Abstract Title Page

Title: Getting Teachers Excited about Student Feedback: It's all in the Ask

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Abstract Body.

Background / Context:

Until recently, asking K-12 students – who spend hundreds of hours with their teachers annually – to weigh in on their teachers' performance was considered taboo. Many have questioned students' capacities to provide reliable, fair feedback on teaching quality. Recent research challenges those assumptions, showing that students' perceptions can be reliable (Kane & Staiger, 2012) and may be more accurate than teacher and principal ratings (Wilkerson, Manatt, Rogers & Maughanm, 2000). Consequently, numerous states now encourage the use of student perception surveys to assess K-12 teachers (MET Project, 2012; TEAMTN, 2015; The Colorado Education Initiative, 2015).

But passionate views often persist despite data to the contrary. Media outlets report that teacher unions staunchly oppose integrating student feedback in teacher evaluations (Cromidas, 2012; Decker, 2012). Despite the tension between the push from policy makers and the push back from some teacher groups, research tells us little regarding how teachers' views regarding the use of student perception surveys for evaluative and teaching improvement purposes.

Perhaps even more importantly, administrators have little way of knowing how entrenched or how malleable those feelings might be. If teachers consider student perception surveys to be unfair, not useful, and biased, they are unlikely to incorporate the feedback into their practice. However, if they can be nudged towards keeping an open-mind to student input, this type of feedback holds great promise given that it can be collected cheaply, quickly, and regularly.

For policy makers, the core of the tension between the promise of student perception surveys and teachers improving from student feedback centers on teacher beliefs. Teachers' beliefs affect the way they formulate goals and define teaching (Lumpe, Czerniak, Haney, & Beltyukova, 2012; Nespor, 1987; Pajares, 1992). These goals ultimately impact students' behavior, learning processes, and academic performance (Good, 1987; Hollingsworth, 1989). If teacher evaluations are to eventually drive improvements in pedagogy, then teachers must be open to learning from students. Given the recent research highlighting the potential of student perception surveys to improve teacher evaluations, and the anecdotal reports of some teachers' opposition to the measure, it is important to determine what teachers' beliefs are and if those beliefs are malleable. Motivated by the potential benefits of student perception surveys to improve teaching, the current research investigates the following research question: Can teachers' attitudes towards student perception surveys be improved so that teachers are more open to learning from the feedback of their students?

Shifting teacher beliefs

One way to shift teachers' beliefs about student feedback is to invoke cognitive dissonance about the topic. Cognitive dissonance theory states that people strive for internal consistency and feel discomfort when holding contradictory, or dissonant, beliefs at the same time. Thus, in an effort to reduce or eliminate the dissonance, an individual may change one or more of the beliefs involved in the dissonance (Festinger, 1962). Moreover, research has shown that the motivating influence of cognitive dissonance can promote changes in attitude and behavior (Dickerson, Thibodeau, Aronson, & Miller, 2003).

One intriguing application of this theory has emerged through the survey design literature. In particular, scholars have shown how different 'consistency effects' can bias people's responses on a questionnaire (Dillman, Smyth, & Christian, 2014). A classic example from around 1950 asked Americans a focal question regarding whether communist reporters

should be allowed to report on visits to the United States. During this era, this idea garners little endorsement (37% of respondents saying 'yes'). However, when part of the sample was first asked about U.S. reporters being allowed to report on the Soviet Union (an idea most everyone endorsed) and were *then* asked the key question, respondents' opinions shift dramatically (with 73% now agreeing that communist reporters should be allowed to report on the U.S.). Thus, this application of cognitive dissonance can produce shifts in beliefs.

In applying cognitive dissonance to teachers' views of perception surveys, a similar approach may be promising. While some teachers may disdain the idea of students evaluating them through perception surveys, most teachers likely feel well qualified to share their perceptions of their administrators' performance (Wiener & Lundy, 2013). By juxtaposing these dissonance arousing beliefs about perception surveys – student perceptions surveys are biased and worthless but teacher perception surveys are fair, useful, and an important source of feedback – substantial cognitive dissonance might be aroused. According to the theory, this dissonance should cause teachers to alter one of their beliefs to alleviate the dissonance (e.g., teacher perception surveys are an important source of feedback for administrators, therefore student perception surveys must have some merits too).

Purpose / Objective / Research Question / Focus of Study:

If inducing cognitive dissonance can bolster the extent to which teachers' remain open to student perception surveys, major implications follow for how schools introduce and contextualize the practice of using student feedback for teacher evaluations. The present research provides some initial data on what teachers' views are and investigates whether their attitudes might be shifted by altering the context in which they are asked their opinions. Specifically, do teachers view student perception surveys more favorably when their views of *teacher* perception surveys are first made salient? We investigated this question through an experimental design that used a "split ballot" survey that asked all teachers about their views of student perceptions surveys, but teachers in the treatment condition were first asked about their views of teacher perception surveys.

Setting:

The online survey was administered via Qualtrics.

Population / Participants / Subjects:

The study focused on teachers who taught K-12 in the year prior. Of the 407 teacher participants who clicked into the survey, 309 participants completed the intervention, and 279 participants completed the entire survey (i.e., including the demographic questions). Of those who completed the entire survey, 85% identified as white or Caucasian, 76% were female, and 32% have received national recognition for their teaching. The participants taught in 44 states and the District of Columbia, and teachers from all grades, K-12, were represented.[1] The average number of years teaching was 18 years, with a standard deviation for 8.2 years and a maximum of 39 years.

Intervention / Program / Practice:

The survey took 5-10 minutes to complete and was open for two weeks in June of 2015. Measures in this study included two measures to assess participants' support for student and teacher perception surveys.

All participants completed the support for student perception survey measure, which consisted of a 5-item scale ($\alpha = .86$) to assess teachers' views of using student perception

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[1] Approximately 50% of teachers reported having taught high school in the prior year, 24% taught middle school, and 26% taught elementary school.

surveys to evaluate teachers. This measure included questions such as, "Overall, to what extent is it a good idea to have teachers' performance reviews be partially based on student input?"

Only participants randomly assigned to the treatment condition completed the support for teacher perception survey measure, which consisted of a 5-item scale ($\alpha = .75$) that mirrored the student perception survey questions and assessed teachers' views of using teacher perception surveys to evaluate administrators. This measure included questions such as, "Overall, to what extent is it a good idea for administrators' evaluations to be based partially on teacher input?" Both measures were developed specifically for this study adhering to standard best practices in survey design (Dillman et al., 2014; Gehlbach, 2015) and can be found in the appendix. We also collected demographic data and information on the participants' teaching career at the end of the survey.

Research Design:

Participants were randomly assigned to the treatment and control groups by the Qualtrics platform after participants completed their consent forms. All participants were told that schools and districts across the country are considering using perception surveys as part of performance reviews for teachers, and researchers wanted to get teachers' input on this practice. They then answered the 5-item scale regarding their views about the use of student perception surveys to evaluate teachers. Before being asked about student perception surveys, participants in the treatment condition were first told that schools and districts across the country are considering using *teacher* perception surveys as part of performance reviews for administrators, and researchers wanted to get teachers' perspectives on this idea. They then answered the 5- item scale regarding their views about the use of teacher perception surveys to evaluate administrators.

Data Collection and Analysis:

We recruited participants through a snowball sampling approach. By working with the National Network of State Teachers of the Year (NNSTOY), we recruited a number of teachers via emails and posts on social media outlets. Teachers in this network were then encouraged to send an email with the survey link to their colleagues and asked to take the survey themselves. Participants were given the opportunity to win a $100 gift card in a lottery. This study also gave participants the opportunity to answer open-ended questions and to sign up for future focus groups to discuss student perception surveys as part of an ongoing, complementary study.

Before testing our hypothesis, we confirmed to see if the random assignment produced equivalent groups and found no differences between the treatment and control conditions on gender and national recognition for teaching.[2]

In accordance with the growing consensus that studies need to be pre-registered and hypotheses stated ahead of time (Cumming, 2014; Simmons, Nelson, & Simonsohn, 2011), we submitted a "Statement of Transparency" (Authors' citation), with one pre-specified hypothesis. Specifically, we anticipated that teachers in the treatment condition would report greater support for student perception surveys, as compared to those in the control condition. As described in the Statement of Transparency we test this hypothesis by fitting an OLS regression model, using whether a teacher was part of NNSTOY as a covariate in the analysis. Consistent with Cumming's (2014) recommendation, we will evaluate the hypothesis by reporting the 95% confidence intervals and the standardized β to provide an estimate of effect size. We also report the unstandardized B and p-values for those interested.

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[2] Control vs. treatment condition. Female: 73% vs. 79% ($\chi^2(1) = 1.03$, $p = 0.31$); NNSTOY teachers: 31% vs. 33% ($\chi^2(1) = 0.07$, $p = 0.79$).

Findings / Results:

Our results are congruent with our hypothesis. On average, teachers in the treatment condition report greater support for student perception surveys than teachers in the control condition when controlling for whether teachers have received national recognition for their teaching ($B = 0.23$, $SE = 0.10$, CI: 0.04, 0.42; $\beta = 0.14$; $p = 0.018$). The conditional means and 95% confidence intervals are depicted in Figure 1.

[INSERT FIGURE 1 HERE]

NNSTOY teachers were, on average, more supportive of student perception surveys than teachers who have not received national recognition ($B = 0.41$, $SE = 0.10$, CI: 0.21, 0.46; $\beta = 0.23$; $p < 0.001$). The results of our main hypothesis do not differ when not controlling for whether teachers have received national recognition for their teaching. Furthermore, the results hold when not including NNSTOY teachers.[3]

Unsurprisingly, teachers are more supportive of using teacher perception surveys to evaluate administrators than of using student perception surveys to evaluate teachers ($M = 3.61$ vs. 2.71, respectively).

Conclusions:

Through a modest intervention that leverages the power of cognitive dissonance, we find that teachers' attitudes towards student perception surveys are malleable. Specifically, how one asks teachers about this issue may nudge their opinions in a positive direction. Thus, it appears that the context for approaching evaluation matters. If everyone in a school is receiving feedback from one another, evaluation may become a cultural norm and teachers are likely to be more open to student perception surveys. This has big implications for how principals and districts may want to introduce the practice of student perception surveys.

While observed effect size is small, the intervention itself was small and extremely brief. Given Cumming's (2014) recommendation to interpret effect sizes relative to the context, detecting an effect size of more than 0.1 with an intervention that lasted less than two minutes is non-trivial, especially because the intervention might be strengthened fairly easily.

Given the potential for practical applications of these results, it is important to highlight two particular limitations of this research. First, teachers were recruited through a snowball sample of convenience, consisting of teachers who received national recognition for their teaching and their colleagues. It is possible that this sample is unrepresentative of the broader population of U.S. K-12 teachers in some way (e.g., they are more motivated to improve their teaching than average teachers) that might affect the results. However, given the experimental design and the parallel results for NNSTOY and non-NNSTOY teachers, it is hard to imagine a compelling scenario in which this issue undermines our main finding. Second, this study measures teachers' beliefs about student perception surveys in a low stakes survey. Teachers' opinions may vary greatly when the practice is actually being implemented at their school, particularly if stakes are attached to student perception surveys. Future field experiments should investigate whether introducing teacher perception surveys of their administrators impacts teachers' views of student perception surveys and their ability to learn from students' input.

This research highlights the novel application of cognitive dissonance as a motivating influence when attempting to modify teachers' beliefs in service of improving teaching. Practically – as schools increasingly utilize student perception surveys to evaluate teachers – this research underscores the potential of interventions to make teachers more amenable to receiving student feedback, which may make teacher evaluations more effective in improving teaching.

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[3] $B = 0.27$, $SE = 0.11$, CI: 0.04, 0.50; $\beta = 0.17$; $p = 0.02$

Appendix A. References

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Appendix B. Tables and Figures.

Figure 1

Figure 1: Mean differences and 95% confidence intervals for Support for Student Perception Surveys by Condition controlling for whether teachers have received national recognition for their teaching.
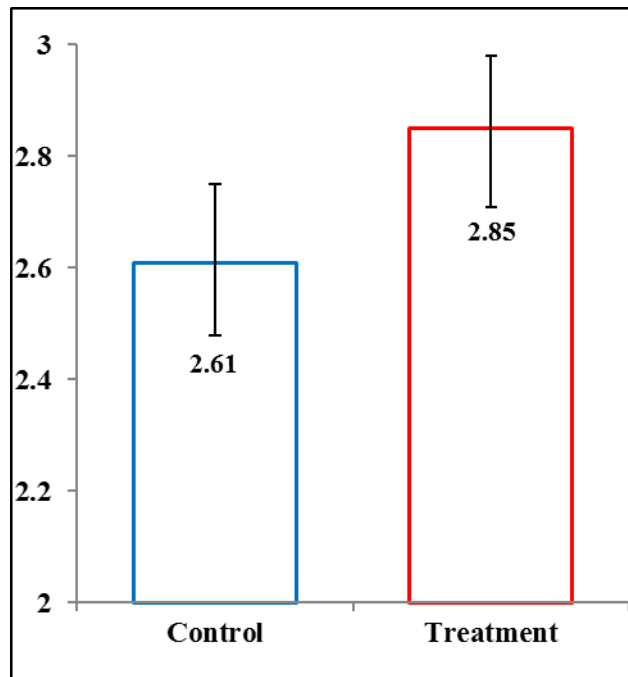
Measures

A list of the items in the two scales used in this study.

The 5-item support for student perception surveys scale:

How fair is it for student perception surveys to be one of the sources of information in assessing your teaching performance?	Not fair at all	Mildly fair	Moderately fair	Quite fair	Extremely fair
How useful is it for you to receive feedback on your teaching from your students?	Not at all useful	Mildly useful	Moderately useful	Quite useful	Extremely useful
How objectively can your students assess your teaching performance?	Not at all objectively	Mildly objectively	Moderately objectively	Quite objectively	Extremely objectively
How supportive do you think *other teachers* are of using student perception surveys to assess teaching performance?	Not at all supportive	Mildly supportive	Moderately supportive	Quite supportive	Extremely supportive
Overall, to what extent is it a good idea to have teachers' performance reviews be partially based on student input?	Not a good idea at all	A mildly good idea	A moderately good idea	Quite a good idea	An extremely good idea

The 5-item support for teacher perception surveys scale:

How objectively can teachers evaluate their administrators?	Not at all objectively	Mildly objectively	Moderately objectively	Quite objectively	Extremely objectively
How fair is it for teacher perception surveys to be one of the sources in assessing the performance of school administrators?	Not fair at all	Mildly fair	Moderately fair	Quite fair	Extremely fair
How supportive do you think *other teachers* are of using teacher perception surveys to assess administrators' performance?	Not at all supportive	Mildly supportive	Moderately supportive	Quite supportive	Extremely supportive
How useful is it for administrators to receive feedback on their job performance from their faculty?	Not at all useful	Mildly useful	Moderately useful	Quite useful	Extremely useful
Overall, to what extent is it a good idea for administrators' evaluations to be based partially on teacher input?	Not a good idea at all	A mildly good idea	A moderately good idea	Quite a good idea	An extremely good idea