

Trusting Your Teacher: Implications for Policy

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Abstract

Despite decades of research, predictors of teacher quality have been difficult to determine, leading to challenges in proposing policy. The current review suggests that students' trust in teachers may be an important, but understudied, part of teacher success. Indeed, even young children are surprisingly adept at deciding what type of a teacher to choose to learn new information. First, they prefer to learn from a teacher who has been an accurate source of information in the past. But they also take into account various social features of the teacher such as familiarity, emotional relationship, and social group membership. This research on children's trust in teachers can translate into practice and policies for improving student outcomes.

Keywords

trust, teacher quality, education, learning

Tweet

1. Traditional measures of a teacher's quality in the classroom may not be enough. Social features (familiarity, relationship, ethnicity) and credibility play a role in children's learning outcomes.
2. Teachers' success may depend on more than their knowledge base alone. Children's trust in teachers may be integral to children's learning outcomes. We need to study teacher trustworthiness as a potential mechanism for teacher quality.
3. Past measures of teachers' quality are insufficient for effective policy making. We are overlooking the role of social factors and children's trust in their teachers as measures of teacher quality.

Key Points

- Teachers are critical to children's classroom learning, because entire domains of knowledge are removed from firsthand experience and require instruction.
- Attributes such as experience, preservice training, and attainment of advanced degrees are not reliable measures of a teacher's quality, making policy decisions more difficult. Understanding the components of teacher quality matters to improving children's behavioral and life outcomes.
- Social factors (familiarity, relationship, ethnicity) and informational trustworthiness play integral roles in the components of teacher quality.
- By the start of kindergarten, children are already attending to both expertise and social cues about a

teacher's trustworthiness, which guide how children rely on their teacher in learning.

- The mechanisms related to teacher quality, specifically trust, need further research.
- Administrators need tools, both to identify teacher credibility and to help scaffold teacher trustworthiness, especially for White teachers working with non-White students.

Introduction

Education aims to provide children with opportunities to learn new information. Research on child development and education has highlighted one method: children's use of firsthand evidence to acquire new pieces of knowledge (Duckworth, 1972; Gopnik & Meltzoff, 1997; Piaget, 1952). For example, the "theory theory" (Gopnik & Meltzoff, 1997) suggests that children learn about the world as if they were little scientists: They first make a hypothesis about how something might work, they test out their prediction through firsthand experimentation, and then they revise their theory based on the results of their experiment. This approach is also heralded in educational research through what is called inquiry learning (Bruner, 1966; Dewey, 1933). Like the theory theory, inquiry learning highlights the child's active role

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in the learning process, by first formulating a hypothesis and then testing the hypothesis through observation or experimentation.

Consider the question of how rainbows form. An inquiry-learning approach might provide the child with hands-on objects such as prisms. By observing how light refracts through the prism, the child might gain insight into their original question. And indeed, inquiry teaching does yield greater learning, as compared with traditional instructional methods (Alfieri, Brooks, Aldrich, & Tenenbaum, 2011; Furtak, Seidel, Iverson, & Briggs, 2012; Minner, Levy, & Century, 2010). Yet this approach has an obvious limitation: It is constrained to children's use of evidence that they can actually see in front of them. Indeed, the presence of objects to manipulate might help children to make the analogy that light reflecting off of a glass prism is similar to light reflecting off of very small raindrops, but inquiry in and of itself does not necessarily lead the child to the right conclusion.

The current article focuses on the role of teachers in the learning process. In classroom learning, for entire domains of knowledge, learning solely through firsthand experience is either inefficient or unavailable. Under these circumstances, children must rely on information from others. Consider learning about the shape of the Earth. Although the child could observe the fact that the Earth is a sphere through space travel, this is clearly not the most efficient learning method (Campbell & Corriveau, 2018; Harris & Corriveau, 2014; Harris & Koenig, 2006). Learning via firsthand observation is next-to-impossible when considering the veracity of historical events: Because children cannot go back in time to determine what happened in the past, they must rely on oral and written information provided by others (Corriveau, Kim, Schwalen, & Harris, 2009; Harris & Corriveau, 2014). To understand such concepts, children must rely on other people, most often teachers.

Yet children do not learn equally well from all teachers. In research from both economics and psychology, teacher quality is associated with student success; children are sensitive to teacher effectiveness from a young age. Nevertheless, the factors associated with teacher quality are not well understood. Improving our understanding of teacher quality will require researchers to directly assess students' relationship with their teacher. Such trust in their teacher may help to explain the range of student-level outcomes and might focus on future policy. Next, we review some literature associated with teacher quality before turning to how children make decisions of trustworthiness. Some policy recommendations are gleaned from both bodies of work.

Teacher Quality

The quality of a child's teacher drives student learning outcomes. Hence, economists, educators, and policymakers ask what factors are associated with teacher quality. Unfortunately, researchers have found it distressingly

difficult to identify characteristics that predict teacher effectiveness.

To be clear, "teacher quality" means the teacher's particular contribution to student outcomes that is independent of other components of the educational process. In this sense, the teacher adds value to other resources available from self, school, family, peers, and so on. Value-Added Models (VAM) are the primary tool for estimating teacher quality within this frame. Although VAM differ (for a detailed review of VAM specifications, see Koedel, Mihaly, & Rockoff, 2015), a teacher's estimated value added is the average outcome of the students they instructed while holding constant other observed student and school characteristics, including the student's prior test score.

Teacher quality as measured by VAM varies widely, both within and across public schools (e.g., Chetty, Friedman, & Rockoff, 2014; Hanushek, 2011; Hanushek & Rivkin, 2010; Rockoff, 2004). Most estimates suggest that teacher quality effect is not small for standardized math and reading tests. Teacher quality also affects longer run and non-test score outcomes. Teacher quality affects behavioral outcomes, including absences, suspensions, course grades, and retention in the ninth grade (Jackson, 2018). Moreover, teacher VAM have substantial impacts on a student's later life outcomes, including the probability of attending college, the ranking of college attended, labor market earnings, and the probability of having a child during the teenage years (Chetty et al., 2014; Hanushek, Kain, O'Brien, & Rivkin, 2005). As teachers' substantial role in the education process suggests, policies and practices that improve teacher quality within public school systems could have large and lasting effects on student educational outcomes.

The clearest strategy for developing such policies requires first understanding the component factors that make one teacher more effective than another. However, researchers have had difficulty identifying characteristics that predict teaching effectiveness. Teacher experience does relate to effectiveness. Novice teachers are much less effective than more experienced teachers, up to a certain point. The benefit from teacher experience plateaus after 3 to 5 years in the classroom (Hanushek et al., 2005; Rockoff, 2004). However, teacher attributes commonly observed in administrative data sets explain little about teacher quality. For example, student outcomes are not meaningfully related to their teacher's prior training, as measured by their possession of an advanced degree (Boyd, Ariail, Williams, & Joeson, 2006; Clotfelter, Ladd, & Vigdor, 2010; Hanushek, 2011; Rockoff, 2004), certification status (Goldhaber & Brewer, 2000; Jepsen & Rivkin, 2002), or preservice coursework (Harris & Sass, 2011; von Hippel, Bellows, Osborne, Lincove, & Mills, 2016; Winters, Dixon, & Greene, 2011). Even more challenging, recent studies do show meaningful teacher quality improvements much later in a teacher's career (Harris & Sass, 2011; Papay & Kraft, 2015; Wiswall, 2013).

Although observed characteristics such as training or experience explain little of the variation in teacher quality, a teacher's classroom practice still has meaningful effects. Much of this evidence comes from the Measures of Effective Teaching (MET) project. In this project, researchers randomly assigned teachers to class rosters and collected detailed data of teacher practice videotaped lessons in six large urban school districts over a 2-year period. Teacher observation scores correlated with effective teaching (according to the Danielson framework [ref.]; Garrett & Steinberg, 2015), which mirrored other recent findings outside of the MET context. In addition, using data from MET, a teacher's domain-general skills are associated with effectiveness (Cheng & Zamarro, 2018). Taken together, research both from MET (Kane & Staiger, 2012) and a similar project conducted in Ecuador (Araujo, Carneiro, Cruz-Aguayo, & Schady, 2016) found that an index of measures of three domains of teacher behaviors—emotional support, classroom organization, and instructional support—has a large impact on student outcomes.

Such supportive behaviors might be associated with student success because they may serve as a proxy for the student–teacher relationship. Administrative data sets do not record sufficient proxies for a teacher's effectiveness in the classroom. Fully understanding teacher quality requires a more direct assessment of practices and the ability of teachers to develop strong relationships with their students to build an environment conducive to learning. The importance of the child viewing the teacher as a trusted source is also highlighted in the developmental literature from an early age. We expand upon this below.

Cues Children Use to Determine Trust in Teachers

Children do not trust information from all individuals equally. Indeed, by the time they are 3 or 4 years old, they are selective in determining from whom to learn (Harris, Koenig, Corriveau, & Jaswal, 2018). Thus, children enter kindergarten well prepared to make judgments about the credibility of their teacher. A lack of trust in one's teacher likely has enormous implications for learning outcomes. For example, if children do not view their teacher as credible, they might be less likely to seek guidance, resulting in many missed learning opportunities (Rotenberg, 2010)—especially given that a large spectrum of knowledge can only be gained through the testimony of a trusted adult. Thus, an understanding of how young children make trust-based decisions is timely and useful.

Much of the research focusing on how young children make decisions on whom to trust for information has employed the *selective learning paradigm*. This method presents children with two teachers who vary on a single dimension. For example, Teacher A might be consistently accurate when labeling familiar objects, whereas Teacher B

might be consistently inaccurate. To determine whether children use that dimension to make inferences about Teacher A and B's future trustworthiness, children are presented with a novel object and then invited to seek and accept information about that object from one of the two teachers. The extent to which children selectively rely on information from that teacher is measured.

Using this paradigm identifies two broad groups of cues that young children use when making decisions about a teacher's credibility. First, they appear to take into account epistemic information about the teacher (i.e., expertise, such as whether or not the teacher had been accurate about this domain of knowledge in the past; Corriveau & Harris, 2009; Corriveau & Kurkul, 2014; Harris, 2012; Mills, 2013; Sobel & Kushnir, 2013). They also take into account social information about the teacher (such as whether or not the teacher is a member of the child's social group; Corriveau, Fusaro, & Harris, 2009; Elashi & Mills, 2014; Kinzler, Corriveau, & Harris, 2011). We review each of these cues in more detail below.

Monitoring for Epistemic Information

Children monitor and track a teacher's history of providing high-quality, accurate information to their students. For example, in early studies focused on object labeling, 3- and 4-year-old children prefer to seek out and accept novel information from an informant who had previously labeled a familiar object correctly (e.g., labeling a ball "ball"), rather than an informant who had previously labeled a familiar object incorrectly (e.g., labeling a ball "shoe"; Birch, Vauthier, & Bloom, 2008; Koenig & Harris, 2005). This selective trust in a teacher appears to be long-lasting, with children still displaying a preference for the previously accurate teacher up to 1 week after initial accuracy exposure (Corriveau & Harris, 2009).

Providing consistently accurate information in response to a learner's query is challenging. For example, preschoolers ask on average 76 information-seeking questions *per hour*—or over one per minute (Chouinard, Harris, & Maratsos, 2007)! Thus, even the most well-intentioned teacher with 26 students in class is constantly bombarded with requests for information. Rather than taking an all-or-nothing approach to prior accuracy, young children probably selectively weigh the proportion of accurate over inaccurate responses. Indeed, young children are able to adopt a proportional strategy, preferring to learn from a teacher who gives mostly accurate, but sometimes inaccurate, responses over a teacher who gives mostly inaccurate, but sometimes accurate, responses (Pasquini, Corriveau, Koenig, & Harris, 2007).

Children also take into account information about a teacher that might be a marker of competence. One cue that they attend to by preschool is whether or not the information provided by the teacher is informative. For example, children

prefer to learn from an informant who provides a noncircular response to a question over one who provides a circular response (Corriveau & Kurkul, 2014). Circular explanations refer to statements that reiterate the information from the original question without adding any new information. By contrast, noncircular explanations provide new information beyond what the question states. For example, consider two responses to the question, “why does it rain?” One informant might say, “It rains because water falls from the sky and gets us wet,” whereas another informant might say, “It rains because the clouds fill with water and get too heavy.” Note neither explanation has semantic inaccuracies—the second one simply provides more information. Naturalistic data from parent–child conversations indicate that when children receive a circular response to their question, they are significantly more likely to drop the topic and refrain from asking a follow-up question (Kurkul & Corriveau, 2018). These data indicate that children are attuned to the quality of information provided by their teacher and use that information to inform learning decisions. By extension, children who receive repeated exposure to circular responses from their teacher might also be less likely to rely on that teacher in the future when they have a question.

Monitoring for Social Information

Unlike epistemic information (expertise), which is typically malleable and under the control of the teacher, social group information is typically fixed. Yet, children do monitor for and selectively prefer to learn from an individual who is a member of their social group (Corriveau, Fusaro, et al., 2009; Elashi & Mills, 2014; Kinzler et al., 2011; McDonald & Ma, 2016). For example, they prefer to learn from an informant who shares their racial group (Chen, Corriveau, & Harris, 2013), gender (Boseovski, Hughes, & Miller, 2016), or accent (Corriveau, Kinzler, & Harris, 2013) and wins group consensus (Corriveau, Fusaro, et al., 2009).

Assignment to a teacher of the child’s social group appears to also influence student learning in a classroom setting. Minority students achieve higher educational outcomes when exposed to teachers of their same race/ethnicity (Egalite, Kisida, & Winters, 2015; Gershenson, Hart, Hyman, Lindsay, & Papageorge, 2018; Lindsay & Hart, 2017). Female students often benefit from exposure to female teachers, especially in math (Muralidharan & Sheth, 2016; Winters, Haight, Swaim, & Pickering, 2013), although not always (see, for instance, Antecol, Eren, & Ozbeklik, 2014). The apparent benefit of assignment to a same-race/gender teacher may be due to the student’s comfort level with the instructor. In addition, teachers might unconsciously interact with students of a different race/ethnicity in ways that compromise the student’s trust. For example, non-Black teachers of Black students have lower expectations than do Black teachers instructing the same students (Gershenson, Holt, & Papageorge, 2016).

On one hand, a preference for learning from a member of one’s own social group makes sense because those individuals are most likely to provide information that will be useful in conforming to the group (Nielsen, 2012). But on the other hand, social information by definition should not hold any epistemic value: Teachers’ racial makeup should be completely uncorrelated with their ability to provide high-quality information in the classroom. And teachers’ accent should not provide any information about their accuracy. Such reliance on social group information as a cue to teacher accuracy may be especially challenging for students of color, given that the majority of the teaching profession (82%) is White (King, McIntosh, Bell-Ellwanger, 2016; Segall & Garrett, 2013). Thus, even before opening their mouths, some teachers might be at a disadvantage in student effectiveness.

Moreover, familiarity might help to buffer the effect of potentially misleading information. Children encountered their own classroom teacher and a classroom teacher from another building who taught the same grade and curriculum (Corriveau & Harris, 2009). As might be expected given children’s use of social group information, children selectively preferred to learn from their familiar teacher. However, children’s trust in that teacher was modified based on the accuracy of her information. Whereas younger preschoolers (3-year-olds) still preferred to learn from their teacher even after hearing her provide inaccurate information, older preschoolers (5-year-olds) displayed a selective preference for learning from the unfamiliar teacher who had previously been accurate. Given children’s ability to monitor for the proportional accuracy of an informant, this shift in learning might make good sense: Whereas 3-year-olds are evaluating based on a global assessment of their history with their teacher, older preschoolers are evaluating based on a more local assessment of accuracy.

To our knowledge, only one study attempted to explore children’s use of their emotional relationship with an adult when making learning decisions (Corriveau, Harris, et al., 2009). Children had a choice between learning from their mother and a stranger. At base, children preferred to learn from their mother. However, when their mother provided information about a picture that was inconsistent with the child’s visual experience, children’s willingness to abandon learning from their mother in favor of learning from the stranger was related to their emotional relationship with their mother as measured by their attachment style (via the Strange Situation) at 12 months. Children who were securely attached displayed greater flexibility and were more willing to learn from the informant who provided information that was consistent with the child’s experience. By contrast, children characterized as insecurely attached either struggled to switch their preference from learning from their mother even when she provided inaccurate information (insecure-resistant) or displayed no consistent preference for learning from either their mother or the stranger (insecure-avoidant). By implication, children’s relationship

with their teacher likely affects how they turn to her in learning situations.

Taken together, research on children's trust in adults suggests that even before children enter formal classroom settings, they are sensitive to both epistemic and social cues about their teacher, and they use those cues to make initial and long-lasting impressions of trustworthiness.

Teacher Quality and Trustworthiness: Next Steps for Policy and Practice

The empirical finding that teachers have a large impact on student learning is clear. By contrast, documenting teacher effectiveness highlights the challenges in identifying teacher quality. Therefore, to adopt better policy that promotes teacher effectiveness, additional tools should help identify the factors that characterize successful teachers. In what follows, we propose some immediate actions and areas for future research that build upon our knowledge of trust in child and adult relationships to further our understanding and guide the development of future policies.

Clearly, students benefit when exposed to teachers with similar demographic characteristics. These data justify efforts to substantially diversify the teaching profession. Notions of trust are likely to explain a large part of why students benefit from teachers of the same race/ethnicity or gender. One strategy for improving educational outcomes for minority students, then, is to employ more minority teachers.

Of course, a significant component of the added trust that children in minority subgroups have for adults with the same characteristic derives from historical and other community-based factors that are outside the scope of schools to fully remediate. Nevertheless, it seems likely, and some research suggests that at least part of the advantage of a non-White student being assigned to a non-White teacher derives from teacher expectations and behaviors that can be mitigated through preservice training and other professional development. Interventions and techniques for improving the ability of White teachers to earn the trust of their non-White students should be explored and their effectiveness thoroughly studied.

Having failed to find suitable proxies in administrative data sets, researchers have already begun to dissect the component parts of teacher quality. Prior literature provides strong reason to believe that trust within the student-teacher relationship could be an important component to consider. Teachers who systematically earn the trust of their students are also likely to be more effective instructors from whom students are willing and able to learn.

Linking the teacher quality findings with research on children's selective trust can benefit from descriptive analyses that look for a correlation between measures of teacher quality and trust. Unfortunately, the trust between students and teachers is not widely measured or simple to observe within a state or large public school system. One strategy for observing this

relation would be to measure trust of different teachers within a representative sample of schools and then correlate those measures with teacher quality. Another approach would be to first use VAM measures within a state or large school system to identify subsets of effective, ineffective, and average-quality teachers and then within those groups assess the trust between the teachers and their students.

Establishing a link between VAM and teacher trustworthiness would provide information regarding the mechanisms underlying teacher quality; nevertheless, assuming such a relation exists, policymakers need additional tools to leverage that knowledge. For example, principals and other administrators tasked with hiring and evaluating teachers not only require the knowledge that trustworthiness is an important attribute in a teacher's effectiveness but also need tools they can use to identify this attribute. Principals across the nation's school system cannot conduct detailed assessments of the teacher's credibility within each classroom. Rather, administrators would benefit from guidance on how to identify a teacher's trustworthiness based on a set of observable attributes and behaviors.

This review has highlighted a link between a child's trust in an adult and willingness to learn from that adult. However, an open question for future research is the extent to which an adult's trustworthiness is a fixed attribute or learned skill. Determining whether trustworthiness is malleable within teachers is essential for developing strong policy. If trustworthiness is malleable, then we can develop policy to provide these skills to teachers in their preservice training or further professional development. However, if trustworthiness is largely fixed within adults, then policymakers should adopt policies that seek to identify this characteristic within teachers prior to their hire and in the early stages of their career. We urge researchers to pursue this line of investigation, as we believe these findings may have significant implications for learning outcomes for future generations.

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