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### Teacher Feedback in the Classroom: What's going on in there?

Jenny O'Brien  
*Trinity College*

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Teacher Feedback in the Classroom;  
What's going on in there?

Jennifer O'Brien, Trinity College

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Faculty Sponsor: Barbara Henriques

The United States is a nation defined by assessment. We measure everything from intelligence levels of our citizens to productivity levels in the workplace to the speed at which children can run a mile, pore over the results, assign labels and markers to differentiate those who succeed from those who fail. We obsess over standardized testing results and grades, always looking for a quick fix, for a way to maximally improve our schools with minimum effort or more importantly, in a minimal amount of time. In studying educational reform issues, one sees a repeating pattern of quick theorizing, quick program development, quick implementation, and quick abandonment of ideas and policies intended to be quick fixes for the most pressing of educational issues.

#### *Attribution theory and motivation*

Attribution theorists study perceptions of causality in motivation and achievement. They argue that individuals engage in causal analyses after experiencing successes or failures, attempting to answer the question “why did I succeed (or fail).” In finding a probable cause for his level of performance, one “attributes” his success or failure to that characteristic of himself, the task, or the situation. Attribution theorists further argue that the attributions people make can be classified into categories based on a number of salient characteristics. Though these classification matrices vary between researchers, certain categories reappear throughout the literature and seem to be generally agreed upon among experts in the field.

Weiner (1986) gives a comprehensive overview of several classification systems for attributions in the contexts of motivation and achievement. His own system, like many of the others he discusses includes the dimensions of internality and stability.

Internality refers to whether the cause within the actor (internal) or outside the actor (external). Stability refers to whether the cause is an enduring (stable) trait, which will likely affect the actor in a similar way in the future or is transient (unstable) and will not necessarily continue to affect the actor in the same way throughout the future. *Ability* is an example of an internal and stable attribution while *effort* is an example of an internal but unstable attribution. Attributional theorists believe making different attributions for success and failure can then lead to a variety of affective, motivational, and behavioral results.

According to Weiner (1986) attributing success to ability (internal stable) increases one's expectation of future success on a given task. Since, in this case, the actor considers the cause of his success to be a characteristic that will continue to affect his performance in the same way, his confidence in future tasks is high. For similar reasons, attributing failure to lack of ability lowers one's confidence and expectations for success, since one then expects the failure-inducing cause to continue to have negative effects in future situations. Alternatively, he argues that attributing success to effort (internal unstable) does not increase one's expectations for future successes. In this case, the actor considers the cause of his success to be a transient quality that may or may not affect him in the same way, i.e. that he will only do well in the future if puts enough effort into the task again. Similarly, attributing failure to lack of effort, does not lower one's confidence or expectations for future success, since the cause of the negative results is no highly likely to present again in future situations. Consequently, Weiner argues that ability attributions for success generally increase task motivation and ability attributions for

failure generally decrease task motivation but effort attributions for either success or failure have minimal motivational effects overall.

Kun and Weiner (1973) argue that ability and effort attributions have a compensatory relationship in academic achievement, i.e. those who have to exert a lot of effort to achieve on a task are perceived as having less ability than those who do not exert a lot of effort and achieve on a task. Diener and Dweck (1978) found evidence that shows children do spontaneously make causal attributions of ability and effort in achievement contexts, asking children to “think out loud” as they completed an experimental task in which they induced failure. And as might be expected given the attributional framework above, Schunk (1983) found that feedback attributing good performance to ability was more effective than attributing it to effort in improving subsequent task performance and self-competence measures.

#### *Praise and blame as attributional feedback*

Sandra Graham (1990) argues that praise and blame from teachers can send counter-intuitive ability messages to students. Specifically, she argues that praise on easy tasks conveys a low ability message and blame, or anger and disappointment, for failure conveys a high ability message. This is because she believes praising achievements on easy tasks shows low expectations and sends the message ‘you are not very good at this, I am surprised you were able to do this’. Accordingly blame shows high expectations and sends the message ‘you are good at this, you could have succeeded.’ Graham also argues that showing sympathy for students when they fail at a task conveys a low ability message, i.e. ‘it’s ok I didn’t really think you could do it anyhow.’

Barker and Graham (1987) found a developmental shift in children's perceptions of these types of feedback. At approximately age eight, children begin to perceive the underlying ability messages in the types of feedback Graham studies. Before the age of eight, children perceived any and all positive feedback as ability-affirming, i.e. 'the teacher said something good, I am good at this,' all negative feedback as disaffirming.

#### *Current study*

In researching the field of achievement motivation, I found a wealth of information on theories, models, and reform programs, but very little information on how this research actually applies to schools. In looking at studies of attributional feedback, I found no one who actually stopped to ask teachers what's going on in their classrooms before proceeding to make recommendations about what should be happening there. I therefore chose to take this assessment step and find out what teachers are doing and how they are thinking about feedback in their classrooms. I will approach this study from the theoretical framework of Graham's research on praise and blame as attributional cues.

In this study I will explore teachers' attitudes and beliefs about the types of feedback Graham studies, looking to see whether teachers use feedback in the ways she suggests are beneficial. My research question is thus, "What's actually happening in the schools; how do teachers actually use feedback?" I predict that teachers will show they already use feedback in the ways Graham's findings suggest are beneficial, i.e. compared to teachers of students under the age of eight, teachers of students over the age of eight will use negative feedback more frequently, will use praise less often, especially on easy tasks, will show more disappointment and anger and less sympathy when students fail,

and will believe negative feedback to be more beneficial to their students. I will use a survey to gather my data.

## Method

### *Participants*

I distributed two hundred surveys to public school teachers working in a Title-1 funded district in Southern New England. Specifically, I distributed a survey to each teacher working in one of the high schools (grades 9-12), one of the middle schools (grades 6-8), and two of the elementary schools (grades K-5) operating within the anonymous school system. Twenty-seven teachers of grades K-12 participated in the study yielding a response rate of 13%. Eleven of the participants taught in the elementary schools, six of the participants taught in the middle school, and ten of the participants taught in the high school. All participants from the elementary schools happened to teach students under the age of eight and all participants from the middle and high school teach students over the age of eight, therefore, I grouped all my elementary participants as the “under eight” group” (n = 11) and my middle and high school participants as the “over eight” group (n = 16).

### *Materials*

Teachers received a survey packet containing the survey instrument, an informed consent form which was in compliance with Trinity IRB standards, a cover letter from the president of the local teacher’s union condoning distribution of the survey, a cover letter from me explaining my interest in the topic, the terminology used in the instrument, and general instructions for completing the survey parts, and also an envelope so

participants could return the survey instrument and consent form in a confidential manner.

The survey instrument used in this experiment contained four parts. The first asked teachers to report how frequently they themselves used positive and negative feedback, how frequently the average teacher of their grade level used positive and negative feedback, how often, ideally, a teacher ought to give positive and negative feedback, and how beneficial each type of feedback is to students' understanding of material, motivation to achieve, and performance on academic tasks. For the purposes of this study, "positive feedback" was defined as any type of feedback drawing attention to the positive aspects of a performance situation, e.g. praise, and "negative feedback" as any type of feedback drawing attention to the negative aspects of a performance situation, e.g. constructive criticism. Teachers responded on separate four-point Likert scales for average students, high-achieving students, and low-achieving students. The frequency scale was described as follows: 1 = rarely (1-2 times a semester or less), 2 = once in a while (more than rarely, less than once per every five class hours), 3 = often (about once per every five hours in class), 4 = very frequently (more than once per every five hours in class). The benefits scale was 1 = not at all, 2 = not very much, 3 = somewhat, 4 = very much.

The second part of the survey asked teachers to rate the following emotions in terms of how appropriate they would be to express in specific achievement situations: anger, joy, sadness, surprise, disappointment, excitement, no emotion. There were twelve achievement situations derived from combinations of achievement level of student (average, high, low), task performance (success, failure), and task difficulty (easy,



difficult). Teachers rated as many of the emotions as they thought applied or had an opinion about using a scale of one (most appropriate) to seven (least appropriate).

The third part of the survey asked teachers to rate specific types of feedback in the same way they rated emotions in part two. Using the same scale, instructions, and achievement situations as described above, teachers rated the following feedback types: general praise, e.g. “great job”; general criticism, e.g. “you could have done better”; praise for ability, e.g. “you’re very good at this”; sympathy/understanding, e.g. “it’s ok, don’t worry about it”; criticism of ability, e.g. “you’re not very good at this; praise for effort, e.g. “ I can see you really tried your best here”; criticism of effort, e.g. “ you could have tried harder.”

The last section of the survey asked teachers what grade they taught, how long they had been teaching, whether they were familiar with attributional feedback research, and if they thought the instrument allowed them to express their belief on the topic in an accurate and comprehensive manner.

### *Procedure*

After obtaining permission from the Institutional Review Board at Trinity, the president of the teacher’s union in the participating town, and the administration of each participating school, I distributed a survey to each teacher working in each school by placing it in their school mailbox. I left a collection envelope near the teacher mailboxes and noted the date of last pick-up on it in bold letters. Teachers then filled out the instrument and consent form and left them, sealed in an envelope, in the collection device. I returned to each school three times to pick up the completed surveys. I then

separated the informed consent forms from the actual instruments and analyzed the results anonymously using Microsoft Excel software.

## Results

I tested for significant differences between data sets using T-tests in Microsoft Excel. All differences were deemed to be significant at  $p < .05$ .

### *Self-Report*

Elementary school teachers did not differ significantly from middle/high school teachers in self-reports of feedback frequencies. Teachers of the two age groups reported giving positive feedback equally often and negative feedback equally often. Both groups reported giving positive feedback more frequently than negative feedback. There were no significant differences between student achievement levels in either group. See figures 1 and 2.

### *Average Teacher*

Elementary school participants believed the average elementary school teacher gives significantly more positive feedback than middle/high school participants believed the average middle/high school teacher gives. This significant difference is due to a statistically significant interaction between student achievement level and age group such that only elementary school participants believed the average teacher gives positive feedback to high-achieving students more frequently than to students of other achievement levels. Elementary and middle/high school participants did not differ significantly in their ratings of average teachers' frequencies of giving negative feedback. Elementary participants believed the average elementary school teacher gives more positive feedback than negative feedback, but middle/high school teachers did not rate

average teachers' use of positive and negative feedback significantly differently. See figures 3 and 4.

### *Ideal Teaching*

Ideal feedback frequency ratings did not differ between elementary and middle/high school participants for either positive or negative feedback. Both groups thought that ideally, teachers should offer more positive than negative feedback. There were no significant differences between achievement levels in either group. See figures 5 and 6.

### *Comparisons between self, average, and ideal*

Self-reports of feedback frequencies did not differ significantly from ratings of ideal frequencies in either group. Additionally, both groups believed the average teacher in each student-age level gives significantly less positive feedback than either they themselves do, or than is ideal. See figures 7 through 10.

### *Benefits of feedback*

Teachers of both age groups believed positive feedback to be significantly more beneficial than negative feedback. Teachers of both age groups also believed positive feedback improves students' motivation to achieve more than their understanding of material. Elementary teachers also believed positive feedback significantly improves students' performance on similar tasks more than their understanding of material. Middle/high school teachers believed positive feedback improves students' motivation to achieve significantly more than their performance on similar tasks. See figures 11 and 12.

### *Emotions*

There was only one significant difference between the way elementary and middle/high school teachers rated the appropriateness of emotions to display in specific achievement situations, i.e. when an average student fails at a difficult task, elementary school participants thought it was more appropriate to show no emotion (1.57) than middle/high school participants (4.00). Teachers across student-age groups rated joy and excitement as the most appropriate emotions to show when any type of student succeeds at any type of task, with one exception in the case of high-achieving students succeeding in an easy task, when teachers thought joy or no emotion to be the most appropriate. When any type of student fails at an easy task, teachers across student-age groups thought it most appropriate to show disappointment and surprise. When a high-achieving student fails at a difficult task, teachers across student-age groups thought it most appropriate to show surprise and disappointment, but when an average or low achieving student fails at a difficult task they thought it most appropriate to show disappointment or no emotion. See table 1.

### *Feedback Types*

There were few significant differences between the way elementary and middle/high school teachers rated the appropriateness of different types of feedback in specific achievement situations. These differences did not seem to follow any predictable type of pattern. The significant differences were as follows: when a high-achieving student fails at a difficult task, elementary participants thought it more appropriate to give general praise (4.29) than middle/high school participants (6.43); when an average student fails at an easy task, elementary participants thought it more appropriate to give general criticism (1.14) than middle/high school participants (2.86) and middle/high

school participants thought it more appropriate to give praise for effort (1.90) than elementary participants (4.60); when a low achieving student succeeds at a difficult task, elementary participants thought it more appropriate to give praise for effort (1.63) than middle/high school participants (3.50); when a high achieving student fails at an easy task, middle/high school participants thought it more appropriate to give praise for effort (3.00) than elementary participants (5.60); and when a low achieving student succeeds at an easy task, middle/high school participants thought it more appropriate to give general praise (1.00) than elementary participants (1.78).

Across student-age groups, teachers rated general praise as the most appropriate type of feedback to give when any type of student succeeds on an easy task. For success on a difficult task, teachers thought praise for effort to be the most appropriate type of feedback to give average students, general praise to be the most appropriate for high-achieving students, and praise for ability to be the most appropriate for low-achieving students. Across student achievement levels, teachers in each student-age group thought general criticism to be the most appropriate type of feedback to give when students fail at an easy task. When students fail at a difficult task, teachers believed it most appropriate to give average students praise for effort and offer both high and low-achieving students sympathy and understanding.

## Discussion

I predicted that there would be differences between elementary and middle/high school teachers on number of different measures. I expected middle/high school teachers to use negative feedback more frequently and praise less often than elementary school teachers. I expected middle/high school teachers to be more willing to show

disappointment and anger and less willing to show sympathy when students fail at tasks and I expected middle/high school teachers to see negative feedback as more beneficial to their students. My results do not support these hypotheses. There were essentially no differences between the ways elementary and middle/high school teachers reported using feedback in the classroom, and only minimal differences between their beliefs about the benefits of feedback use.

My data clearly does not map well onto the research Graham performs. This apparent misfit between theory and current practice suggests three possible interpretations. The first is that teachers are actually using feedback in ways that may be detrimental to their students' academic motivation and would benefit significantly from knowledge of Graham's results. The second possibility is teachers know more about the nuances of teacher-to-student feedback than Graham can study in laboratory settings, use feedback in ways that benefit their students more than Graham might predict and would not benefit from knowledge of her work. It is entirely possible that teachers of all grade levels use some combination of feedback types which can not be described by the dimensions discussed in the literature but are nevertheless highly appropriate to the individual students present in their classrooms. The third possibility is that this study contained methodological flaws and teachers do actually use feedback in the ways Graham's research suggests are beneficial, this study was simply unable to reflect this.

#### *Feedback frequencies*

Elementary school teachers did not differ from middle/high school teachers in terms of the frequency with which they give positive or negative feedback. Furthermore, beliefs about ideal frequencies for giving positive and negative feedback did not differ

between elementary and middle/high school teachers. These findings clearly refute my hypothesis that teachers already offer students the types of feedback Graham's research suggests they should.

Though my results were not significant in either direction on many of the dimensions central to my thesis, in several cases there do appear to be slight trends in the directions I had predicted (see figures 1 through 6). Since my data were based on several Likert scales which were each limited to four points, it is possible that the survey instrument was not a sensitive enough measure to detect significant differences between the two student-age groups. Perhaps with seven or nine point Likert scales, one would see more of a difference between the age groups on self-reporting, average teacher ratings, and ideal ratings of positive and negative feedback. One must keep in mind, however, that the instrument was sensitive enough to detect significant differences among a number of other variables: self/ideal vs. average, positive vs. negative, types of benefits with positive feedback.

A larger sample size would also help clarify results. If I were to conduct this study again I would only distribute one part of the survey instrument at a time to ease the time-demands of participation. I would schedule distribution so as not to interfere with the end of a marking period or report card preparation time and also I would visit the school at the time of distribution and introduce myself to as many teachers as possible, explaining who I am, what the survey is, and why they should take five minutes from their busy day to fill it out.

Teachers of each age group did exhibit significant self bias in terms of performance ratings relative to ideals. As can be seen best in figure 10, both elementary

and middle/high school teachers rated themselves equal to their ideals in terms of the frequencies with which they give positive and negative feedback, but rated the average teacher significantly different from the ideal, with the average teacher specifically offering less positive feedback than. The effect was the most exaggerated among middle and high school teachers. Though such self-bias is certainly not unexpected in this type of social judgment situation, such a finding in the absence of many other expected results does raise questions about the validity of a survey approach in measuring these variables. The instrument, in asking teachers to make such comparative judgments, does invite such bias through its basic structure. As a whole, one might argue the first section of the survey asks teachers ‘what’s ideal?’ and ‘who matches up, you or them?.’ This was certainly not the intent of the study. Perhaps a naturalistic observational study, a different combination of questions in teacher and/or student surveying, or distributing different parts of the first section at different times, might be more appropriate to control for these comparison effects.

#### *Emotions and feedback types*

Participants filled out the second and third parts of the survey instrument in a number of different ways. Whether due to instructions that were not specific enough, too small, or unclear, some participants rated each possible choice in the order they believed they would choose them, i.e. used all of the possible ratings (1-7) for each achievement situation. Others filled out only their top and/or bottom choices, some using the same rating multiple times within a single achievement situation. The results are therefore not conducive to statistical analyses. The data that are still somewhat useful from this section are the highest and lowest rankings, since these are unaffected by whether participants



felt they needed or wanted to rank them. As can be seen in Table 1, the choices by both elementary and middle/high school students of emotions to display and types of feedback to give roughly follow the patterns suggested to be beneficial by Graham's research, though based on Barker and Graham (1978), one would expect teachers of each student-age group to differ in specific ways from this general breakdown. For instance, one might expect elementary school teachers to avoid criticism all together in failure situations. One would expect middle and high school teachers to choose less positive emotions following success on easy tasks, since excitement can convey a low-ability message; to choose more negative types of feedback following student failure on difficult tasks, since sympathy and gratuitous praise can convey low-ability messages; and to rate anger as an appropriate emotion to display following failure, sending a very high ability message.

Based on the results of this study, it seems clear that there is much to discover in the field of teacher feedback and attributional cues. At present, it appears teachers' actual uses of feedback in the classroom differ sharply from the uses Graham has found to be most beneficial to students in experimental settings. Therefore, continued research is certainly warranted on these topics. Aside from replicating these findings with a more reliable instrument, the next step in studying this difference would be to probe for reasons why teachers choose not to use feedback in the ways Graham suggests and begin to determine the relative benefits of the actual and theoretical approaches. Though some might argue that self-reporting about feedback behaviors and beliefs is not a reliable enough measure of the topic at hand, I wholeheartedly believe in the approach. Even if self-reports of frequencies of behaviors are subject to self-biasing, such reports, in conjunction with ratings for ideals and, in this case, ratings of average teachers in their

grade levels, offer a glimpse into the most important area to teacher feedback research, i.e. teachers' attitudes and beliefs about feedback use and its potential benefits. Until further research is conducted in this area, we must wait to find any more clarification on the answer to the question, "What's going on in there?."

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## APPENDIX

Figure 1: no significant differences between elementary and middle/high school teachers in self reports of negative feedback frequencies

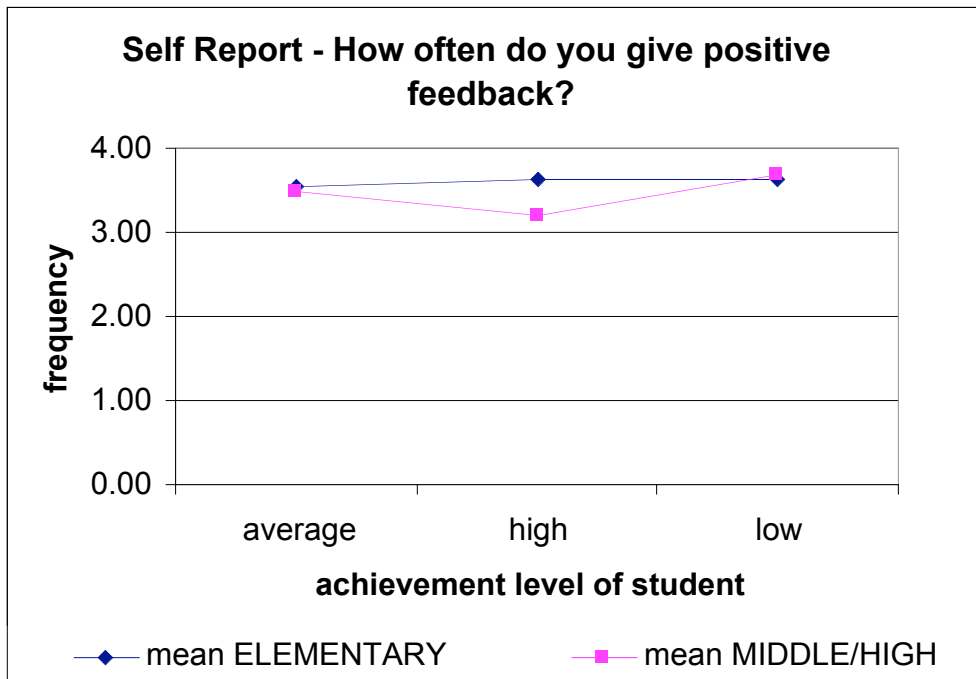


Figure 2: no significant differences between elementary and middle/high school teachers in self reports of negative feedback frequencies

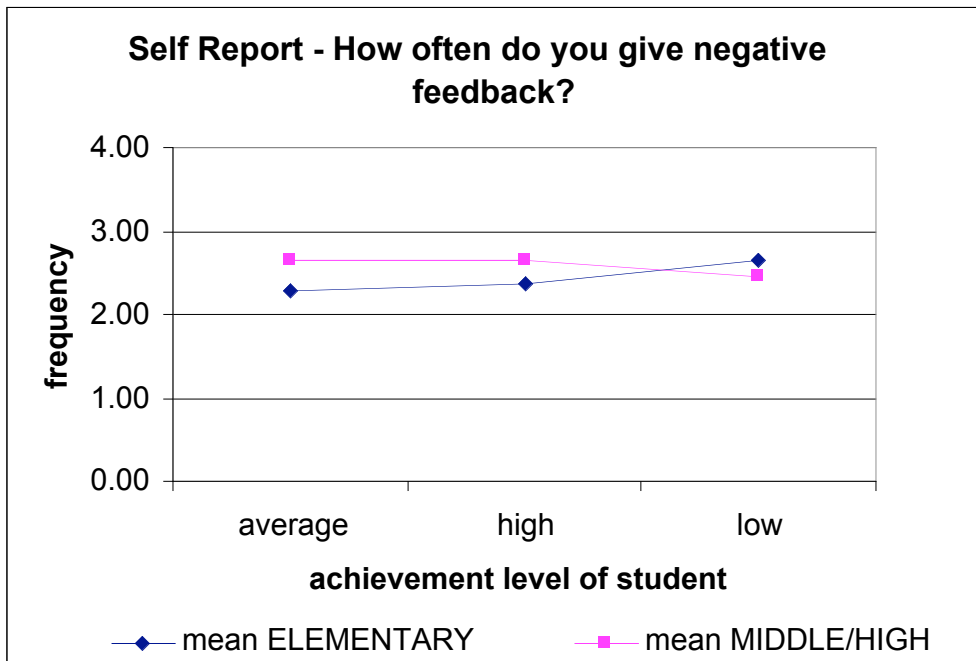


Figure 3: there is a significant interaction such that elementary school teachers report the average teacher gives more positive feedback to high achieving students than middle/high school teachers report the average teacher gives

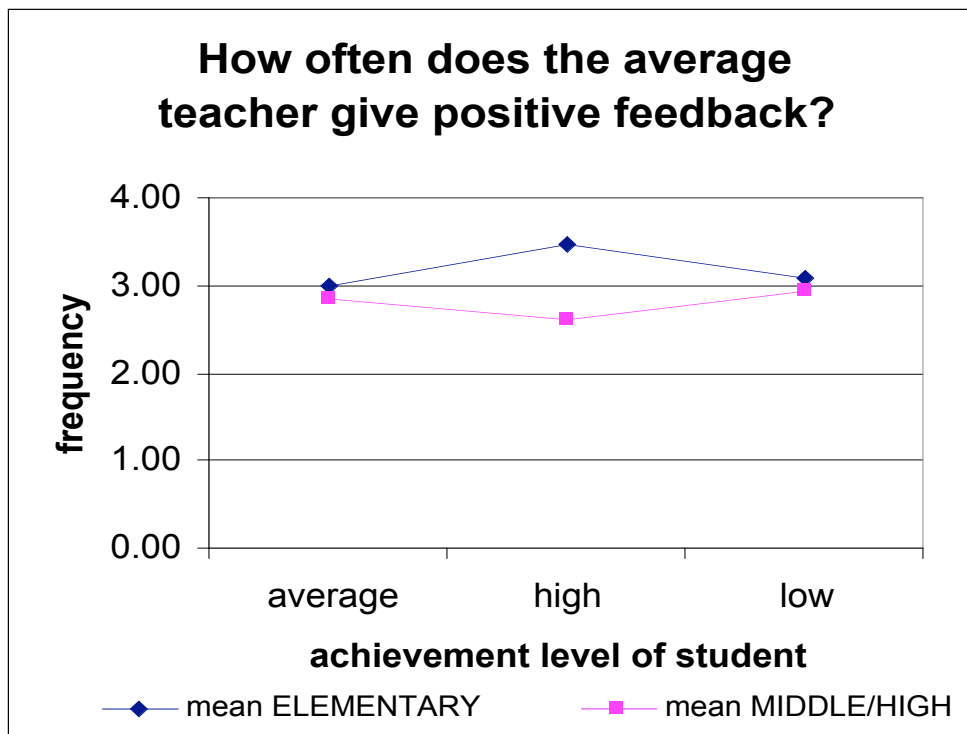


Figure 4: no significant differences between elementary and middle/high school teachers in ratings of average teacher negative feedback frequencies

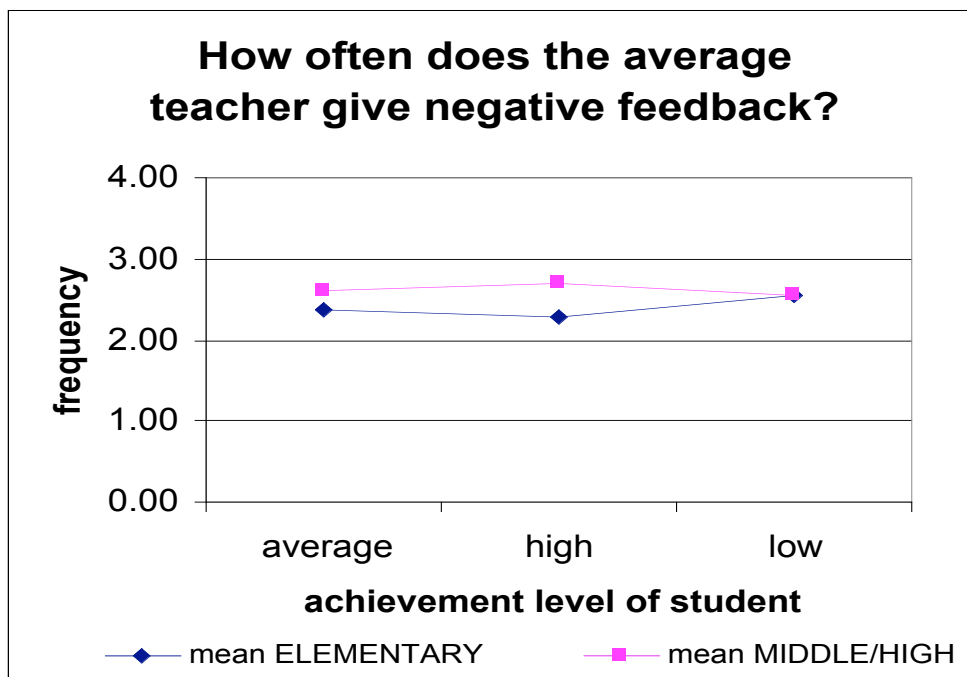


Figure 5: no significant differences between elementary and middle/high school teachers in ideal ratings of positive feedback frequencies

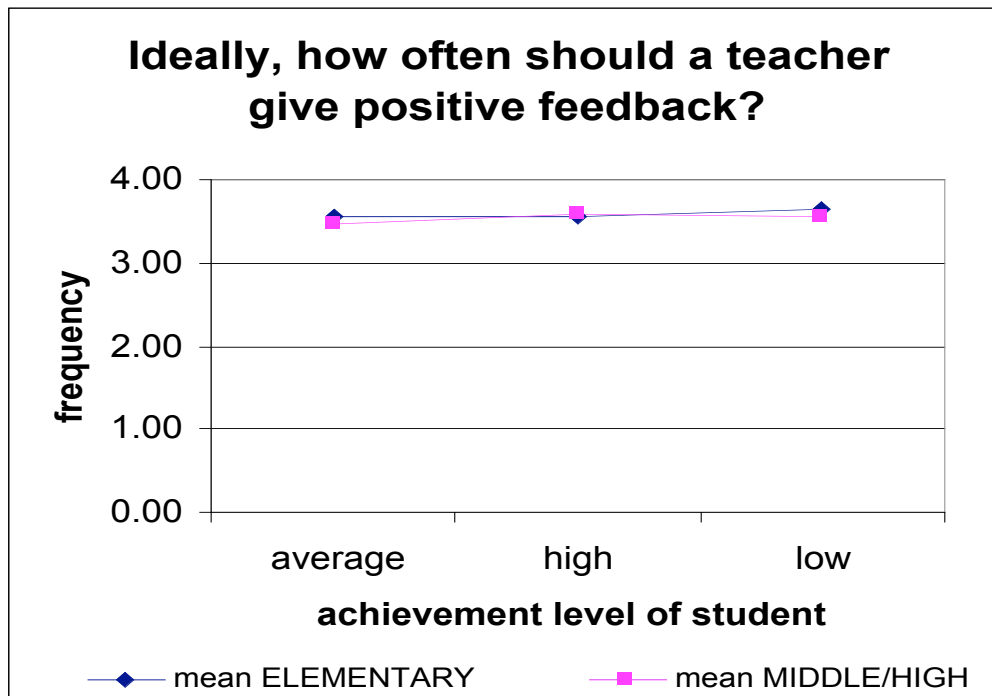
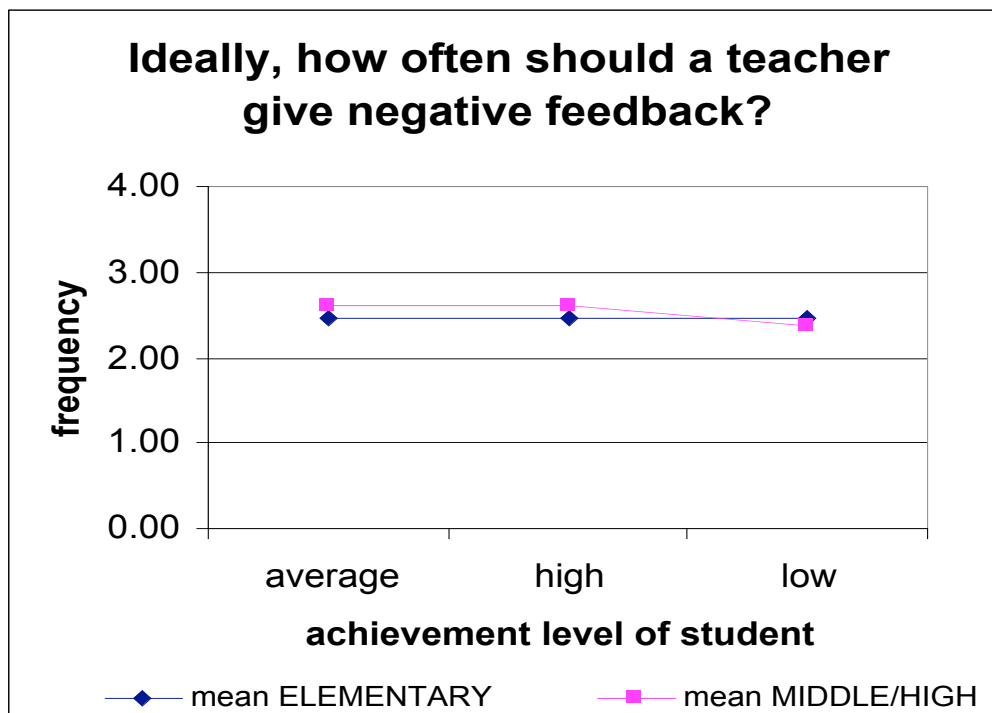


Figure 6: no significant differences between elementary and middle/high school teachers in ideal ratings of positive feedback frequencies



Figures 7, 8, & 9: Self-report and ideal frequencies are greater for positive than negative feedback in both student age groups; elementary school teachers also rate the average teacher as giving more positive feedback than negative feedback; frequencies do not differ significantly for average teacher in middle/high school teacher ratings

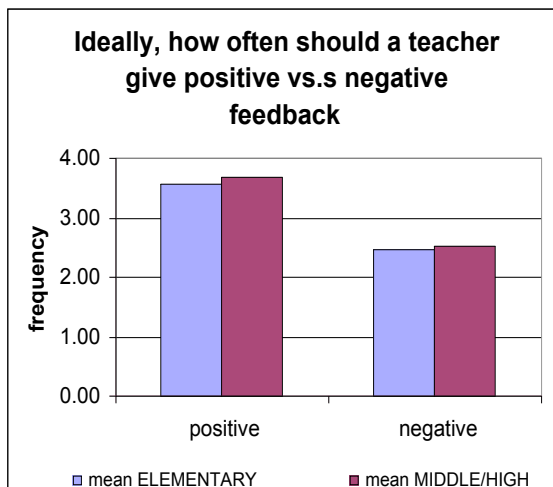
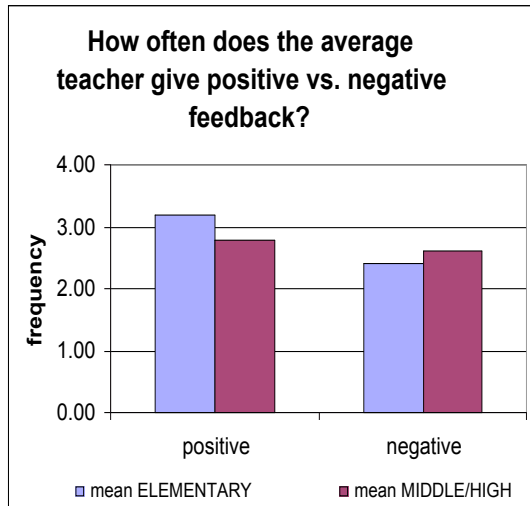
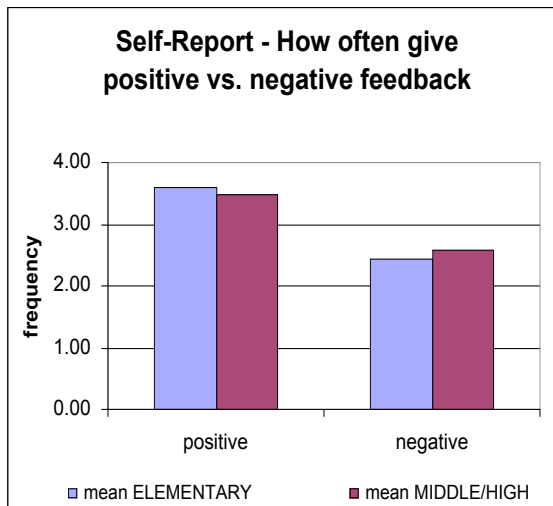


Figure 10: Evidence of self-bias; in both student age groups, teachers' self-reports matched reported ideals but reported the average teacher gives significantly less positive feedback than is ideal





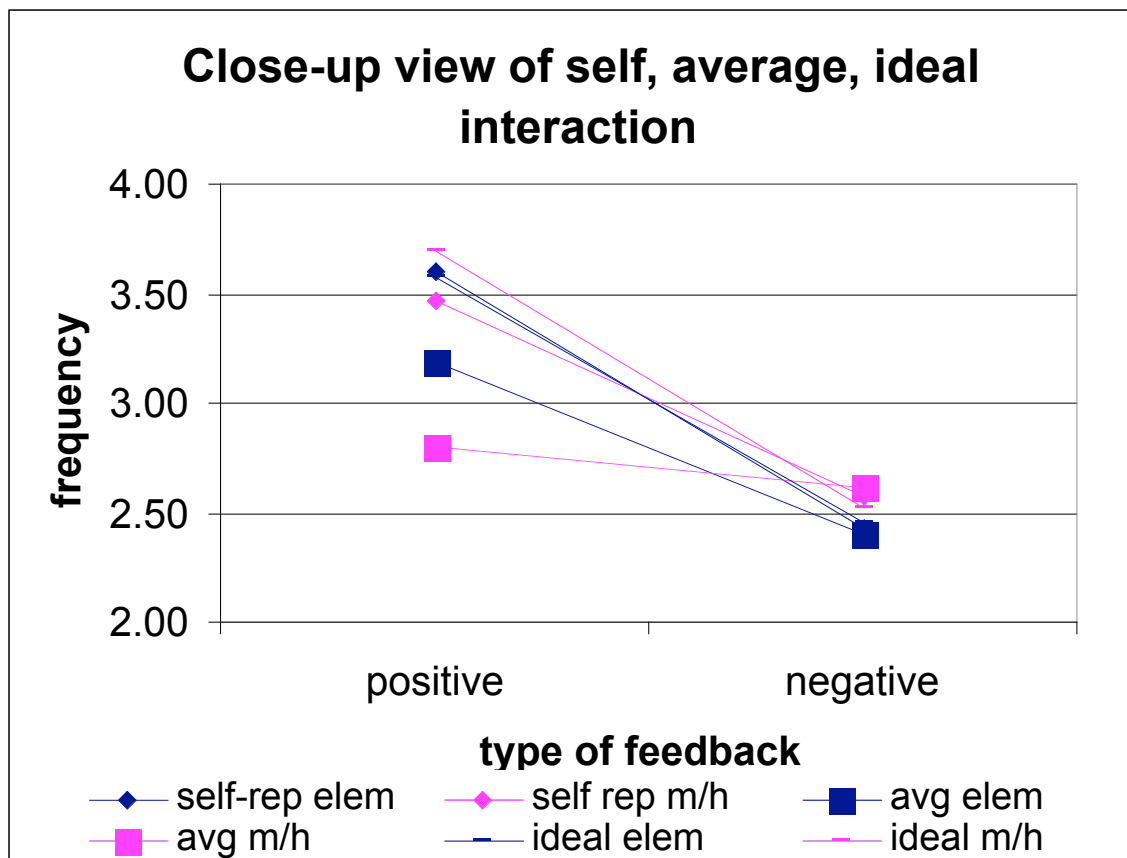


Figure 11: Elementary and middle/high school teachers rate positive feedback as more beneficial to student motivation than understanding. Elementary school teachers also rate positive feedback as more beneficial to student performance than understanding. Middle/high school teachers rate positive feedback as more beneficial to student motivation than performance.

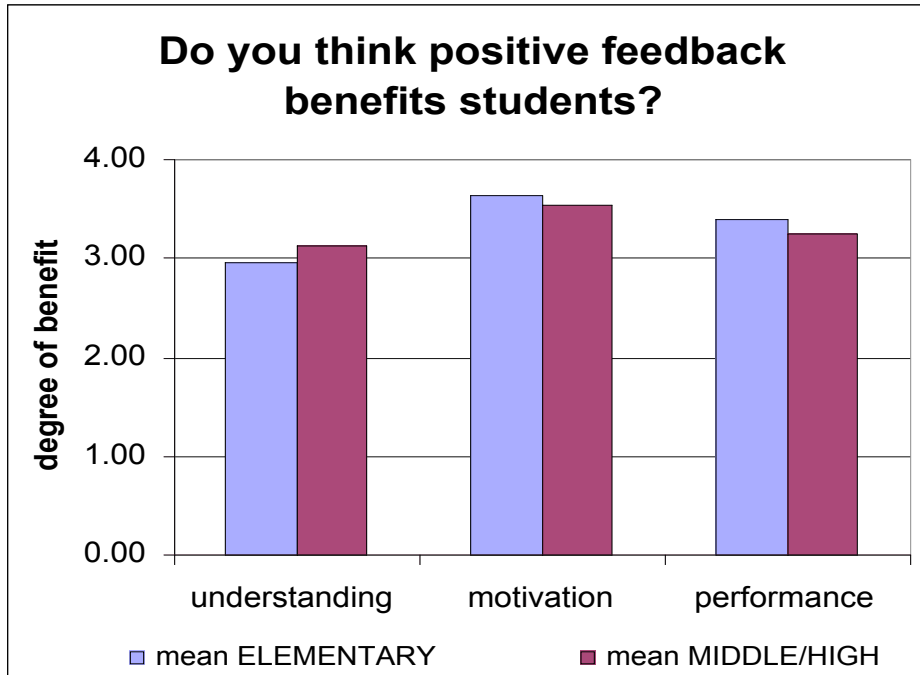


Figure 12: No significant differences between types of benefits or student-age groups

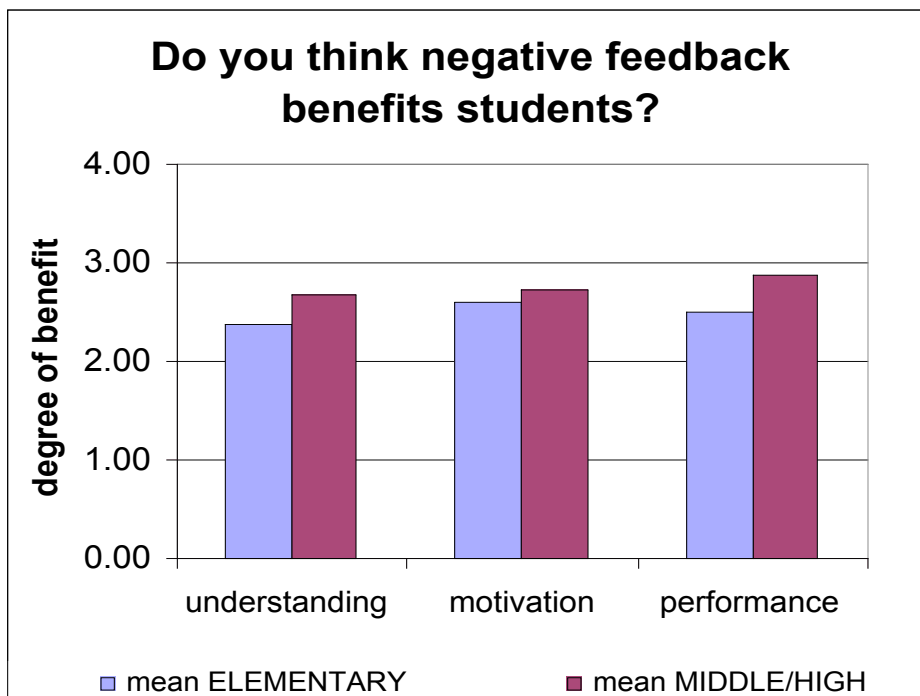


Table 1: Breakdown of best and worst choices for emotions to display in specific achievement situation, most appropriate type of feedback to give (all responses pooled, no sig. differences between student-age groups)

	Succeed		fail	
	easy	Difficult	easy	difficult
AVERAGE	best: joy, excitement worst: anger GENERAL PRAISE	best: joy, excitement worst: anger PRAISE EFFORT	best: disappointment, surprise worst: joy/excitement GENERAL CRITICISM	best: disappointment, no emotion worst: anger PRAISE EFFORT
HIGH	best: joy, no emotion worst: anger GENERAL PRAISE	best: excitement, joy worst: anger GENERAL PRAISE	best: surprise, disappointment worst: joy GENERAL CRITICISM	best: surprise, disappointment worst: anger SYMPATHY/UNDERSTANDING
LOW	best: joy, excitement worst: anger GENERAL PRAISE	best: excitement/joy worst: anger PRAISE ABILITY	best: disappointment, surprise worst: anger GENERAL CRITICISM	best: disappointment, no emotion worst: anger SYMPATHY/UNDERSTANDING