

Teacher quality as a primary factor in learner success

Key findings

Teacher quality is one of the primary factors in learner success:

1. Teacher quality is reflected strongly through instructional quality.

Research points to relationships between instructional quality and three broad classes of teacher characteristics:

- educational experiences and prior career experience
- **knowledge, habits, and dispositions, including content and pedagogical content knowledge, and self-efficacy; (all developed through PLD)**
- resources governed by the institutions teachers work in, including curriculum materials and pacing guides, test preparation practices, class size, and the distribution of students into classrooms

2. Higher-quality teachers increase the level of students' cognitive engagement in classes, motivate learners to a higher degree, and increase achievement levels of students.

Instructional quality has been described as a mediating process between teacher characteristics and student outcomes, for example, student achievement and motivation (Kunter, Klusmann, et al., 2013; Rimm-Kaufman & Hamre, 2010; Seidel & Shavelson, 2007).

Teachers who have higher self-efficacy have higher student achievement rates. How do teachers develop self-efficacy? By engaging in professional development.

“Which education policies can best support teacher self-efficacy? Results from TALIS 2013 have shown that the level of self-efficacy among teachers in a country is highly correlated with teachers' participation rates in professional development.” (OECD, 2016, p. 61)¹

Below we have referenced and summarised a range of relevant papers.

For more references regarding the role of educator professional development in learner success, see the reference list of the [ALNACC Capability Building Model](#).

¹ Noémie Le Donné, Pablo Fraser and Guillaume Bousquet, (2016) Teaching strategies for instructional quality: Insights from the TALIS-PISA link data OECD. Education Working Paper No. 148

1. **Hattie, J. (2009). Visible learning: A synthesis of over 800 meta-analyses relating to achievement. London, England: Routledge.**

Summary: This research demonstrates that teacher quality is the most important in-school factor for student achievement and motivation—and thus their educational attainment. Teacher quality includes: the ability of the teacher to cultivate positive teacher-student relationships, the quality of pedagogical knowledge (instructional practice), and subject matter knowledge.

Note for chapter 8: The major messages in this chapter are the importance of learning intentions, success criteria, a classroom environment that not only tolerates but welcomes errors, attention to the challenge of the task, the presence of feedback to reduce the gaps, and a sense of satisfaction and further engagement and perseverance to succeed in the tasks of learning.

Conclusion from chapter 9: “It is also clear that, yet again, it is the differences in the teachers that make the difference in student learning” (p.236)

2. **Steven G. Rivkin, Eric A. Hanushek, John F. Kain (2005). Teachers, Schools, and Academic Achievement**

Summary: This paper demonstrated that teacher quality has powerful effects on maths and reading achievement.

Abstract: This paper disentangles the impact of schools and teachers in influencing achievement with special attention given to the potential problems of omitted or mismeasured variables and of student and school selection. Unique matched panel data from the UTD Texas Schools Project permit the identification of teacher quality based on student performance, along with the impact of specific, measured components of teachers and schools. Semiparametric lower-bound estimates of the variance in teacher quality based entirely on within-school heterogeneity indicate that teachers have powerful effects on reading and mathematics achievement, though little of the variation in teacher quality is explained by observable characteristics such as education or experience. The results suggest that the effects of a costly ten-student reduction in class size are smaller than the benefit of moving one standard deviation up the teacher quality distribution, highlighting the importance of teacher effectiveness in the determination of school quality.

3. Measures of Effective Teaching Project (2013). Ensuring fair and reliable measures of effective teaching: Culminating findings from the MET project's three-year study. Policy and Practice Brief. Seattle, WA: Bill and Melinda Gates Foundation.

Summary: The research findings show that teachers with greater content knowledge had higher-quality teaching and resulted in higher student engagement and performance.

Abstract: The Measures of Effective Teaching (MET) project, a three-year study designed to determine how to best identify and promote great teaching, today released its third and final research report. The project has demonstrated that it is possible to identify great teaching by combining three types of measures: classroom observations, student surveys, and student achievement gains. The findings will be useful to school districts working to implement new development and evaluation systems for teachers. Such systems should not only identify great teaching, but also provide the feedback teachers need to improve their practice and serve as the basis for more targeted professional development.

4. Resources for Teaching: Examining personal and institutional predictors of high-quality instruction. Heather C. Hill, David Blazar, Kathleen Lynch (2015).

Summary: This paper shows that content knowledge, resources (and how to use them), and district context moderately predicted instructional quality.

Abstract: Policymakers and researchers have for many years advocated disparate approaches to ensuring teachers deliver high-quality instruction, including requiring that teachers complete specific training requirements, possess a minimum level of content knowledge, and use curriculum materials and professional development resources available from schools and districts. In this paper, we investigate the extent to which these factors, which we conceptualize as resources for teaching, predict instructional quality in upper elementary mathematics classrooms. Results show that teachers' mathematical knowledge and their district context explained a moderate share of the variation in mathematics-specific teaching dimensions; other factors, such as teacher experience, preparation, non-instructional work hours, and measures of the school environment, explained very little variation in any dimension.

5. Bau, Natalie, and Jishnu Das. 2020. "Teacher Value Added in a Low-Income Country." *American Economic Journal: Economic Policy*, 12 (1): 62-96.

Summary: Research findings indicate that effective teachers had increased student learning outcomes substantially.

Abstract: Using data from Pakistan, we show that existing methods produce unbiased and reliable estimates of teacher value added (TVA) despite significant differences in context. Although effective teachers increase learning substantially, observed teacher characteristics account for less than 5 percent of the variation in TVA. The first two years of tenure and content knowledge correlate with TVA in our sample. Wages for public sector teachers do not correlate with TVA, although they do in the private sector. Finally, teachers newly entering on temporary contracts with 35 percent lower wages have similar distributions of TVA to the permanent teaching workforce.

6. Vorhaus, J., Litster, J., Frearson, M., & Johnson, S. (2011). Review of research and evaluation on improving adult literacy and numeracy skills. London: Department of Business, Innovation and Skills.

Summary: “Teachers of adult basic skills need to have both good generic teaching skills and good subject specific teaching skills. Effective practice in literacy occurs where teachers build on learners’ experience, encourage fluent oral reading, use reciprocal teaching and explicit comprehension strategies and adequate time is allowed for active reading in class. Effective practice in numeracy occurs where teachers build on knowledge learners already have and help them overcome their fear of maths, expose and treat misconceptions as a subject for discussion, promote reasoning and problem solving over ‘answer getting’, and make creative use of ICT. However, although much is known about what is effective in teaching and learning, these practices are often not observed in delivery” (p. 12)

Abstract: First, this review summarises findings of the research from the last decade in six fields identified by the Department for Business, Innovation and Skills (BIS) as critical to its forward planning: (1) the economic, personal and social returns to learning; (2) the quality and effectiveness of provision; (3) the number of learning hours needed for skills gain; (4) learner persistence; (5) the retention and loss of skills over time; (6) the literacy and numeracy skills that are needed. Second, this review assesses this evidence base in terms of its quality and robustness, identifying gaps and recommending ways in which the evidence base can be extended and improved. Thirdly, this review attempts to interpret the evidence base to suggest, where possible, how returns to ALN learning for individuals, employers and wider society might be increased through effective and cost-effective interventions.