

RELATIONS BETWEEN STUDENTS' PERCEPTIONS OF TEACHER FEEDBACK
AND INTELLIGENCE BELIEFS

By

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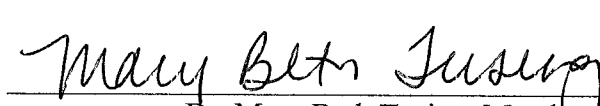
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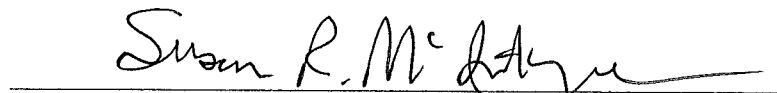
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Relations Between Students' Perceptions of Teacher Feedback and Intelligence Beliefs

By

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The University of Wisconsin-Eau Claire, 2013
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Research suggests that students who endorse malleable intelligence beliefs demonstrate higher achievement and more positive academic self-perceptions than students who endorse fixed intelligence beliefs. Research also suggests that when teachers provide effort praise students are more likely to endorse malleable intelligence beliefs. The purpose of this study was to examine whether or not 4th and 5th grade students' intelligence beliefs and academic self-concepts change across time, and whether or not students' perceptions of their teachers' praise is related to intelligence beliefs and academic self-concept. Using a pre- and post-test study design, students from four classrooms (two from 4th grade, and two from 5th grade) were administered surveys that assessed their perceptions of teacher praise (either ability praise or effort praise), their beliefs about intelligence (either malleable or fixed), and their academic self-concepts. Surveys were administered at the beginning of the academic year and again in the middle of the academic year. The results of this study revealed that there was no significant difference between pre-test and post-test intelligence beliefs, nor was there a difference between pre-test and post-test academic self-concepts. Further, there were no significant relationships among perceived teacher praise, intelligence beliefs, and academic self-

concepts.

Mary Beth Jusing 5/15/13 (proxy for Mary Beth Leibham)

Dr. Mary Beth Leibham, Thesis Advisor Date

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CHAPTER I

Introduction

Many factors are correlated with academic success: self-efficacy (Bandura, 1994; Niiya, Crocker, & Bartmess, 2004), depression (Tesiny, Lefkowitz, & Gordon, 1980), cognition (Winne & Nesbit, 2010), school contexts (Winne & Nesbit, 2010), peer group contexts (Ryan, 2001), and motivation (Winne & Nesbit, 2010). Among the factors underlying academic success, motivation has been extensively examined. Motivation is especially important for academic success because it is related to one's self-worth, one's beliefs about the learning process, and teacher praise, (Burhans & Dweck, 1995; Cain & Dweck, 1995; Dweck, Chiu, & Hong, 1995; Gunderson, Gripshover, & Dweck, 2013; Henderlong, Lepper, 2002; Henderlong, Ogle, & Love-Geiger, 2006; Henderson, & Dweck, 1990; Koestner, Zuckerman, & Olson, 1990; Linnenbrink, 2005; Mueller & Dweck, 1998).

Dweck, Chui, and Hong's (1995) investigations of motivation have indicated that students' implicit intelligence beliefs are one possible factor underlying academic motivation. Students hold beliefs about intelligence, and these beliefs influence the way the self and learning are perceived. For example, students who believe that intelligence is changeable are likely to believe in the importance of effort when working on a challenging academic task, whereas students who believe that intelligence is unchangeable are likely to believe that effort is futile when working on a challenging academic task (Blackwell, Trzesniewski, & Dweck 2007; Dweck et al., 1995; Henderlong, et. al., 2006; Mueller & Dweck, 1998; Sciarreta & Cacciamani, 2012; Yeager & Dweck, 2012). As such, students who believe that intelligence is changeable

may be more motivated to persevere and put forth extensive effort. On the other hand, students who believe that intelligence is unchangeable may be less motivated to persist when faced with challenge. Further, research suggests that intelligence beliefs are related to motivational orientations (i.e., performance goals or mastery goals), such that students who believe that intelligence is malleable may have more mastery goals and students who believe that intelligence is unchangeable may have more performance goals (Blackwell, Trzesniewski, & Dweck 2007; Dweck et al., 1995; Henderlong, et al., 2006; Mueller & Dweck, 1998; Schwinger & Stiensmeier, 2011; Sciarreta & Cacciamani, 2012; Yeager & Dweck, 2012). Research also suggests that praise for effort increases the likelihood of a student endorsing more resilient intelligence belief systems, which includes the possibility of endorsing more mastery goals, in addition to an increased likelihood of students displaying more positive academic self-concepts (Craven, et al., 1991; Linnenbrink, 2005; Kamins & Dweck, 1999; Marsh, Relich, & Smith, 1983; Mueller & Dweck, 1998).

The purpose of the current study was to examine how perceived teacher praise is related to students' intelligence beliefs and academic self-concepts. More specifically, this study sought to explore the possibility that students who perceived their teachers' praise as being effort praise would display different intelligence beliefs and academic self-concepts than students who perceived their teachers' praise as being ability praise.

CHAPTER II

Review of Literature

This chapter reviews the research on intelligence beliefs, motivational orientations, and academic self-concept. The review of the literature is organized into four questions:

- (1) What are intelligence beliefs, motivational orientations, and academic self-concept?
- (2) What is the relationship among intelligence beliefs, motivational orientations, and academic self-concept?
- (3) How Does Praise Relate to Academic Self-Concept and Intelligence Beliefs?
- (4) Praise and motivational orientations: What is the link between intelligence beliefs and subsequent patterns of behavior.

What are Intelligence Beliefs, Motivational Orientations, and Academic Self-Concept?

Intelligence beliefs. Intelligence beliefs reflect one's interpretation of what intelligence is or where it comes from, and these beliefs have implications for academic performance in that they are linked with different patterns of behavior after educational setbacks (Blackwell, Trzesniewski & Dweck, 2007). There are currently two general frameworks of intelligence beliefs (Blackwell et al., 2007). The first framework describes a "fixed" type of intelligence belief, where a student believes that he/she is endowed a particular amount of intelligence which is fixed or unchangeable. The second framework describes a "malleable" type of intelligence, where a student believes that his/her intelligence is incremental or changeable. Within the malleable perspective, intelligence is believed to be a process, one that can be controlled and developed through practice and effort (Blackwell, et al., 2007; Dweck, Chiu, & Hong, 1995; Schwinger & Stiensmeier-

Pelster, 2011; Sciarreta & Cacciamani, 2012; Yeager & Dweck, 2012). Intelligence beliefs are often implicit in that students do not realize that they have these conceptualizations of intelligence, or that these beliefs may be related to their academic behaviors. For instance, intelligence beliefs are often correlated with students' achievement goals and subsequent patterns of reactions after negative events (Blackwell et al., 2007; Dweck et al., 1995; Henderlong, 2006; Mueller & Dweck, 1998; Schwinger & Stiensmeier-Pelster, 2011; Sciarreta & Cacciamani, 2012; Yeager & Dweck, 2012).

Motivational orientations. Although intelligence beliefs are believed to be linked to different types of motivational orientations, motivational orientations are a separate construct that includes the types of goals that students pursue. Motivational orientations can be subdivided into two orientations: a performance goal orientation and a mastery goal orientation. Students with a performance goal orientation focus on goals that involve their performance and how they appear to others. These performance goals often include getting high grades, outperforming their peers, looking good in front of others, and/or gaining teacher approval. Students with a mastery goal orientation, on the other hand, focus on goals that involve learning the content and increasing their knowledge (Dweck et al., 1995; Henderson & Dweck, 1990; Schwinger & Stiensmeier-Pelster, 2011; Sciarreta & Cacciamani, 2012; Yeager & Dweck, 2012). Students with performance goal orientations are more likely to choose tasks that they know they can successfully complete. When faced with challenges they develop helpless qualities depicted by lowered perseverance and inefficient strategy use. Students with a mastery-orientation, on the other hand, choose more challenging tasks, and they often view effort as necessary for learning. As a result, these students tend to have experience with meaningful learning and

deep processing of information (Blackwell et al., 2007). In addition, these students see failures as a challenge and something to master (Mueller & Dweck, 1998).

Academic self-concept. Self-concept is defined as an individual's perception of self, which is formed through the relationship with the environment and the people in it, as well as from attributions based on one's own behavior (Shavelson, Hubner, & Stanton, 1976). For example, a child who switches from Velcro shoes to shoes with laces is in a situation that requires him to learn a new skill. When he first learns to tie his own shoes, he is likely to receive praise from his parents. This praise may be internalized, and the child may attribute his shoe tying success with the belief that he is also capable at other things, therefore increasing his self-concept. Self-concept is multidimensional in that perceptions of the self can be categorized into subareas (i.e., cognitive/academic, physical, and social; Marsh, Relich, & Smith, 1983).

Many researchers believe that academic self-concept is an important factor in the development of motivation, and is an imperative element that works within the framework of academic success or failure (Craven, et al., 1991; Henderson & Dweck, 1990; March, et al.; 1983). Both Gonida, Kiosseoglou, and Leondari (2006) and Craven and Marsh (2006) claim that academic self-concept and achievement are interrelated, each leading to gains in the other. Marsh, Koller, Trautwein, Ludtke and Baumert (2005) found that in German 7th-grade students, math self-concept and math interest were positively correlated with school grades and standardized test scores. Students who had higher math self-concepts and math interest had higher grades and standardized test scores. In fact, Marsh et al.'s (2005) study found that, when looking only at a student's level of self-concept and school grades, the positive relationship between math self-

concept and grades was much stronger than the relationship between math interest and grades. This suggests that academic self-concept may play a role in academic success.

In a study including Greek 5th and 6th grade students, Gonida et al. (2006) found that although there was not a direct link between academic self-concept and intelligence beliefs, academic self-concept mediated the endorsement of intelligence beliefs. Gonida et al. (2006) found that Greek 6th and 7th grade high achievers, as compared to other classmates who were middle to low achievers, endorsed more malleable intelligence beliefs and maintained significantly higher academic self-concepts across time. This means that, although direct links between intelligence beliefs and academic self-concept were not significant, academic achievement played a role in which type of intelligence beliefs that a student might endorse, but these endorsements could be swayed by a student's level of academic-self-concept. Students who had higher grades in math and science were more likely to endorse the belief that intelligence can be changed, and they were also more likely to have higher academic self-concept over the course of a year than their lower achieving counterparts (Gonida et al., 2006).

What is the Relationship Among Intelligence Beliefs, Motivational Orientations, and Academic Self-Concept?

Literature that has examined intelligence beliefs suggests that the link between both constructs of intelligence beliefs and motivational orientations are in the use of effort. Hong, Chui, Dweck, Lin, and Wan (1995) performed a study which suggests that intelligence theories and effort beliefs are related to each other. In this study, which included undergraduate university students, they found that fixed and malleable intelligence beliefs were highly predictive of effort and ability beliefs. Students who

believed in malleable intelligence more often attributed task success and failure to the amount of effort used to complete those tasks. Their counterparts, those of who believed in fixed intelligence, more often attributed task success and failure to ability, or a lack thereof. This, and other prior research suggests that the separate constructs of intelligence beliefs and motivational goal orientations are related to each other (Blackwell et al., 2007; Dweck et al., 1995; Henderlong, 2006; Kamins & Dweck, 1999; Mueller & Dweck, 1998; Schwinger & Stiensmeier-Pelster, 2011; Sciarreta & Cacciamani, 2012; Yeager & Dweck, 2012). Studies have demonstrated that students with beliefs in malleable intelligence and beliefs in using effort demonstrate similar learning behaviors as students who have motivational orientations that are rooted in mastery goals; these are students that focus on effort and strategy use. Similarly, students with beliefs in fixed intelligence and beliefs in ability tend to demonstrate similar learning behaviors as students who have motivational orientations that are rooted in performance; these are students who also focus on ability (Blackwell et al., 2007; Dweck et al., 1995; Henderlong, 2006; Kamins & Dweck, 1999; Mueller & Dweck, 1998; Schwinger & Stiensmeier-Pelster, 2011; Sciarreta & Cacciamani, 2012; Yeager & Dweck, 2012).

Not only are beliefs about effort reported to be predictive of student behavior (motivational orientations), they also have been noted in the literature as correlated with academic self-concept (Marsh et al., 1983). Although Gonida et al.'s (2006) examination of the direct relationship between intelligence beliefs and academic self-concept was inconclusive, Marsh et al.'s (1983) examinations of 5th and 6th grade students found that academic self-concept is correlated with motivational orientations such as attributing effort to success or failure. Marsh et al. (1983) found that academic self-concept was

positively correlated with attributions to ability and effort, especially in success situations. More specifically, students who had high academic self-concept were more likely to attribute failure to a lack of effort as opposed to a lack of ability. Marsh et al. (1983) stated that because ability cannot be altered, it is unlikely that a student with high academic self-concept would attribute failure to a lack of ability. Ability cannot be altered but effort can, therefore students with high academic self-concept may be more willing to attribute failure to a lack of effort.

In summary, many studies have examined these three constructs. Some research has examined intelligence and learning behaviors, others have examined links between intelligence beliefs and academic self-concept, or beliefs in the use of effort. Much of the literature base describes intelligence beliefs as linked with motivational orientations because of the resulting similarities in learning behaviors; behaviors that either utilize effort to increase academic persistence, or learning behaviors that result in learned helplessness due to students' focus on natural ability with disregard for the use of effort. Research examining the link between intelligence beliefs and academic self-concept is more elusive; however, examinations including effort beliefs have resulted in more conclusive links between academic self-concept and the belief in the utility of effort.

How Does Praise Relate to Academic Self-Concept and Intelligence Beliefs?

Teacher and/or parent praise (i.e., how teachers/parents compliment or give positive feedback to children) is a construct that may be linked with students' motivational orientations, intelligence beliefs, and self-concepts. Gunderson, Gripshover, Romero, Dweck, Goldin-Meadow, & Levine (2013) found that parents' effort praise (praise for effort rather than ability) of children between the ages of 14 and 38-months old predicted

children's endorsement of malleable intelligence beliefs when they were 7 – 8 years old. This suggests that certain types of praise potentially serve as mechanisms for helping children adopt more resilient intelligence beliefs (i.e. beliefs that will prevent learned helplessness and facilitate a focus on effort). In addition to parents' praise, other research has examined the link between teachers' praise and students' intelligence beliefs (Kamins & Dweck, 1999; Mueller & Dweck, 1998; Sciarretta & Cacciamani, 2012). Teachers often use praise to foster student motivation, and it is a simple technique that requires little additional time away from academics. Teacher responses to student performance such as "Good job!" are considered to be general types of feedback praise. They differ from praise that is given with positive affect and with a detailed response tailored directly to student behavior. This kind of praise is attributional praise. Attributional praise can either praise "effort/strategy" behavior (e.g., "Well done, you have been working so hard! "Good job, you found a good way to solve that problem!"), or ability/performance" behavior (e.g., "Well done, you are really smart!; "Good job, you are good at math!") (Burnett, 2002; Henderlong, & Lepper, 2002).

Praise and academic self-concept. Studies have shown that positive praise made by teachers' influences positive self-talk as well as positive learning self-concepts (Burnett, 1999). Burnett's (1999) examinations of Australian 3rd through 7th grade students documented that high frequencies of positive statements made by teachers was related to increased positive self-talk and increased academic self-concept specific to the area of reading. In addition, Craven et al. (1991) investigated the effectiveness of enhancing academic self-concept through the delivery of intensive praise. Craven et al. (1991), examined students in 3rd through 6th grade, all of whom were screened and

confirmed to have low academic self-concept. The researchers used a combination of internally focused praise (e.g., “You must feel good about your ability in mathematics.”) and performance praise that focused on attributing failed tasks to a lack of effort (e.g., “No, that’s not right. You have the ability to do well and will do well when you try harder.”). Although Craven et al. (1991) did not find that teacher administered praise was related to academic self-concept, they did find that students who were provided researcher-administered attributional praise had significantly increased levels of academic self-concept across time, specifically in the area of reading. The results suggest that some types of praise, specifically effort-focused praise administered after failure, could potentially be correlated with increased academic self-concept.

Praise and motivational orientations: What is the link between intelligence beliefs and subsequent patterns of behavior? Some studies have found correlations between attributional praise for effort and increased mastery goals (Linnenbrink, 2005; Mueller & Dweck, 1998), increased beliefs in using effort to succeed (Mueller & Dweck, 1998; Schunk, 1983), and high mastery-oriented responses to challenges (Linnenbrink, 2005; Mueller & Dweck, 1998). Other studies have found links between praise for effort and higher levels of task persistence, which could potentially lead to greater academic success (Henderlong, Ogle, & Love-Grieger, 2006; Kamins & Dweck, 1999; Mueller & Dweck, 1998; Schunk, 1983). Taken collectively, these studies provide a base from which one can believe that the practice of teacher praise is linked with a student’s internal belief system, with the right type of praise promoting optimal motivational orientations and possibly higher academic self-concepts.

While previous research has considered how praise is related to motivational

orientation and academic self-concept, few studies have examined the link between praise and students' intelligence beliefs. One study performed by Mueller and Dweck (1998) did directly query students on their beliefs about intelligence. Students were asked to perform an academic task, and then were provided with either: a) ability praise (e.g. "You must be smart at these problems."), b) effort praise (e.g. "You must have worked really hard at these problems."), or c) no praise (control group). The students were then asked to rate the statement "You have a certain amount of intelligence and really can't do much to change it." on a scale from 1 (*not at all*) - 6 (*very true*). Higher ratings were indicative of strong beliefs in fixed intelligence. The results were as expected: majority of students who were praised for their ability reported higher fixed/entity ratings regarding the nature of their intelligence beliefs; in contrast, majority of students who were praised for effort reported higher malleable/incremental ratings regarding the nature of their intelligence beliefs. Mueller and Dweck's (1998) results suggest that attributional praise may be correlated with a student's intelligence beliefs.

Summary

Given existing research, it seems reasonable to assume that there are relationships among praise, intelligence beliefs, and academic self-concept (Blackwell et al., 2007; Craven et al., 1991; Henderson & Dweck, 1990; Henderlong, Ogle, and Love-Grieger, 2006; Kamins & Dweck, 1999; Linnenbrink, 2005; Mueller & Dweck, 1998; & Schunk, 1983). While one study (e.g. Mueller and Dweck, 1998) examined the link between intelligence beliefs and praise, and others (e.g., Burnett, 1999 and Craven et al., 1991) examined the link between praise and self-concept, few studies have examined the links among all of these constructs (praise, intelligence beliefs, and academic self-concept).

Therefore, the purpose of the current study is to examine the relationships among these factors.

Research Questions

The current study addressed the following research questions:

- 1) Do students' intelligence beliefs change across time?
- 2) Do students' academic self-concepts change across time?
- 3) Is perceived teacher praise (as ability or effort praise) predictive of different types of intelligence beliefs?
- 4) Is perceived teacher praise (as ability or effort praise) predictive of academic self-concept?

CHAPTER III

Method

Participants

Participants were 4th and 5th grade students currently enrolled in an elementary school in the Upper Midwest. Although examinations of academic self-concept, intelligence beliefs, and praise have been performed across many different age groups, many studies focused on populations of this age. This age range was chosen in attempts to stay aligned with previous literature. Classroom samples were acquired through teacher volunteers who were notified by their principal of the chance to participate in this study. Of the 69 parent-consent forms signed, 64 students participated; three participants were absent at pre-test and two students declined assent. There was a 9% attrition rate; 59 of the remaining 64 participants completed both the pre- and post-assessment. Three participants were removed from the analysis because they answered “I Don’t Know” responses on the Intelligence Belief Survey, and three participants were removed because of other unanswered survey questions, leaving a total of 53 participants.

Table 1
Participant Demographic Information

Grade Level	
4th	34.0% (n= 18)
5th	67.0% (n= 35)
Age	
8	2.0% (n= 1)
9	30.0% (n= 16)
10	62.0% (n= 33)
11	4.0% (n= 2)
Gender	
Male	58.5% (n= 31)
Female	41.5% (n= 22)
Ethnicity	
White-Not Hispanic	34.0% (n= 18)
American Indian/ Alaskan	7.5% (n= 4)

Hispanic	4.0% (n= 2)
Black-Not Hispanic	7.5% (n= 4)
Asian/Pacific Islander	13.0% (n= 7)
I do not know	26.0% (n= 14)
I do not want to answer	4.0% (n= 2)
Other	4.0% (n= 2)

Materials

Participants were administered four questionnaires: a demographic questionnaire (see Appendix A) which asked participants to indicate their gender, age, and ethnicity; an intelligence belief questionnaire; an academic self-concept survey; and a teacher perception survey which assessed the participants' perceptions of the type of teacher praise they received.

Intelligence Belief Survey (IBS). Intelligence beliefs were measured using the Implicit Theory of Intelligence Questionnaire by Dweck (2002). This six-item measure included statements such as “You have a certain amount of intelligence and you can’t really do much to change it.” The original six-point Likert rating scale was modified to be more developmentally appropriate for use with 4th and 5th graders. More specifically, the wording was simplified and a four-point scale was used: “*That sounds really right*” = 1; “*That sounds right*” = 2; “*That sounds wrong*” = 3; and “*That sounds really wrong*” = 4. A fifth selection was included in the scale, but was not used within the calculations of the final Intelligence Beliefs Scale (IBS) composite score: “*I don’t know*” = X. This was included to help increase the reliability of the survey. Since younger participants could have a difficult time understanding the concept of intelligence the fifth selection was put in place to give the student who did not know how to answer the question an option. Participants who marked the “I don’t know” on the IBS survey were discarded from the

IBS survey results as their data files were considered incomplete. Summed responses on the six-item IBS scale ranged from six to 24. Each participant's ratings on all six items were averaged, with lower scores reflecting a belief in malleable intelligence, and higher scores reflecting a belief in fixed intelligence. The overall averaged score range was 1 – 4. As reported by Blackwell et al. (2007), the internal reliability of the original theory of intelligence scale developed by Dweck in 2002 was .78 (N = 373), with a two week period test-retest reliability of .77 (N = 52). The Intelligence Belief Survey is included in Appendix B.

Academic Self-Concept (ASC). To assess students' academic self-concepts, questions were taken from the Academic Self-Concept subscale developed by Marsh, et al. (1983). The Academic Self-Concept scale was used to measure students' perceptions of their academic abilities, particularly in the areas of math, reading, and general academic content. Marsh et al.'s (1993) original scale consisted of 30 total items (10 items in three academic areas: math, reading, and all school subjects). The current study required participants to rate six statements such as "*I am good at math*", "I am good at reading", and "I am good at all school subjects" using a four-point Likert-scale: "*Not True*" = 1, "*A Tiny Bit True*" = 2, "*More Than a Tiny Bit True*" = 3, and "*Very True*" = 4. Summed scores on the six-item ASC scale ranged from 6 - 24. Each of the participants' ratings on all six items were averaged, and higher averages were indicative of positive academic self-concepts while lower averages were indicative of more negative academic self-concepts. As reported by Marsh et al. (1983), the coefficient alpha's for the original scales were .89, .92, and .85 for reading math and all school subjects, respectively.. The Academic Self-Concept scale is included in Appendix C.

Teacher Feedback Scale (TFS). The Teacher Feedback Scale (TFS) developed by Burnett (2002) was adapted for the purpose of this study, and used with the author's permission. Sixteen items were used to measure the participants' perceptions of their teachers' use of either ability or effort praise in the areas of math and reading. The ability praise subscale included eight teacher statements such as "*You are good at math*" and "*You have good reading ability.*" Each statement was followed by a three-point Likert scale ("*never*" = 1, "*sometimes*" = 2, or "*often*" = 3) indicating the participants' perceptions of the frequency of this type of statement. The effort praise subscale also included eight teacher statements such as "*You are trying really hard at math*" and "*You put a lot of effort in your reading.*" The same Likert scale followed each statement. Summed scores on the 16-item TFS ranged from 16 - 48. Each of the participants' ratings on all 16 items were averaged, and higher averages were indicative of perceived effort praise while lower averages were indicative of perceived ability praise. Burnett (2002) performed a confirmatory factor analysis to examine the factor structure of the effort and ability (praise) items. As reported by Burnett (2002), coefficient alpha's of 0.78 for effort praise and 0.79 for ability praise were found. The Teacher Feedback Scale is included in Appendix D.

Procedure

In order to access a student population, the researcher contacted the principal at a local elementary school and received his/her permission. The principal consent form is presented in Appendix E. The researcher then sent letters (see Appendix F) to the 4th- and 5th-grade teachers at that school, briefly describing the study and requesting a meeting time. During the meeting, the teachers were presented with the research questions,

method, and procedure, and their full assent was requested. The teachers agreed to participate, and were willing to hand out cover letters and consent forms to parents on orientation day, prior to the first day of school. Options for non-participants included silent reading time or homework/study time. Parental cover letters and consent forms can be found in Appendices G and Appendix H, respectively.

Prior to entering each classroom, the teacher provided the researcher with a list of students who had a disability so that the appropriate accommodation (i.e., verbal administration of the survey) could be provided. The researcher visited each classroom at the beginning of the year. At this point, the teacher introduced the researcher and the researcher described the study to the students. Students whose parents did not provide consent were instructed to work on an alternative task, namely a silent reading task. Participants were reminded that their participation was voluntary and they were provided a written assent form, which is presented in Appendix I. The researcher read the form aloud to the participants, answered any questions, and then collected the forms. Each participant was then given a packet consisting of a form with an identification number, a demographic survey, an Intelligence Beliefs Survey, and an Academic Self-Concept Scale. Identification numbers were applied to the questionnaire before entering the classroom. Each questionnaire had an attached identification cover form that had a space for the participant's name below the pre-applied identification number (see Appendix J). Participants were first instructed to write in their name, and to tear off the cover form and hand it to the researcher. The participants were then told not to write their names on the questionnaires because they would remain confidential. It was explained that neither the teacher nor the researcher would know which survey packet belonged to which

participant. The researcher explained how to fill out the survey, and then provided visual instruction by writing a sample statement from the questionnaire on the board and showing participants how to use the Likert-scale. To ensure that the participants knew what the word “intelligence” meant, the researcher explained that intelligence has to do with using one’s knowledge and skills. It is the power of the mind to get knowledge, and to use knowledge. The participants were told that they could ask questions at any time during the procedure. Each statement was then read aloud for the students, and participants were given sufficient time to write down their answers to each statement.

This procedure was repeated three months later, after the participants had repeated exposure to their teachers’ attributional praise. The second procedure was identical to the first procedure, except that the Teacher Feedback Scale was administered instead of the demographic survey. Participants were provided a packet that consisted of the Intelligence Beliefs Survey, the Teacher Feedback Scale, and the Academic Self-Concept Scale. The scripted instructions were provided to the participants in the same manner as the initial survey procedure; however, additional instructions were required for the Teacher Feedback Scale.

CHAPTER IV

Results

General Findings on Students' Beliefs of Intelligence, Academic Self-Concepts, and Perceptions of Teacher's Praise

Independent-samples *t*-tests were conducted to explore any possibility of gender and/or grade-level differences in the IBS, ACS, and TPS averages. No significant gender or grade-level differences were found for any of the three surveys. For details depicting the results, see Tables 2-4.

Table 2
Post Intelligence Belief Mean Scores by Grade Level and Gender

Grade Level	<i>M</i>	Minimum	Maximum	<i>SD</i>
Fourth	2.14	1.17	3.50	.63
Male	2.33	1.50	3.50	.61
Female	1.90	1.17	2.83	.60
Fifth	2.00	1.00	3.50	.61
Male	1.88	1.00	2.67	.46
Female	2.19	1.00	3.50	.77

Table 3
Post Academic Self-Concept Mean Scores by Grade Level and Gender

Grade Level	<i>M</i>	Minimum	Maximum	<i>SD</i>
Fourth	2.95	2.00	3.83	.51
Male	2.90	2.17	3.83	.45
Female	3.02	2.00	3.83	.60
Fifth	2.95	1.83	4.00	.60
Male	2.96	2.00	4.00	.63
Female	2.93	1.83	3.83	.58

Table 4
Teacher Praise Mean Scores by Grade Level and Gender

Grade Level	<i>M</i>	Minimum	Maximum	<i>SD</i>
Fourth	2.01	1.50	2.25	.20
Male	2.05	1.63	2.25	.19
Female	1.97	1.50	2.19	.22
Fifth	2.05	1.75	2.38	.15
Male	2.03	1.75	2.25	.15
Female	2.08	1.94	2.38	.14

Gonida et al. (2006) suggest that academic self-concept has the potential to mediate endorsements of intelligence beliefs. If academic self-concept does in fact mediate intelligence belief endorsements, it has the potential to impact the relationship between praise and intelligence beliefs. To assess for any potential erroneous variable effects, a bivariate Pearson correlation was performed to assess the possibility of a relationship between academic self-concept and intelligence beliefs. The results revealed that the link between pre-academic self-concept mean scores and pre-intelligence belief mean scores were not significant, $r(49) = -.26, p = .064$ (one-tailed). The link between post-academic self-concept mean scores and post-intelligence belief mean scores were also not significant, $r(50) = -.023, p = .87$ (one-tailed).

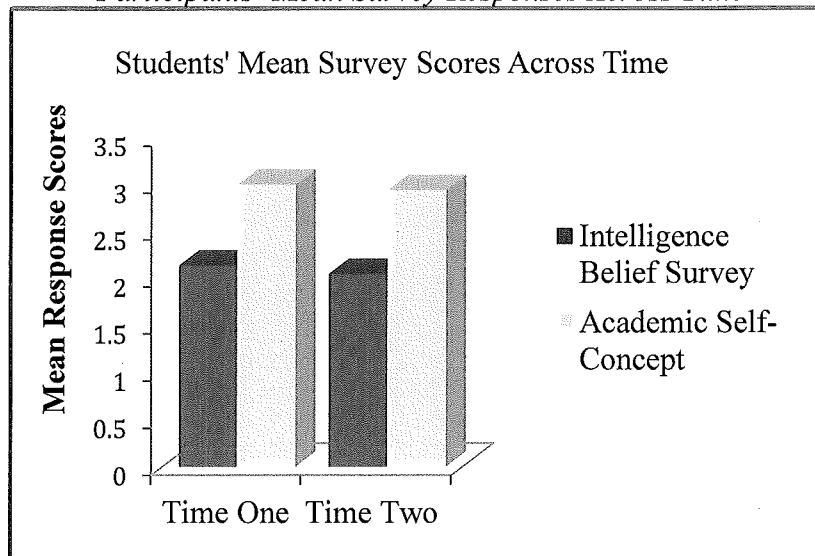
Do Students' Intelligence Beliefs and Students' Academic Self-Concepts Change Across Time?

To assess whether the mean responses of intelligence beliefs and academic self-concept changed over time, a paired-samples *t*-test was conducted to compare students' mean intelligence belief responses in the pre-assessment and the post-assessment conditions. The same procedure was performed to compare students' mean academic self-concept responses in the pre-assessment and the post-assessment conditions.

There was a not a significant difference between the intelligence beliefs at pre-assessment ($M = 2.14, SD = .56$) and the intelligence beliefs at post-assessment ($M = 2.05, SD = .62$) conditions; $t(51) = 1.08, p = .287$. Further, there was a not a significant difference between the academic self-concept scores at pre-assessment ($M = 3.00, SD = .56$) and post-assessment ($M = 2.94, SD = .56$) conditions; $t(50) = .920, p = .362$. These results suggest that the participants' intelligence beliefs and' academic self-concepts did

not change across time. Figure 1 shows the participants' mean survey responses across pre and post-assessments.

Figure 1
Participants' Mean Survey Responses Across Time



Is Perceived Praise Predictive of Student's Intelligence Beliefs?

A bivariate Pearson correlation was performed to evaluate the relationship between intelligence beliefs and perceived teacher praise. More specifically, perceived teacher praise was the predictor (independent) variable and intelligence belief was the dependent variable. The correlation between perceived teacher praise and intelligence beliefs was not statistically significant, $r(49) = .15, p = .15$ (one-tailed)

Is Perceived Praise Predictive of Student's Academic Self-Concept?

A bivariate Pearson correlation was performed to evaluate the relationship between academic self-concept and perceived teacher praise. More specifically, perceived teacher praise was the predictor (independent) variable and academic self-concept was the dependent variable. The correlation between perceived teacher praise

and academic self-concept was not statistically significant, $r(50) = -.19, p = .09$, (one-tailed).

CHAPTER V

Discussion

This examination investigated whether students' intelligence beliefs and academic self-concepts changed across time. In addition, the aim was to examine whether there was a predictive link between teacher praise and intelligence beliefs as well as academic self-concept. The current study is one of few to investigate the relationships among intelligence beliefs, academic self-concept, and teacher praise. Results of this study could be important to understanding how praise, student beliefs, and academic self-concepts may function together within a naturalistic classroom setting.

The current study demonstrated no significant differences in mean ratings of intelligence beliefs, or in mean ratings of academic self-concept across time. Participant responses for both pre and post-assessments of intelligence beliefs demonstrated mean responses close to 2 on a 4-point scale, with high scores reflecting fixed beliefs and low scores reflecting malleable beliefs. This demonstrates that overall, participant responses remained neutral across time, suggesting that they did not strongly endorse one intelligence belief over another. In addition, academic self-concept remained moderately high across time; responses remained near 3, on a 4-point scale, across both time one and time two assessments.

The current study demonstrated that there was not a significant relationship between academic self-concept and intelligence beliefs for either the pre-assessment or the post-assessments ratings. However, the relationship between these two factors approached significance at the pre-assessment, suggesting that there was a stronger relationship between intelligence beliefs and academic self-concept at the beginning of

the year, before being exposed to the classroom. At the beginning of the school year, students with higher fixed ratings demonstrated a trend toward higher academic self-concept, and as more time was spent in the classroom, this relationship weakened. This trend warrants further investigation, and these factors should be included in future research.

Despite the lack of significant change in variables across time, the neutrality in intelligence beliefs within this study is interesting considering prior research on intelligence beliefs. Dweck, the researcher who designed the intelligence belief survey, has demonstrated students' ability to reliably indicate endorsements of one or the other. For example, Dweck et al. (1995) used three of the six intelligence belief questions, and 85% of the participants were evenly distributed between the two theory groups. On the other hand, Gonida et al. (2006) noted that many authors (e.g. Ablard & Mills, 1996; Leondari & Gialamas, 2002) have found that elementary-aged students tend to adopt a malleable view of intelligence. Gonida et al.'s (2006) investigation of intelligence beliefs and academic self-concept aligned with these findings, and demonstrated that malleable intelligence beliefs were more likely to be endorsed by the 5th and 6th graders. Conversely, both Ablard and Mills (1996) and Leonardi and Gialamas (2002) found that high school adolescents were more likely to endorse a fixed-view of intelligence, suggesting that age may be a factor in what types of beliefs that children endorse.

Although there is research that suggests a number of potential outcomes could be found when administering the Intelligence Belief Survey to young students, Ablard and Mills (1996) found that when they asked gifted students (achieving within the top 1% of their class) to rate intelligence on a 6-point Likert scale, from (1) "stays the same" to (6)

“changes a lot,” the majority of the 3rd through 11th graders did not demonstrate a preference for one type of intelligence belief over another. The response rate fell into a normal curve, meaning that a many of the students (48%) answered with borderline responses. Examinations of the scatterplot of the current study’s responses (see Figure 2, suggests that the pattern of responses obtained from fourth and fifth graders parallels the findings of Ablard and Mills (1996), where most responses were within the borderline of both malleable and fixed intelligence beliefs. This means that most of the students did not endorse one intelligence belief over another.

The research above suggests that age appears to be a factor in the assessment of students’ intelligence beliefs. Some researchers have found differences in patterns of responses in young verses adolescent students (Ablard & Mills, 1996; Leondari & Gialamas, 2002). Other research has suggested that age may not only influence which type of intelligence belief a student might endorse, age may also be a confounding factor when gathering belief information, and may limit the reliability of intelligence scales like the one used within the current study (Burhans & Dweck, 1995). Burhans and Dweck (1995) state that the predictability of intelligence beliefs on subsequent learning behaviors, such as the use of effort or the demonstration of learned helplessness, is not valid in population of students under the age of approximately 9 or 10. Reasoning behind these statements consider the fact that when assessed with a questionnaire like the Intelligence Belief Survey utilized in the current study, young children may not understand intelligence as fixed or changeable. Young children might have difficulty with abstract terms such as intelligence, ability, and effort, and young children may not be able to reflect upon these concepts until the middle grade school years. However, the current

study was designed to counter these arguments. First, assessments were only performed on older elementary-aged school children. Most of the participants, with the exception of one, were 9-11 years old. In addition, the Intelligence Belief Survey was designed to weed out any participants whom may have had difficulty understanding the measure; “I don’t know” response items were included and used as a reliability flag, identifying participants whom may not have had a strong enough concept of intelligence to be able to answer the questions reliably. In fact, the prominent study on praise, performed by Mueller and Dweck (1998) and discussed previously herein, was performed on students between the ages of 9 to 11 year old, thus providing more reliability.

A more reasonable conclusion that explains the neutrality of the intelligence belief endorsements may be due to the current study’s use of an altered Intelligence Belief Survey. Dweck et al. (1995) used a 6-point Likert scale, unlike the 4-point Likert scales used in the current study. Because information regarding the degree of cognitive ability within this participant population was not available, adaptations were made in efforts to ensure that the students could reasonably understand the scales. An even number was preferred verses an odd number, because the results could be confounded if students overly relied on a middle, more neutral number, so the numbers across the scales were reduced from six to four. Scores on the Intelligence Belief Survey were averaged, and overall averaged scores ranged from 1 to 4. Allowing for only four items within the scale resulted in a cutoff score of 2: 2 or below demonstrated malleable intelligence beliefs, and 3 or above demonstrated fixed intelligence beliefs. On the other hand, Dweck et al.’s (1995) use of a 6-point Likert scale allowed for a less restricted range of overall scores (they had a possible range of average scores between one and six). It is

possible that the use of a less restricted scale allowed a more dichotomized grouping of intelligence beliefs because their scale was less restricted; whereas the current scale did not leave much room between one end of the intelligence belief spectrum to the other end of the intelligence belief spectrum, resulting in scores piling up around the middle (i.e. 2).

Research on academic self-concept has demonstrated that although researcher praise did influence the level of academic self-concept reported by 3rd to 6th grade students, teacher praise did not (Craven et. al, 1991). Thus, the findings from the current study, which found no differences between academic self-concept across time, aligned with previous research. Considering that the only types of praise influence within the classrooms was from the students' teachers, and no additional examiner praise was utilized within the study, a change in academic self-concept was not expected.

Results of this examination suggest that perceived teacher praise was not predictive of the participants' intelligence beliefs, nor was it predictive of the participants' academic self-concepts. Prior literature on praise suggests a different trend, one that demonstrates effort praise as correlated with higher malleable intelligence beliefs (Gunderson, et al., 2013; Mueller & Dweck, 1998). It is important to remember that the current study examines *perceived* teacher praise. Other studies, such as that of Mueller and Dweck (1998), provided direct effort or ability praise, and they controlled for the level of administered praise. It is possible that the participants answered in a way that resembled how they *felt* they should be praised, not necessarily how they were *actually* praised.

Limitations

There are a few reasons why this study may not have revealed significant results across analyses. First, examination of time one and time two mean ratings on intelligence

beliefs demonstrated that students generally had intelligence beliefs that were in the middle between a malleable and a fixed belief of intelligence. In addition, mean ratings of academic self-concept were generally high across time, and demonstrated very little variability. This suggests that the data collected from both dependent variables had a restricted range of responses. Correlations will be reduced whenever a sample has a restricted range of scores. To take the most extreme example, consider what the correlation between scores on district standardized tests and student grades would be in a sample where every student had the same scores on district standardized tests. The correlation would necessarily be 0.0 (Warner, 2008).

Furthermore, the design of the study becomes problematic when one considers the possibility of limited statistical power. Warner (2008) suggests that in order to meet an appropriate level of statistical power when performing a regression, at least 105 participants should be included in a study. Unfortunately the resources for the current study were limited, and prevented a large enough sample to procure a level of statistical power that would be useful in finding significant relationships between the independent and dependent variables.

The current study's potential toward inadequate statistical power is compounded even further by other problematic variables connected with its design; specifically, a lack of experimental control. The level of strength of the independent variable provided, or in this case, the level of strength of teacher praise provided was not controlled for. There was no control over the level of praise provided, nor the type of praise provided in this study. The praise provided may not have been strong enough to demonstrate a predictive relationship with the dependent variables examined. It is most likely that the teachers

provided both types of praise, masking the effects of one type of praise over another. Introduction of more experimental control may have increased the current study's statistical power.

In addition, a second weakness of the current design includes the types of measurements used. The Intelligence Belief Survey as well as the Academic Self-Concept scale used in the current study were measures were adapted from their original form. Due to time constraints within the classrooms participating within this study, the survey sizes were reduced. Although all of the surveys utilized within this study were originally validated as having high reliability measures, the adaptations made to their designs potentially weakened the methods of measurement.

Future Examinations/Implications

Although findings such as those from Mueller and Dweck (1998) suggest that praise may be linked to student endorsements of intelligence beliefs, this study was performed outside of the natural classroom context. The current study demonstrates how difficult it is to generalize results found outside the classroom into the real world. Teachers often do not use only one type of praise consistently; they use a multitude of different types of praise within their classrooms. This study also demonstrates how difficult it can be to examine constructs such as praise, and internalized belief systems such as intelligence beliefs and academic-self-concept. There are always potential confounds created when researchers utilize measures based from perceptions rather than direct measurable observations. Future examination designs should include control over the level and types of praise provided to the students. It would be beneficial to train teachers to praise only with either ability or effort praise; however, many teachers may

not respond positively to such requests. It would be more plausible, and potentially more generalizable, to videotape classrooms and code for the types of praise provided. This would increase the reliability of teacher praise measures.

One of the limitations of the current study includes the point that there may not have been enough praise provided within the classroom to create a strong relationship between the factors that were assessed. To ensure that students receive an appropriate amount of praise, future research should include teacher training in the area of praise in order to increase the base amount of praise provided. Not only is a high level of praise important within research, it is also important within the classrooms at schools.

Although the current results were inconclusive, there is a base of literature describing laboratory-based research that suggests praise is an important element in increasing student motivation (Henderlong; Kamins & Dweck, 1999; Mueller & Dweck, 1998; Schunk, 1983). Other research suggests that students can be trained to endorse the more resilient malleable intelligence belief, which takes more precious time to implement than praise, but still may be effective for increasing success (Ogle & Love-Grieger, 2006; Sciarreta & Cacciamani, 2012). The fact that intelligence beliefs and academic-self-concept have been established firmly in the literature as having a correlation with increased achievement increases their value as future research possibilities (Blackwell et al., 2007; Craven, et al., 1991; Dweck et al., 1995; Henderlong, 2006; Marsh, et al., 1983; Mueller & Dweck, 1998; Schwinger & Stiensmeier-Pelster, 2011; Sciarreta & Cacciamani, 2012; Yeager & Dweck, 2012). This is a topic that could be integral to improving classroom achievement, and is a topic that should be further investigated within the classroom.

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Appendix A
Student Demographic Questionnaire

1. How old are you?

2. Circle One:

Are you Male or Female?

3. Circle One:

What ethnicity are you?

White-Not Hispanic

American Indian/ Alaskan

Hispanic

Black-Not Hispanic

Asian/Pacific Islander

I do not know

I do not want to answer

Other: _____

Appendix B
Intelligence Belief Survey

1 (*identification number*)

There are no right or wrong answers!

1. You have a certain amount of intelligence, and you really can't do much to change it.

Does this sound right to you?

That Sounds <i>Really</i> Right 1	That Sounds Right 2	That Sounds Wrong 3	That Sounds <i>Really</i> Wrong 4	I Don't Know X
--	--	--	--	--

2. No matter who you are, you can change your intelligence a lot.

Does this sound right to you?

That Sounds <i>Really</i> Right 1	That Sounds Right 2	That Sounds Wrong 3	That Sounds <i>Really</i> Wrong 4	I Don't Know X
--	--	--	--	--

3. You can learn new things, but you can't really change your intelligence.

Does this sound right to you?

That Sounds <i>Really</i> Right 1	That Sounds Right 2	That Sounds Wrong 3	That Sounds <i>Really</i> Wrong 4	I Don't Know X
--	--	--	--	--

Keep going, almost done! ☺

4. Your intelligence is something about you that you can't change very much.

Does this sound right to you?

That Sounds <i>Really</i> Right 1	That Sounds Right 2	That Sounds Wrong 3	That Sounds <i>Really</i> Wrong 4	I Don't Know X
--	--	--	--	--

5. You can always greatly change how intelligent you are.

Does this sound right to you?

That Sounds <i>Really</i> Right 1	That Sounds Right 2	That Sounds Wrong 3	That Sounds <i>Really</i> Wrong 4	I Don't Know X
--	--	--	--	--

6. No matter how much intelligence you have, you can always change it quite a bit.

Does this sound right to you?

That Sounds <i>Really</i> Right 1	That Sounds Right 2	That Sounds Wrong 3	That Sounds <i>Really</i> Wrong 4	I Don't Know X
--	--	--	--	--

The End ☺

Appendix C
Student Academic Self-Concept Scale

1 (identification number)

There are no right or wrong answers!

1	I'm good at all SCHOOL SUBJECTS.	Not True 1	A Tiny Bit True 2	More Than a Tiny Bit True 3	Very True 4
2	Work in MATH is easy for me.	Not True 1	A Tiny Bit True 2	More Than a Tiny Bit True 3	Very True 4
3	I'm good at MATH.	Not True 1	A Tiny Bit True 2	More Than a Tiny Bit True 3	Very True 4
4	Work in all SCHOOL SUBJECTS is easy for me.	Not True 1	A Tiny Bit True 2	More Than a Tiny Bit True 3	Very True 4
5	I am good at READING.	Not True 1	A Tiny Bit True 2	More Than a Tiny Bit True 3	Very True 4
6	Work in READING is easy for me.	Not True 1	A Tiny Bit True 2	More Than a Tiny Bit True 3	Very True 4

Thank You!!

The End ☺

Appendix D
Teacher Feedback Survey

1 (identification number)

Here are some things your teacher might say to you in your classroom. Read each statement carefully and decide how often your teacher has said these things to you in the classroom.

There are no right or wrong answers. Only you know what your teacher might say to you.

During reading lessons and activities, how often does your teacher say these things to you?

	NEVER	SOMETIMES	OFTEN
1. You are a good reader.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
2. You are trying really hard at reading.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
3. You seem very smart in reading.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
4. You are a hard worker in reading.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
5. You have good reading ability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
6. You put a lot of effort in your reading.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
7. You have the skills it takes to be a good reader.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
8. You are working really hard in reading.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Keep going, you are halfway done!

During mathematics lessons and activities, how often does your teacher say these things to you?

	NEVER	SOMETIMES	OFTEN
9. You are good at math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
10. You are trying really hard at math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
11. You seem very smart in math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
12. You are a hard worker in math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
13. You have good ability in math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
14. You put a lot of effort into your math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
15. You have the skills it takes to be good at math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	NEVER	SOMETIMES	OFTEN
16. You are working really hard in math.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

THANK YOU!



Appendix E
Principal Consent Form

Title of Investigation: "The Relations Between Students' Perceptions of Teacher Feedback and Their Intelligence Beliefs"

Name of Principal Investigator: Amanda Baumann

This document is to certify that I, _____, hereby freely give permission to have my school participate as a volunteer in a study as an authorized part of the educational and research program of the University of Wisconsin Eau Claire under the supervision of Dr. Mary Beth Leibham.

- The research project and my school's role in the research project have been fully explained to me by Amanda Baumann, and I understand her explanation as well as what will be expected by virtue of my school's participation in this research project. A copy of the procedures of this investigation and a description of any risks, discomforts and benefits associated with my school's participation has been provided and discussed in detail with me.
- I have been given an opportunity to ask questions, and all such questions and inquiries have been answered to my satisfaction.
- I understand that all data will remain confidential with regard to my school's identity.
- I understand that my school's participation in this research project is voluntary and not a requirement or a condition for being the recipient of benefits or services from the University of Wisconsin-Eau Claire or any other organization sponsoring the research project.
- I understand that if I have any questions or concerns about the treatment of human subjects in this study, I may call or write:

Dr. Don Bredle
Chair, Institutional Review Board for the Protection of Human Subjects
Schofield 17
University of Wisconsin-Eau Claire
Eau Claire, Wisconsin 54702-4004
Telephone: 715-836-2373

Although this person will ask my name, I understand that all inquiries will be kept in the strictest confidence.

- Furthermore, I understand that if I have any questions concerning the purposes or the procedures associated with this research project, I may call or write:

Appendix F
Teacher Cover Letter

Dear Teacher:

I am a graduate student in School Psychology conducting a research project for my thesis. My research concerns 4th and 5th grade students' perceptions of teacher feedback. I am recruiting students from three different classrooms from each grade level for participation in this project.

I would like to come into your classroom at two points during the first half of this year to administer a survey to your students. The survey should take about twenty minutes to complete for each administration. Your participation in this project is completely voluntary.

I hope that you will choose to participate in this study. What is learned from this study may aid both of us in professional development.

The results of this study may be presented at School Psychology state conferences. Your identity will remain confidential. If you have any questions about this project or the results please contact Dr. Leibham at: (715) 836-4536, at the Graduate Department of School Psychology, HHH #259, at the University of Wisconsin-Eau Claire.

Both the Eau Claire School District, and the University of Wisconsin-Eau Claire Institutional Review Board for the Protection of Human Subjects have approved this examination. If you have any questions or concerns about your treatment as a participant in this study, please contact Dr. Don Bredle, Chair, Institutional Review Board for Protection of Human Subjects, Schofield 17, University of Wisconsin-Eau Claire, WI, 54702-4004, (715) 836-2373. Thank you for your time and cooperation.

Sincerely,

Amanda Baumann
Graduate Student Researcher

Appendix G
Parent Cover Letter

Dear Parent:

My name is Amanda Baumann and I am a graduate student in school psychology at UW-EC. For my thesis I am conducting a study entitled "The Relations Between Students' Perceptions of Teacher Feedback and Their Intelligence Beliefs". The primary purpose of this research is to examine how teachers' feedback is related to students' intelligence beliefs.

Your child is invited to participate in this study. Data are being collected from four classrooms, two classrooms each from grade 4rd and 5th. There are no direct benefits to your child from his or her participation. However, the data may provide information showing that feedback may be a useful tool in the classroom.

Three questionnaires will be handed out in class, once at the beginning of the school year and again mid-year. One questionnaire will ask whether your child believes intelligence can be changed. The other will ask your child to report what kind of feedback the teacher provides (e.g. "You work really hard at math."). The last questionnaire will ask questions regarding your child's perception of his/her performance in school. The procedure takes approximately twenty minutes to complete during each administration.

Your child's participation is entirely voluntary. If you choose you may discontinue your child's participation in the study at any time without penalty. This procedure should pose no risk to your child. Your child's confidentiality will be assured by assigning your child a number. The responses for each questionnaire will not match up to any names; all of your child's responses will be associated with this number. All data will be kept in a secure place. If data from this study are presented or published, only grouped data will be presented.

If you are willing to allow your child to participate in the study, please sign and hand this in with your orientation paperwork. If I receive the attached form, it indicates that you have given your consent for your child's participation.

If you have any questions about the treatment of human subjects in this study you may call or write Dr. Don Bredle, Chair, Institutional Review Board for the Protection of Human Subjects, Schofield 17, University of Wisconsin-Eau Claire, WI 54702, telephone 715-836-2373. If you have any additional questions about the purpose of this research, contact Dr. Mary Beth Leibham, Graduate Department of School Psychology, HHH #259, University of Wisconsin-Eau Claire, Eau Claire, WI 54702, telephone (715)-836-4536.

Sincerely,

Amanda Baumann
Graduate Student Researcher

Appendix H
Parent Consent Form

Title of Investigation: "The relations Between Students' Perceptions of Teacher Feedback and Their Intelligence Beliefs

Name of Principal Investigator: Amanda Baumann

This document is to certify that I, _____, hereby give permission to have my child participate as a volunteer in a study as an authorized part of the educational and research program of the University of Wisconsin-Eau Claire under the supervision of Dr. Mary Beth Liebham.

- The research project and my child's role in the research project have been fully explained to me by Amanda Baumann, and I understand her explanation as well as what will be expected of my child by virtue of his/her participation in this research project. A copy of the procedures of this investigation and a description of any risks, discomforts and benefits associated with my child's participation has been provided and discussed in detail with me.
- I have been given an opportunity to ask questions, and all such questions and inquiries have been answered to my satisfaction.
- I understand that I am free to decline to answer any specific items or questions in interviews or questionnaires.
- I understand that all data will remain confidential with regard to my child's identity.
- I understand that participation in this research project is voluntary and not a requirement or a condition for being the recipient of benefits or services from the University of Wisconsin-Eau Claire or any other organization sponsoring the research project.
- I understand that the approximate length of time required for participation in this research project is 60 minutes in total across the first trimester of school.
- I understand that if I have any questions or concerns about the treatment of human subjects in this study, I may call or write:

Dr. Don Bredle
Chair, Institutional Review Board for the Protection of Human Subjects
Schofield 17
University of Wisconsin-Eau Claire
Eau Claire, Wisconsin 54702-4004
Telephone: 715-836-2373

Although this person will ask my name, I understand that all inquiries will be kept in the strictest confidence.

- Furthermore, I understand that if I have any questions concerning the purposes or the procedures associated with this research project, I may call or write:

Amanda Baumann
Address: University of Wisconsin Eau Claire
HSS #160
Eau Claire, WI
Telephone: 715-836-5604

- I also understand that it will not be necessary to reveal my name in order to obtain additional information about this research project from the principal investigator.
- I FURTHER UNDERSTAND THAT I AM FREE TO WITHDRAW MY CONSENT AND DISCONTINUE MY CHILD'S PARTICIPATION AT ANY TIME.

I hereby consent to the participation of

_____, a minor in the investigation
herein described

Date Signature of Minor's Parent or Guardian

I, the undersigned, have defined and fully explained the investigation to the above subject.

Date Signature of Investigator

Appendix I
Child Assent Forms

Your parents know I am going to ask you to fill out a few forms with questions on them. They sent me a letter saying that it was okay to help me, if you want to. I want to ask questions on what you think about intelligence. Intelligence is the power of the mind to get knowledge, and to use knowledge. I will be in your class two different times; once now, and then again in a few months. Each time I am here I will ask you to fill out questions on my forms for about a half an hour.

Your name will not be written anywhere on the forms. Your answers will be private. That means that no one will know it was you that answered.

If you do not want to participate, you can raise your hand and tell me that you want to stop. There will be no bad feelings if you don't want to do this. You can ask me questions at anytime.

Do you understand?

Is this okay?

Name (please print
neatly): _____,

Signature:

Date: _____

Appendix J
Identification Number Cover Form

1 (pre-assigned identification number)
Name: