.80/11.32	32.87	.000*

***p < .001**

Table 2 also follows Rosenfeld's (1983) presentation. Twelve (12) out of the 15 *t* tests performed for this study reached statistical significance (compared to nine of his 11 *t* tests). The three coping mechanisms that did not reach significance in the current study were as follows: "I cheated/Did not cheat on exams," "I lied/Did not lie in class," and "I plagiarized/Did not plagiarize." There was not a significant difference for these items regarding favorite and least favorite professors; however, these items were still more frequently associated with least favorite professors than they were with their favorite.

The average scores for each coping mechanism were added together to compare the degree to which coping mechanisms were used in classrooms with favorite professors versus

least favorite professors. The average added scores in favorite professor classrooms was 90.615, while the average added scores in least favorite professor classrooms was 67.578. Because of the bipolar nature of this questionnaire, low numbers represented frequent coping mechanism use while high numbers represented little to no use of any particular coping mechanism. With this in mind, the high number of 90.6 reported for favorite professor classrooms actually shows that fewer coping mechanisms were utilized than in classes with least favorite professors, which received the lower score of 67.6. The difference between these two scores is significant ($p < .000$).

TABLE II

COPING MECHANISMS AND COURSE REFLECTION

	Favorite $\bar{X}$ / SD	Least Favorite $\bar{X}$ / SD	*t*	Sig.
1. I resisted the professor's influence...	5.68/1.07	3.28/1.65	16.63	.000*
I did not resist the professor's influence				
2. I did not do what the professor asked...	6.49/.80	5.66/1.49	6.70	.000*
I did what the professor asked				
3. I retaliated against the professor...	6.39/1.24	5.10/1.76	8.06	.000*
I did not retaliate against the professor				
4. I hid my feelings in class...	5.77/1.35	3.40/2.05	13.53	.000*
I did not hide my feelings in class				
5. I cheated on exams...	6.87/.71	6.72/.99	1.82	.070
I did not cheat on exams				
6. I lied in class...	6.75/.78	6.52/1.24	2.28	.024
I did not lie in class				
7. I plagiarized...	6.89/.57	6.83/.68	.90	.372
I did not plagiarize				
8. I formed alliances against the professor...	6.77/.82	5.16/2.04	9.65	.000*
I did not form alliances against the professor				
9. I did not try to get on the teacher's good side...	5.99/1.19	4.28/1.93	11.07	.000*
I tried to get on the teacher's good side				
10. I took risks in this class...	2.75/1.54	4.28/1.88	-1.18	.000*
I did not take risks in this class				
11. I daydreamed in this class...	4.68/1.69	2.59/1.82	2.42	.000*
I did not daydream in this class				
12. I was always tempted to skip this class...	5.98/1.29	3.21/2.26	2.14	.000*
I never considered skipping this class				
13. Even though I tried, I did not earn a good grade...	6.67/.54	4.51/2.10	13.27	.000*
I put in the effort needed to earn a good grade				

14. I am not satisfied with what I learned in this class...	6.72/.53	2.62/1.76	28.69	.000*
I am satisfied with what I learned in this course				
15. The workload for this class burned me out...	6.22/1.22	3.40/2.11	15.62	.000*
The workload for this class was reasonable				
Total Σ	90.62/6.75	67.58/11.84	23.30	.000*
***p < .001**				

In addition to the analyses that were conducted for the professor behaviors and student coping mechanisms questionnaires, *t* tests were also conducted regarding student and professor behaviors outside of the typical in-class experience. Table 3 shows the results of those analyses. According to these data, students were found to skip more classes taught by their least favorite professor than their favorite professor and were more likely to talk to their favorite professors before and after class or during office hours. The data also showed that students were more likely to email their favorite professors than their least favorite professors; the average student reported emailing their favorite professor once a month and their least favorite professor only two or three times a semester. The data also showed that favorite professors responded more quickly to student emails than did least favorite professors; the average favorite professor responded within a day or two, while the average least favorite professor took anywhere from a few days to a week to respond. The differences found between the five measures listed on Table 3 were all statistically significant.

TABLE III

BEHAVIORS OUTSIDE OF CLASS

	Favorite $\bar{X}$ / SD	Least Favorite $\bar{X}$ / SD	*t*	Sig.
1. How many times did you skip this class?	.72/1.32	1.65/2.58	-4.50	.000*
2. How many times did you talk to your professor before or after class?	8.64/9.54	2.98/5.36	7.30	.000*
3. How many times did you visit your professor during his/her office hours?	3.07/6.34	1.12/2.57	3.73	.000*
4. How frequently did you email this professor?	2.56/.89	2.95/.97	-4.39	.000*

5. How quickly did this professor respond to emails?	1.62/1.15	2.75/1.50	-8.66	.000*

***p < .001**

Though students' perceptions of professor behaviors correlated with classroom outcomes, student behavior also played a role. Results showed a significant correlation between skipping class and cumulative grade point average ($r = -.179$ and $r = -.239$ for favorite and least favorite classes, respectively).

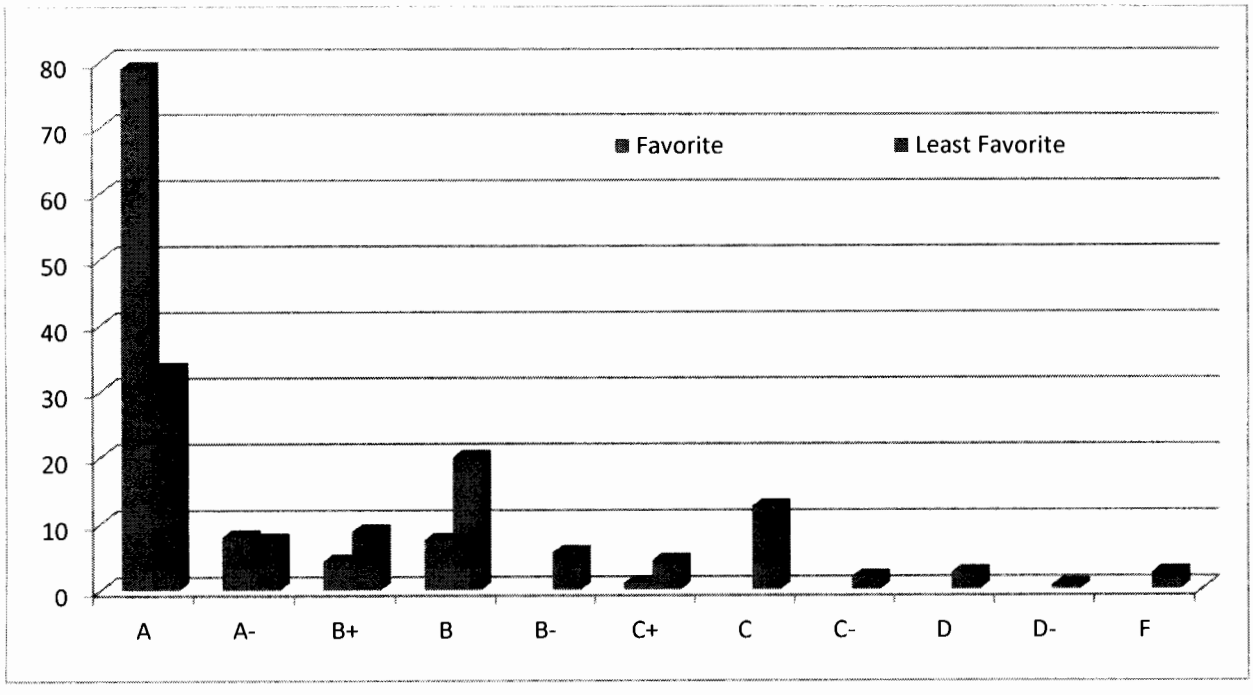
Regarding classes with favorite professors, there was a significant positive correlation between talking to professors before and after class and also visiting the professors during their office hours ($r = .520$). There was a significant negative correlation between talking to professors before and after class and the frequency of emailing them ($r = -.325$), as well as between visiting professors during their office hours and the frequency of emailing them ($r = -.275$). In other words, students who visited with professors (before or after class, or during office hours) were less likely to email them (and vice versa).

Regarding classes with least favorite professors, there was a significant positive correlation between talking to the professor before and after class and visiting the professor during their office hours ($r = .377$). There was a significant negative correlation between talking to professors before and after class and the frequency of emailing them ($r = -.377$), as well as between visiting professors during their office hours and the frequency of emailing them ($r = -.462$). In other words, students who visited with professors (before or after class, or during office hours) were less likely to email them (and vice versa).

There was a difference in grades received from favorite and least favorite professors. Frequencies were calculated to compare grades for classes with least favorite professors with the grades received in classes with favorite professors. The results showed that 79% of the students

received an A in the supportive classrooms while only 33% of the students received an A in the defensive classrooms. For supportive classrooms, 8% received an A-, 4% received a B+, 8% received a B, and 1% received a C. For defensive classrooms, 8% received an A-, 9% received a B+, 20% received a B, 6% received a B-, 4% received a C+, 13% received a C, 2% received a C-, 3% received a D, and 3% failed the class. Figure 2 shows the distribution of these grades.

FIGURE II
STUDENT GRADES



Lastly, there were no significant gender differences found.

DISCUSSION

Hypotheses

The data support the research hypothesis that defensive communication between professors and students negatively affects student outcomes. Analyses supported the first

hypothesis by showing that favorite professors were perceived by students as exhibiting more supportive than defensive behaviors, while least favorite professors were perceived by students as exhibiting more defensive behaviors than supportive behaviors.

The data also show that students utilized a greater number of coping mechanisms in classrooms taught by least favorite professors than in classrooms taught by favorite professors, which supports the second hypothesis. A modicum of mechanisms were used by each student in favorite classrooms as well, but the nature of any college courses elicits some amount of stress in response to deadlines and tests (Rosenfeld, 1983). The difference between the coping mechanism scores in classrooms taught by favorite and least favorite professors shows that the defensive classroom climate created by least favorite professors affected the amount of coping mechanisms used by students in the classroom.

Results showed that grades differed between classes taught by favorite and least favorite professors, which supports the hypothesis that grades are negatively affected by defensive communication. The number of students who received As in the supportive classroom versus the defensive classroom dropped substantially (79% in supportive classrooms and only 33% in defensive classrooms). The lowest grade students received in supportive classrooms was a C, and only 1% of the student received that grade; in defensive classrooms, on the other hand, student grades reflected not only As, Bs and Cs, but also Ds and Fs. The distribution of grades for the defensive classrooms was much more varied than the distribution for the supportive classrooms.

The fourth hypothesis – that classroom attendance will be affected by defensive communication – was supported by the data. The analyses show that students skipped a greater number of classes taught by their least favorite professors than classes taught by their favorite

professors. In addition to classroom attendance, students reported communicating less with least favorite professors outside of the classroom both through face to face interaction and email. In other words, if students avoided attending a class with a defensive climate, they also avoided any additional contact with the professor of that class.

Student reported greater course satisfaction with classes that were taught by favorite professors than least favorite professors, and they felt more burned out by the end of the semester in classes taught by least favorite professors; these findings support the fifth hypothesis. Students were also more likely to consider skipping classes with a defensive climate, and they felt like they had less control over their final grade in defensive classes than in supportive ones.

For both favorite and least favorite professors, a negative correlation existed between face-to-face interactions with the professors and emailing the professors. It may be the case that students who frequently talked to the professor before and after class or during office hours were able to have the professor answer their questions, thus eliminating the need to ask questions via email. On the other hand, students who emailed the professor frequently may not have felt a need to discuss their classroom material face-to-face with their professor.

Limitations

The correlational nature of this study demonstrates that a relationship exists between defensive communication and student outcomes in the classroom. The results, however, do not determine whether students dislike their professors because of the defensive communication style, or whether students disliking their professors causes a defensive classroom climate; likewise, this study does not prove that supportive communication causes students to like their professors, nor that students liking their professors causes a supportive classroom climate.

The average cumulative grade point average of 3.55 indicates that the data may be skewed toward the more gifted population of college students; a large number of respondents participate in the UNI Honors Program. Though this may make it difficult to generalize the results to every college student, the findings from this study show that even the most academically-driven students experience significant differences in their classroom outcomes depending on the supportive or defensive climates that they experience. It would be interesting to see if the differences are even more pronounced among students with lower GPAs.

This study is also skewed with regard to sex, with only 47 male respondents out of 198 participants. Thus, the survey results are more representative of female college students. Within the results, however, no significant gender differences were found.

Future Research

The most important recommendation for future research would be to conduct a study that could determine a cause and effect relationship between defensive communication and student outcomes in the classroom. For example, the study could resolve whether or not defensive communication causes poorer grades, attendance, and negative feelings toward the professor, or if the poorer grades, classroom attendance and negative feelings toward professor causes the defensive classroom climate. Likewise, the same study could establish whether or not supportive communication results in better grades, classroom attendance and positive feelings toward the professor, or if the better grades, classroom attendance and positive feelings toward the professor cause a more supportive classroom climate.

Further research could be conducted in three areas. The first would include an element in the survey that allows students to report where they sit in their classes relative to their professors.

It is possible that a closer proximity to the professor may encourage greater liking while greater distance may foster neutral or negative feelings. It is also possible that students sitting closer to professors could pick up facial cues that students in the back of the room may not. For example, a professor who rolls his or her eyes at a student question or comment may be disliked more by students seated at the front of the room than by students sitting farther away; likewise, a small smile or word of praise given by a professor may only be picked up on by students in the first few rows.

The second area could focus on differences between professors based on their sex. In this case, the study would focus on whether or not students perceive female professors differently than male professors based on gender stereotypes. For example, if neither a female nor male professor appear to be approachable or warm, do students view the female professor as more defensive than the male since she does not fit into the "nurturing" stereotype within which society views women?

The third area of research could also be conducted between different colleges within a university. For example, the college of education may have professors that show greater warmth toward students than professors in the college of business. If this is the case, further studies could focus on whether or not such differences affect student outcomes. If no differences are found, then studies beyond that could look at student resilience and how it plays a role in defensive communication and student outcomes.

Regardless of the particular area of research, it would be important to obtain a wider inclusion of students in regards to GPAs, and also to obtain a sample that has a more balanced male to female ratio. Including a higher number of students with lower GPAs and including

additional males would make the future research more applicable to the entire population of college students in a way that this study was not.

Implications

The data from this study show that defensive communication not only affects relationship outcomes, but is also indirectly involved with other variables. In the classroom in particular, defensive communication has a strong relationship with student performance, perception of the professor, and overall course evaluation. Without determining a cause and effect relationship between these variables, one cannot say with confidence that professors should work on fostering a supportive classroom climate in order to offset negative student outcomes, due to grades and evaluations, a modicum of defensiveness will always remain present in the classroom. It is unlikely, however, that an attempt to make the environment as supportive as possible would be a detriment to the students enrolled.

If student behavior and coping mechanisms were found to be the cause of defensive classroom climates, it would be important for students to learn more about the coping behaviors and effects in the liberal arts communication courses that they are required to take at each university. The knowledge they would learn from a more in-depth unit would help them to identify when they exhibit particular behaviors and help them in overcoming them, thus reducing the amount of defensiveness in the classroom environment. On the other hand, if creating a highly supportive environment were found to improve student outcomes, it would be important for professors to be able to identify behaviors that they exhibit that help to foster the desired environment. Trainings or workshops could assist with this, as well as help the professors with identifying student behaviors or coping mechanisms that surface more frequently in response to

defensive classroom climates. Likely both types of interventions would yield positive outcomes for students, faculty, and classroom interaction.

In addition to training and workshops, professor could receive feedback from students about how their behavior is perceived in the classroom. At the conclusion of each semester, students at UNI fill out course evaluations for each of their classes. They are asked questions such as "What did your professor do well?" and "How could your learning have been improved in this course?" Students then respond with whatever they can think of, and they typically only have a few minutes to come up with answers to provide on the forms.

The problem with this method is that students are unsure of what to write down, or may not have enough time to provide a meaningful evaluation; likewise, professors are not usually given clear feedback from the students about how they can improve their teaching and classroom experience. As this study shows, much of student outcomes is highly correlated with student perceptions, so it would be useful for professors to have students fill out a survey such as the one used in this study in order to see how students are interpreting particular behaviors. This means that instead of saying "My professor was good," students could report that "My professor is approachable" or "My professor answers questions well" or "My professor gives great feedback." The first statement is generic and does not tell the professor specifics of what they did well; the last three statements focus on particular behaviors that students perceive, and they tell the professor *why* the students think that he or she is a good professor.

Additionally, using a survey like the one in this study would allow students to report experiences that they may otherwise have overlooked during the evaluation, and professors can take note of trends among the students about mannerisms and techniques that students view positively, and others that may need to be a focus for improvement.

CONCLUSION

The findings from this study show a strong relationship between communication and student outcomes in college classrooms. Classrooms that fostered a supportive climate were more frequently associated with better grades, better classroom attendance, and higher student satisfaction, while classrooms that developed a defensive climate were more often associated with negative student outcomes.

While it may be easy to blame professors for setting the climate in their classrooms, it is important to remember that communication is only present when more than one person share a dialogue or interact. This study showed that students used a number of coping mechanisms in response to their perceptions of their professor, so both professors and students are responding to one another simultaneously. Both should be responsible for monitoring their own actions toward one another, and also the way that they react to statements, suggestions or criticism.

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Appendix A

University of Northern Iowa
Application for Review of Survey Project

Note: Before completing application, investigators must consult guidance at: http://www.uni.edu/osp/irb
Always check website to download current forms.

All items must be completed and the form must be typed or printed electronically. Submit 2 hard copies to the Human Participants Review Committee, Office of Sponsored Programs, 213 East Bartlett, mail code 0394

Title of proposal: Defensive communication between professors and students and its effects on student outcomes

Name of (PI) Principal Investigator(s): **Alexa Pomerenk**

PI Status: ☐ Faculty ☒ Undergraduate Student ☐ Graduate Student ☐ Staff ☐ Non-UNI

Project Type: ☐ Faculty/Staff Research ☒ Thesis/Dissertation ☐ Other-specify:

PI Department: **Psychology** PI Phone: **515.230.5298** PI Email: **pomerena@uni.edu**

PI Address or Mail Code: **2900 Hudson Rd – NRN 247 – Cedar Falls, IA 50613**

Faculty Advisor Mail Code: **0505** Advisor Phone: **319.273.2302** Advisor Email: **kim.maclin@uni.edu**

Source of Funding: N/A

Project dates: Beginning August 2012 Through May 2013

All key personnel and Advisor (if applicable) must be listed and must complete IRB training/certification in Human Participants Protections. Attach a copy of the certificate, if not already on file *in the IRB office*.

Principal Investigator	Alexa Pomerenk	Certificate Attached ☐	On File ☒
Co-Investigator(s)		Certificate(s) Attached ☐	On File ☐
Faculty Advisor	Kim MacLin	Certificate Attached ☐	On File ☒
Other Key Personnel:	_____(name)	Certificate Attached ☐	On File ☐
Other Key Personnel:	_____(name)	Certificate Attached ☐	On File ☐

SIGNATURES: The undersigned acknowledge that: 1. this application represents an accurate and complete description of the proposed research; 2. the research will be conducted in compliance with the recommendations of and only after approval has been received the UNI IRB. The PI is responsible for reporting any adverse events or problems to the IRB, for requesting prior IRB approval for modifications, and for requesting continuing review and approval.

Principal Investigator:	Alexa Pomerenk		2/8/2013
	TYPED NAME	SIGNATURE	DATE
Co-Investigator(s):			
	TYPED NAME	SIGNATURE	DATE
Faculty Advisor (required for all student projects):	Kim MacLin		2/8/2013
	TYPED NAME	SIGNATURE	DATE

A. PURPOSE OF RESEARCH.

Explain 1) why this research is important and what the primary purposes are, 2) what question(s) or hypotheses this activity is designed to answer, and 3) whether and how the results will be used or disseminated to others.

1) The purpose of this thesis is to examine the effects of defensive communication between professors and students in the classroom on variables such as course satisfaction, burnout, and final grades. Much of the literature on defensive communication focuses on why and how people become defensive, and also how defensiveness harms intimate relationships. Few studies have focused on any negative effects of defensive communication outside of intimate relationships, so these findings will be an important new element to the current literature.

2) This project will test the hypothesis that defensive communication between professors and students negatively affects student outcomes in the classroom.

3) The results will be shared in an oral presentation at Lang Hall on Honors Research Day, and the final thesis will be added to the archives of the University of Northern Iowa Honors Program.

B. RESEARCH PROCEDURES INVOLVED.

Provide a step-by-step description of all study procedures (e.g., where and how these procedures will take place, presentation of materials, description of activity required, topic of questionnaire or interview). Provide this information for each phase of the study (pilot, screening, intervention and follow-up). Attach questionnaires, interview questions/topic areas, scales, and/or examples of materials to be presented to participants.

Students will be recruited by email. The email will include a link to the survey which will be administered by qualtrics.com. Students will take the survey on their own.

C. DECEPTION.

If any deception or withholding of complete information is required for this activity: a) explain why this is necessary and b) explain if, how, when, and by whom participants will be debriefed. Attach debriefing script.

No deception will be used for this study.

D. PARTICIPANTS.

1. Approximately how many participants will you need to **complete** this study?

   Number 500 Age Range(s) 18 years of age or older

2. What characteristics (inclusion criteria) must participants have to be in this study? (Answer for each participant group, if different.)

   Participants must be currently enrolled students at a college or university, or must have graduated from a college or university within the last year.

3. Describe how you will recruit your participants and who will be directly involved in the recruitment. Key personnel directly responsible for recruitment and collection of data must complete human participant protection training. Attach all recruiting advertisements, flyers, contact letters, telephone contact protocols, web site template, PSPM description, etc. that you will use to recruit participants. If you plan to contact them verbally, in person or over the telephone, you must provide a script of what will be said.

Note: Recruitment materials, whether written or oral, should include at least: a) purpose of the research; b) general description of what the research will entail; and c) your contact information if individuals are interested in participating in the research.

Please see attached form.

4. How will you protect participants' privacy during recruitment? Note: This question does not pertain to the confidentiality of the data; rather it relates to protecting privacy in the recruitment process when recruitment may involve risks to potential participants. Individual and indirect methods of contacting potential participants assist in protecting privacy.

Students will be recruited individually through email requests. They may choose to ignore the request, and there will be no way to verify if they completed the survey or not. Qualtrics has SAS 70 Certification and meets the privacy standards imposed on health care records by the Health Insurance Portability and Accountability Act (HIPAA). All Qualtrics accounts are hidden behind passwords and all data is protected with real-time data replication.

5. Explain what steps you will take during the recruitment process to minimize potential undue influence, coercion, or the appearance of coercion. What is your relationship to the potential participants? If participants are employees, students, clients, or patients of the PI or any key personnel, please describe how undue influence or coercion will be mitigated.

Students who participate will complete the survey online, thus eliminating the possibility of feeling coerced by someone administering the survey. No relationship will exist between the students and me.

6. Will you give compensation or reimbursement to participants in the form of gifts, payments, services without charge, or course credit? If course credit is provided, please provide a listing of the research alternatives and the amount of credit given for participation and alternatives.

☒ No ☐ Yes If yes, explain:

7. Where will the study procedures be carried out? If any procedures occur off-campus, who is involved in conducting that research? Attach copies of IRB approvals or letters of cooperation from non-UNI research sites if procedures will be carried out elsewhere. (Letters of cooperation are required from all schools where data collection will take place, including Price Lab School.)

☒ On campus ☐ Off campus ☐ Both on- and off-campus

E. RISKS and CONFIDENTIALITY.

1. All research carries some social, economic, psychological, or physical risk. Describe the nature and degree of risk of possible injury, stress, discomfort, invasion of privacy, and other side effects from all study procedures, activities, and devices (standard and experimental), interviews and questionnaires. Include psychosocial, emotional and political risks as well as physical risks.

It is possible that reflecting on their negative experience with a professor may cause some students minor psychological discomfort. There are no other foreseeable risks.

2. Explain what steps you will take to minimize risks of harm and to protect participants' confidentiality, rights and welfare. (If you will include protected groups of participants which include minors, fetuses in utero, prisoners, pregnant women, or cognitively impaired or economically or educationally disadvantaged participants, please identify the group(s) and answer this question for each group.)

The research will be conducted in an online study. Participants will not include their names on the survey, and are able to discontinue their participation whenever they choose.

3. Will you record any participant identifiers? (Direct personal identifiers include information such as name, address, telephone number, social security number, identification number, medical record number, license number, photographs, biometric information, etc. Indirect personal identifiers include information such as race, gender, age, zip code, IP address, major, etc.)

☒ No ☐ Yes If yes, explain a) why recording identifiers is necessary and b) what methods you will use to maintain confidentiality of the data (e.g., separating the identifiers from the other data; assigning a code number to each participant to which only the research team has access; encrypting the data files; use of passwords and firewalls, and/or destroying tapes after transcription is complete and using pseudonyms.) Also explain, c) who will have access to the research data other than members of the research team, (e.g., sponsors, advisers, government agencies) and d) how long you intend to keep the data.

4. After data collection is complete, will you retain a link between study code numbers and direct identifiers?
☒ No ☐ Yes If yes, explain why this is necessary and for how long you will keep this link.

5. Do you anticipate using any data (information, interview data, etc.) from this study for other studies in the future?
☒ No ☐ Yes If yes, explain and **include this information in the consent form.**

6. Will you access participants' medical, academic, or other personal records for screening purposes or data collection during this study? Note: A record means any information recorded in any way, including handwritten, print, computer media, video or audio tape, film, photographs, microfilm, or microfiche that is directly related to a participant.
☒ No ☐ Yes. If yes, specify types of records, what information you will take from the records and how you will use them. **Permission for such access must be included in the consent form.**

F. CONSENT FORMS/PROCESS (Check all that apply.)

☐ **Written Consent** - Attach a copy of all consent and assent forms.

☐ **Oral Consent** - Provide a) justification for not obtaining written consent, and b) a script for seeking oral consent and/or assent.

☒ **Elements of Consent Provided via Letter or Electronic Display** – Provide a) justification for not obtaining written consent, and b) the text for the letter of consent or the electronic display.)
Students will take the survey online whenever and wherever they have time, making it impossible to obtain written consent from every participant.

UNIVERSITY OF NORTHERN IOWA
HUMAN PARTICIPANTS REVIEW
INFORMED CONSENT

Project Title: Defensive communication between professors and students and its effects on student outcomes

Name of Investigator(s): Alexa Pomerenk

Invitation to Participate: You are invited to participate in a research project conducted through the University of Northern Iowa. The university requires that you give your signed agreement to participate in this project. The following information is provided to help you make an informed decision about whether or not to participate.

Nature and Purpose: This study is designed to gather information about defensive communication between professors and students. The goal is to establish a correlation between defensive communication and classroom outcomes, such as grades, attendance, and burnout.

Explanation of Procedures: You will fill out a survey that addresses types of defensive communication that you have experienced in college classrooms. The first part of the survey will focus on your favorite professor and your experience in a classroom setting with him or her, and the second part of the survey will focus on your least favorite professor and your experience in a classroom setting with him or her. The survey should take about 10 minutes to complete. Data gathered from these surveys will be securely stored with the University of Northern Iowa Psychology department in Baker Hall, room 348, at the conclusion of this study.

Discomfort and Risks: There are no foreseeable risks to participation, and no direct benefits will result from participation.

Benefits and Compensation: Individual participants will not receive a direct benefit.

Confidentiality: This survey is administered by an independent third party (qualtrix.com). While no guarantee can be made regarding the interception of data sent electronically, the information provided by Qualtrix that could identify you will be kept confidential. The summarized findings with no identifying information will be disclosed in a final thesis which will be kept in the UNI Honors Program archives. The findings will also be presented at Lang Hall during Honors week.

Right to Refuse or Withdraw: Your participation is completely voluntary. You are free to withdraw from participation at any time or to choose not to participate at all, and by doing so, you will not be penalized.

Questions: If you have questions in regards to this study, you can contact Alexa Pomerenk at pomerena@uni.edu or Kim MacLin at kim.maclin@uni.edu. You can also contact the office of the UNI IRB Administrator at 319.273.6148 for answers to questions about rights of research participants and the participant review process.
By clicking "continue," you acknowledge that you have read and agree with the following statement:

I am fully aware of the nature and extent of my participation in this project as stated above and the possible risks arising from it. I hereby agree to participate in this project. I acknowledge that I have received a copy of this consent statement. I am 18 years of age or older.

Appendix B

Classroom Climate Questionnaire

What type of institution do you attend?

2 Year Community College 4 Year State College/University Private College

Other:_____

What year are you in school?

Freshman Sophomore Junior Senior

Grad Student Graduation year: _____

What is your gender?

Male Female

What is your age?

What is your major?

What is your cumulative grade point average?

For the following section, think of your favorite professor at your current university, and a particular class that you took with him or her. Answer the following questions regarding your classroom experience with this professor.

Approximately how many students were in the class?

What type of class was it?

Lecture Discussion Seminar Online Other: _____

How often did this class meet?

Once a week Twice a week Three + times a week

What grade did you receive in this class?

How many times did you skip this class?

How many times did you talk to your professor before or after class?

How many times did you visit your professor during his/her office hours?

How frequently did you email this professor?

Once a week or less Once a month 2-3 times a semester Never

How quickly did this professor respond to emails?

Within a day Within a few days Within a week Longer than a week

Answer the following questions about this <u>favorite professor</u> on a scale of 1-5

1. My professor helps me understand the reasons for his/her opinions

Strongly disagree 1 2 3 4 5 *Strongly agree*

2. My professor has favorite students

Strongly disagree 1 2 3 4 5 *Strongly agree*

3. My professor is neutral and detached when a dispute arises

Strongly disagree 1 2 3 4 5 *Strongly agree*

4. My professor is straightforward and honest

Strongly disagree 1 2 3 4 5 *Strongly agree*

5. My professor makes me feel he/she is interested in the problems I face

Strongly disagree 1 2 3 4 5 *Strongly agree*

6. My professor focuses his/her attention on the problems which have to be solved

Strongly disagree 1 2 3 4 5 *Strongly agree*

7. My professor uses "psychology" on us, that is, manipulates us

Strongly disagree 1 2 3 4 5 *Strongly agree*

8. My professor is very certain of his/her ideas

Strongly disagree 1 2 3 4 5 *Strongly agree*

9. My professor can see the subject we're studying as we see it

Strongly disagree 1 2 3 4 5 *Strongly agree*

10. My professor judges us by what kind of motives and values we have

Strongly disagree 1 2 3 4 5 *Strongly agree*

11. My professor makes us feel we are not intelligent

Strongly disagree 1 2 3 4 5 *Strongly agree*

12. My professor can change subjects as questions are asked

Strongly disagree 1 2 3 4 5 *Strongly agree*

13. My professor frequently does not tell us his/her purpose for an assignment

Strongly disagree 1 2 3 4 5 *Strongly agree*

14. My professor makes me feel he/she understands me

Strongly disagree 1 2 3 4 5 *Strongly agree*

15. My professor doesn't like to discuss controversial ideas

Strongly disagree 1 2 3 4 5 *Strongly agree*

16. My professor treats us as equals with him/her

Strongly disagree 1 2 3 4 5 *Strongly agree*

17. My professor hardly ever changes his/her mind

Strongly disagree 1 2 3 4 5 *Strongly agree*

18. My professor is approachable

Strongly disagree 1 2 3 4 5 *Strongly agree*

19. My professor shows warmth towards students

Strongly disagree 1 2 3 4 5 *Strongly agree*

20. My professor understands that I have commitments outside of class

Strongly disagree 1 2 3 4 5 *Strongly agree*

21. My professor gives me grades that reflect my effort

Strongly disagree 1 2 3 4 5 *Strongly agree*

22. My professor gives me grades that reflect my performance

Strongly disagree *1* *2* *3* *4* *5* *Strongly agree*

23. My professor offers feedback or explanations for the grades that I receive

Strongly disagree *1* *2* *3* *4* *5* *Strongly agree*

The following section includes different types of coping mechanisms that students use or do not use in the classroom. Circle the number that best represents where you fall between the two poles in regards to this <u>favorite professor</u> and the classroom setting with him/her.

I resisted the teacher's influence	1	2	3	4	5	6	7	I did not resist the teacher's influence
I did not do what the teacher asked	1	2	3	4	5	6	7	I did what the teacher asked
I retaliated against the teacher	1	2	3	4	5	6	7	I did not retaliate against the teacher
I hid my feelings in class	1	2	3	4	5	6	7	I did not hide my feelings in class
I cheated on exams	1	2	3	4	5	6	7	I did not cheat on exams
I lied in class	1	2	3	4	5	6	7	I did not lie in class
I plagiarized	1	2	3	4	5	6	7	I did not plagiarize
I formed alliances against the professor	1	2	3	4	5	6	7	I did not form alliances against the professor
I did not try to get on the teacher's good side	1	2	3	4	5	6	7	I tried to get on the teacher's good side
I did not take risks in this class	1	2	3	4	5	6	7	I took risks in this class

I did not daydream in this class	1	2	3	4	5	6	7	I daydreamed in this class
I was always tempted to skip this class	1	2	3	4	5	6	7	I never considered skipping this class
Even though I tried, I did not earn a good grade	1	2	3	4	5	6	7	I put in the effort needed to earn a good grade
I am not satisfied with what I learned in this course	1	2	3	4	5	6	7	I am satisfied with what I learned in this course
The workload for this class burned me out	1	2	3	4	5	6	7	The workload for this class was reasonable

For the following section, think of your <u>least favorite professor</u> at your current university, and a particular class that you took with him or her. Answer the following questions regarding your classroom experience with this professor.

Approximately how many students were in the class?

What type of class was it?

Lecture Discussion Seminar Online Other: _____

How often did this class meet? Once a week Twice a week Three + times a week

What grade did you receive in this class?

How many times did you skip this class?

How many times did you talk to your professor before or after class?

How many times did you visit your professor during his/her office hours?

How frequently did you email this professor?

Once a week or less Once a month 2-3 times a semester Never

How quickly did this professor respond to emails?

Within a day Within a few days Within a week Longer than a week

Answer the following questions about this <u>least favorite professor</u> on a scale of 1-5

1. My professor helps me understand the reasons for his/her opinions

Strongly disagree 1 2 3 4 5 *Strongly agree*

2. My professor has favorite students

Strongly disagree 1 2 3 4 5 *Strongly agree*

3. My professor is neutral and detached when a dispute arises

Strongly disagree 1 2 3 4 5 *Strongly agree*

4. My professor is straightforward and honest

Strongly disagree 1 2 3 4 5 *Strongly agree*

5. My professor makes me feel he/she is interested in the problems I face

Strongly disagree 1 2 3 4 5 *Strongly agree*

6. My professor focuses his/her attention on the problems which have to be solved

Strongly disagree 1 2 3 4 5 *Strongly agree*

7. My professor uses "psychology" on us, that is, manipulates us

Strongly disagree 1 2 3 4 5 *Strongly agree*

8. My professor is very certain of his/her ideas

Strongly disagree 1 2 3 4 5 *Strongly agree*

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Strongly disagree 1 2 3 4 5 *Strongly agree*

10. My professor judges us by what kind of motives and values we have

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Strongly disagree 1 2 3 4 5 *Strongly agree*

21. My professor gives me grades that reflect my effort

Strongly disagree 1 2 3 4 5 *Strongly agree*

22. My professor gives me grades that reflect my performance

Strongly disagree *1* *2* *3* *4* *5* *Strongly agree*

23. My professor offers feedback or explanations for the grades that I receive

Strongly disagree *1* *2* *3* *4* *5* *Strongly agree*

The following section includes different types of coping mechanisms that students use or do not use in the classroom. Circle the number that best represents where you fall between the two poles in regards to this <u>least favorite professor</u> and the classroom setting with him/her.

I resisted the teacher's influence	1	2	3	4	5	6	7	I did not resist the teacher's influence
I did not do what the teacher asked	1	2	3	4	5	6	7	I did what the teacher asked
I retaliated against the teacher	1	2	3	4	5	6	7	I did not retaliate against the teacher
I hid my feelings in class	1	2	3	4	5	6	7	I did not hide my feelings in class
I cheated on exams	1	2	3	4	5	6	7	I did not cheat on exams
I lied in class	1	2	3	4	5	6	7	I did not lie in class
I plagiarized	1	2	3	4	5	6	7	I did not plagiarize
I formed alliances against the professor	1	2	3	4	5	6	7	I did not form alliances against the professor
I did not try to get on the teacher's good side	1	2	3	4	5	6	7	I tried to get on the teacher's good side
I did not take risks in this class	1	2	3	4	5	6	7	I took risks in this class
I did not daydream in this class	1	2	3	4	5	6	7	I daydreamed in this class
I was always tempted to skip this class	1	2	3	4	5	6	7	I never considered skipping this class

Even though I tried, I did not earn a good grade	1	2	3	4	5	6	7	I put in the effort needed to earn a good grade
I am not satisfied with what I learned in this course	1	2	3	4	5	6	7	I am satisfied with what I learned in this course
The workload for this class burned me out	1	2	3	4	5	6	7	The workload for this class was reasonable