

Unit 8: Instruction

Teaching is at the heart of education systems and is of central importance to determining how much children learn. However, there are multiple system-level components that directly shape teaching (as distinct from the teacher-level factors covered in Unit 7) and determine how effective it is. Core instructional components include curriculum standards, assessments, and instructional resources (i.e., textbooks, lesson plans, and teacher training or coaching). These components are often poorly aligned with each other, and often poorly aligned with children's learning levels.

Many education reform efforts seek to improve teaching by acting on a single instructional component. However, there is increasing evidence that this piecemeal approach is inadequate to improve learning outcomes. Instead, there is a need to examine and improve coherence across instructional components, and alignment between instructional components and children's learning levels and needs.

For example, the literature on overambitious curricula highlights the mismatch between curricula and children's learning levels in many contexts. This results in children who are left behind and unable to catchup, as the curriculum advances faster than their pace of learning. Conversely, many of the most promising examples of systems change that have increased learning at-scale have brought about greater coherence between instructional components.

This unit discusses tools to measure coherence between various instructional components (such as the Surveys of Enacted Curriculum). It also explores influential contemporary case studies that have successfully improved instructional coherence (i.e., 'Teaching at the Right Level' approaches and 'structured pedagogy' programmes), and compares and contrasts the distinct approaches these programmes take even as they pursue a similar goal.

After completing the unit, students should:

- Understand the concepts of instructional components and instructional coherence;
- Be able to provide diverse examples of instructional coherence, and interpret real-world case studies through the lens of instructional (in)coherence; and
- Be able to marshal theoretical and empirical evidence around the impact of overambitious curricula, and the importance of adapting instruction to childrens' learning levels.

Lectures

1. [Diagnosing \(in\)coherence: A focus on the system enablers for learning – Part 1](#) (Julius Atuhurra, RISE Programme, University of Oxford)
2. [Diagnosing \(in\)coherence: A focus on the system enablers for learning – Part 2](#) (Julius Atuhurra, RISE Programme, University of Oxford)
3. [Teaching at the Right Level: Helping tackle systems challenges and deliver results](#) (Rukmini Banerji, Pratham Education Foundation)

Required Readings

- Atuhurra, J. and Kaffenberger, M. 2020. System (In)Coherence: Quantifying the Alignment of Primary Education Curriculum Standards, Examinations, and Instruction in Two East African Countries. RISE Working Paper Series. 20/057. https://doi.org/10.35489/BSG-RISE-WP_2020/057
 - Blog [optional]: https://riseprogramme.org/blog/system_incoherence_curriculum
- Banerji, R., and Chavan, M. 2016. Improving literacy and math instruction at scale in India's primary schools: The case of Pratham's Read India program. *Journal of Educational Change*, 17(4), 453–475. <https://doi.org/10.1007/s10833-016-9285-5>
 - Blog: <https://riseprogramme.org/blog/introducing-aligns>
- Hwa, Y.-Y., Kaffenberger, M. and Silberstein, J. 2020. Aligning Levels of Instruction with Goals and the Needs of Students (ALIGNs): Varied Approaches, Common Principles. RISE Insight Series. 2020/022. https://doi.org/10.35489/BSG-RISE-RI_2020/022
- Piper, B., Destefano, J., Kinyanjui, E. M., and Ong'ele, S. 2018. Scaling up successfully: Lessons from Kenya's Tusome national literacy program. *Journal of Educational Change*, 19(3), 293–321. <https://doi.org/10.1007/s10833-018-9325-4>

Further Readings

- *Case Studies of Improved Instructional Coherence*
 - Banerjee, A., Banerji, R., Berry, J., Duflo, E., Kannan, H., Mukherji, S., Shotland, M., and Walton, M. 2017. From proof of concept to scalable policies: challenges and solutions, with an application. *Journal of Economic Perspectives* 31 (4): 73–102. <https://doi.org/10.1257/jep.31.4.73>
 - Crouch, L. 2020. Systems Implications for Core Instructional Support Lessons from Sobral (Brazil), Puebla (Mexico), and Kenya. *Research on Improving Systems of Education (RISE)*. https://doi.org/10.35489/BSG-RISE-RI_2020/020
 - Muralidharan, K., Singh, A. and Ganimian, A. J., 2019. Disrupting Education? Experimental Evidence on Technology-Aided Instruction in India, in: *American Economic Review*, Vol. 109:4, 1426-1460. <https://www.aeaweb.org/articles?id=10.1257/aer.20171112>
- *Overambitious curricula*
 - Pritchett, L. and Beatty, A. 2012. The Negative Consequences of Overambitious Curricula in Developing Countries (SSRN Scholarly Paper ID 2102726). Social Science Research Network. <https://papers.ssrn.com/abstract=2102726>
- *Pedagogical Production Function*
 - Kaffenberger, M. and Pritchett, L. 2021. A Structured Model of the Dynamics of Student Learning in Developing Countries, with Applications to Policy. *International Journal of Educational Development*. Volume 82, 2021, 102371. ISSN 0738-0593. <https://doi.org/10.1016/j.ijedudev.2021.102371>

- *Instructional incoherence and Covid learning loss*
 - Andrabi, T., Daniels, B., Das, J. 2020. Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005. RISE Working Paper Series. 20/039. https://doi.org/10.35489/BSG-RISE-WP_2020/039
 - Kaffenberger, M. 2021. Modeling the Long-Run Learning Impact of the COVID-19 Learning Shock: Actions to (More Than) Mitigate Loss. In: International Journal of Educational Development, Vol. 81. <https://doi.org/10.1016/j.ijedudev.2020.102326>

Supplementary Resources

- A collection of Daniel Willingham’s articles on cognitive science and classroom instruction. <http://www.danielwillingham.com/articles.html>
- Covid learning loss simulations. <https://riseprogramme.org/tools/simulating-learning>
- Science of Teaching: Improving foundational literacy and numeracy. <https://scienceofteaching.site/>
- The RISE Podcast: Nangamso Mtsatse on Helping Kids to Read for Meaning and Calculate with Confidence in South Africa. <https://riseprogramme.org/podcast/nangamso-mtsatse>
- Why Alignment for Foundational Skills Matters: Cognitive Science Insights and Real-World Implications. Webinar recording: <https://riseprogramme.org/events/why-alignment-foundational-skills-matters-cognitive-science-insights-and-real-world>