

# SCHOOLS2030 RESEARCH COHORT (2021–2023)

## SYNTHESIS OF FINDINGS AND RECOMMENDATIONS

### CORE FINDINGS

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Across the 2021–2023 projects, one finding cuts across every study, every country and every methodology:

- **There is no universal fix.** Local context is the condition for everything else working. What children know – and how they show it – depends on what they have been exposed to in their environment, not just what they have been taught.
- **What communities call “quality education” rarely matches the definitions written into national policy** – and reforms built on that mismatch tend to fail.
- **Approaches that work do so because they were built with the people they serve**, not designed elsewhere and imported.
- **This has direct implications for how systems design tools, define quality, build teacher capacity and measure what children know.** None of these can be done well from a distance.
- **The seven findings and recommendations that follow each reflect a dimension of this:** from how teachers are supported, to how learning is assessed, to how communities are involved. Context runs through all of them.

**In short: there is no universal fix. Local context is the condition for everything else working.**

### PROJECT-BY-PROJECT: KEY FINDINGS & RECOMMENDATIONS

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#### Catalysing locally-rooted education solutions – Pakistan & Kenya

##### PROJECT OVERVIEW

Mixed-methods research in 25 schools and 2 youth centres across Chitral and Gilgit (Pakistan) and coastal Kenya (Mombasa County). It examined how non-academic skills (collaboration,



self-awareness, problem solving, respect, etc.) relate to academic outcomes, and documented school-led holistic learning innovations.

## KEY FINDINGS

- **Non-academic learning is valued but inconsistently understood.** Parents, teachers and school leaders all see life skills as critical for future success, but define them differently, limiting coherent implementation.
- **Schools carry the burden, while home reinforcement is uneven.** Parents largely expect schools to teach non-academic skills, yet structured school–parent collaboration around holistic development remains rare.
- **Inequality and culture shape who accesses holistic learning.** Socio-economic marginalisation and gender norms strongly influence children's opportunities to develop non-academic skills, often disadvantaging girls.
- **Problem-solving supports academic success; collaboration less so.** Problem-solving is linked to stronger academic results, while collaboration showed a less direct relationship at the start of the project.
- **Teacher capacity, assessment gaps and budgets are binding constraints.** Limited teacher training, the absence of assessment frameworks and insufficient school funding keep non-academic learning marginal.
- **Digital literacy and social-emotional skills showed measurable gains.** Digital literacy improved in both countries and social-emotional skills showed statistically significant gains across the project period.

## KEY RECOMMENDATIONS

- **Create a shared, context-sensitive framework for non-academic skills.** Agree on clear, locally grounded definitions that align teachers, parents and policymakers around what holistic learning entails.
- **Invest in teacher training and coaching for holistic learning.** Treat non-academic skills as core teaching competencies, supported through pre-service training, in-service coaching and peer learning.
- **Strengthen school–parent–community partnerships.** Actively involve parents and community actors in reinforcing life skills, moving beyond schools as the sole site of holistic learning.
- **Make non-academic learning visible through assessment.** Introduce simple, practical tools to track non-academic skills at school level, increasing legitimacy and instructional focus.



- **Resource holistic learning deliberately.** Allocate dedicated budgets, materials and incentives so schools can move from intention to implementation.

## Design Thinking & Play-Based Learning – Tanzania

### PROJECT OVERVIEW

Right To Play, University of Notre Dame and University of Dar es Salaam worked with schools in four districts (Temeke, Lindi, Tarime and Serengeti) to compare 'business as usual' teaching with Human-Centred Design and Play-Based Learning (HCD/PBL) approaches. A contextualised SEL tool was co-created with local stakeholders.

### KEY FINDINGS

- **Learner-centred pedagogies improved classroom practice.** Teachers in HCD/PBL schools were more likely to acknowledge student effort, maintain a friendly tone, create a positive climate and encourage exploration.
- **Holistic skills were higher where learner-centred pedagogies were in use.** There was a statistically significant positive link between learner-centred pedagogies and students' holistic skills development.
- **Reading fluency improved – but comprehension lagged.** HCD/PBL schools had a higher proportion of children meeting fluency benchmarks, but comprehension gains were less consistent.
- **Inclusive benefits for learners with differences.** There were no statistically significant differences in literacy or SEL performance between students with and without self-declared learning differences.
- **Co-created assessment tools are powerful.** The contextualised SEL tool, built with local stakeholders and measuring locally prioritised domains, proved usable and insightful.

### KEY RECOMMENDATIONS

- **Scale learner-centred, play-based approaches in policy.** Embed HCD and PBL approaches into national teacher training standards, in-service professional development and inspection frameworks.
- **Shift literacy focus from decoding to deep understanding.** Use the fluency–comprehension gap as a system signal: invest in teaching strategies, materials and assessments that explicitly build inference and comprehension.



- **Systematise SEL measurement.** Use the Tanzanian SEL tool as a model for other contexts, ensuring SEL data feeds into school improvement conversations rather than remaining a standalone project metric.
- **Strengthen student agency and relevance.** Better connect content to learners' lives and increase opportunities for student choice, peer collaboration and leadership.
- **Position HCD/PBL as equity tools.** Highlight the evidence that these pedagogies support learners with diverse needs, and target them to schools and districts with higher concentrations of disadvantaged learners.
- **Invest in print-rich classroom environments.** The study found that 55% of observed classrooms had no print materials displayed. Strengthening classroom print resources can reinforce literacy and create a richer learning environment.

## Stakeholder perspectives on quality – Kyrgyzstan & Tajikistan

### PROJECT OVERVIEW

Researchers from Nazarbayev University and OISE/University of Toronto explored how teachers, students, school leaders and parents in 15 schools across the Chui, Naryn and Osh regions of Kyrgyzstan and in Tajikistan understand and experience quality education in the context of the Schools2030 initiative.

### KEY FINDINGS

- **Quality is inherently holistic in local discourse.** Stakeholders describe quality as a blend of academic learning and social-moral upbringing reflecting long-standing Central Asian traditions.
- **System reforms and lived realities are misaligned.** Competency-based reforms exist on paper, but under-resourcing, large classes and limited teacher preparation make it hard to realise these ambitions in practice.
- **There are deep concerns about learning outcomes.** National and international assessments (including PISA) show extremely low proficiency levels in reading, maths and science, with most 15-year-olds performing below minimum standards.
- **Stakeholders want voice in defining and improving quality.** School leaders, teachers, parents and students emphasise that policies often ignore their perspectives, and that reforms are more likely to work when communities are genuinely consulted.
- **Holistic practices already exist – but are fragile.** The study documents classroom practices that nurture ethical reasoning, cooperation and community engagement, yet these are vulnerable to exam pressures and resource constraints.



- **Schools2030 participation is associated with better perceptions of quality.** Students in Schools2030 schools had more positive perceptions of education quality across all dimensions.
- **Language of instruction and teacher resourcing matter for equity.** Kyrgyz-medium schools had more positive quality perceptions than Russian-medium schools across all stakeholder groups.
- **Students see skills gaps that adults miss.** Students rated their own skills development lower than parents and teachers did. Financial literacy was rated lowest across all three groups.

### KEY RECOMMENDATIONS

- **Co-create national definitions of quality.** Use structured consultations with teachers, students, parents and communities to ensure national quality frameworks reflect local values around ethical, social and academic development.
- **Align assessments with holistic goals.** Complement high-stakes exams with tools that capture competencies such as collaboration, problem-solving and ethical reasoning, so schools are not pushed to prioritise narrow outcomes.
- **Invest in teacher preparation for competency-based teaching.** Provide practical support on active learning, formative assessment and inclusive pedagogy, not just policy directives.
- **Protect and scale promising classroom practices.** Identify, document and share the culturally grounded holistic practices already happening in schools – treating them as assets to be scaled, not exceptions.
- **Use research evidence to re-balance policy design.** Encourage ministries and donors to treat stakeholder evidence as a primary input for reform, rather than as 'feedback' late in the process.

## The Development of Picture Comprehension – Kenya

### PROJECT OVERVIEW

University of California, Berkeley researchers worked with pre-primary children at twelve Schools2030 schools across five sub-counties of Mombasa to examine how early experience with pictures relates to picture comprehension, and what this means for the validity of picture-based learning materials and assessments.



## KEY FINDINGS

- **Picture comprehension varies substantially across contexts.** Children in Mombasa performed better on vocabulary tests using real objects than the same tests using pictures, whereas US children showed no such difference.
- **Overall picture exposure did not predict performance across the whole sample.** Children with more picture experience at home did not perform any better on the picture-based vocabulary task than children with less exposure.
- **The gap was larger for familiar words.** The object-based advantage was driven by specific word types: children did notably better with objects than pictures on nouns and number words.
- **The picture gap is context-specific, not universal.** In a comparison study with US preschoolers, there was no difference between picture-based and object-based performance, suggesting the gap is culturally learned.
- **These differences matter for learning materials and assessments.** Cross-cultural variation in picture comprehension can affect both the effectiveness of picture-based learning materials and the validity of picture-based assessments.

## KEY RECOMMENDATIONS

- **Pre-test picture-based tools locally.** Before deploying assessments or materials that rely heavily on pictures, conduct local pilots to ensure children interpret images as intended.
- **Design visuals that are culturally and contextually grounded.** Use familiar objects, scenes and styles, developed with local educators and families, rather than generic or imported imagery.
- **Avoid over-reliance on pictures in high-stakes assessments.** Where picture comprehension is uncertain, combine pictures with oral, object-based or performance tasks to reduce difficulty unrelated to the construct being measured.
- **Increase equitable access to rich visual materials.** Where appropriate, expand access to picture books and visual media in ways that respect local norms, especially in settings where children currently have limited exposure.
- **Support further cross-cultural research.** Continue generating open-source tools and data on picture comprehension to guide international assessment and curriculum design.



## 'Data Must Speak' – Positive Deviance in Tanzania

### PROJECT OVERVIEW

UNICEF Innocenti's Data Must Speak (DMS) initiative analysed large-scale education datasets with the Ministry of Education in Tanzania and Zanzibar to identify 'positive deviant' schools – those achieving better-than-expected outcomes despite challenging conditions – and to understand what drives their performance.

### KEY FINDINGS

- **The system is severely resource-constrained.** The average pupil–teacher ratio at primary level is 73:1, with an estimated deficit of over 130,000 primary teachers.
- **Textbook access is low and unequal.** Both low availability and inequitable allocation of textbooks compound learning gaps across the system.
- **Maths performance is a particular concern.** National data show persistently low maths outcomes in primary education, even where language outcomes are less stark.
- **Gender differences in STEM outcomes persist.** There are apparent gender gaps in science and maths performance, though not in language subjects, signalling deeply rooted social norms.
- **Positive deviant schools exist – and matter.** High-performing schools share common practices: head teachers take an active role in supporting teaching, teachers share practices and give each other feedback, and schools maintain regular parent communication.

### KEY RECOMMENDATIONS

- **Use positive deviance as a core systems strategy.** Systematically identify and learn from better-than-expected schools, and integrate their practices into national guidance, training and peer-learning networks.
- **Tackle structural constraints head-on.** Develop a long-term teacher workforce plan, address deployment inequities and prioritise textbook provision to the most under-resourced schools.
- **Target maths and science with holistic strategies.** Pair curriculum and teacher development in STEM with interventions on self-efficacy and gender norms, especially for girls.
- **Link DMS insights with Schools2030 micro-innovations.** Use positive deviant practices as inspiration and evidence for HCD cycles in Schools2030 schools, closing the loop between national data and classroom-level innovation.



- **Make system data accessible to schools.** Share simplified dashboards with school leaders and communities so they can see their own performance, identify peers and co-design improvement strategies.
- **Prioritise children's socioemotional well-being.** Foster positive relationships through guidance counselling and student clubs, and make learning inclusive for children with disabilities and those at risk of marginalisation.

## CROSS-CUTTING FINDINGS – WHOLE COHORT

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The following findings cut across all five studies, reflecting patterns that transcend individual contexts.

- **Holistic learning is widely valued – but weakly built into systems.** Teachers, parents and communities across all research countries see social-emotional and life skills as critical. But inconsistent definitions and absent policy frameworks mean they rarely reach classrooms consistently.
- **Fluency gains don't automatically lead to deep learning.** Improvements in reading access and decoding often failed to translate into comprehension, inference or problem-solving. Basic skills are necessary – but not sufficient for the outcomes communities actually want.
- **Equity and gender norms shape who benefits from education.** Socio-economic marginalisation, gender norms and home literacy environments significantly influence who benefits from holistic learning – often disadvantaging girls in STEM and children from poorer households across the board. Reform cannot assume a neutral classroom.
- **Teachers are the most important factor – and the most under-supported.** Teacher beliefs, agency and capacity are decisive for whole-child learning. Yet training, time, incentives and retention are all insufficient. In Pakistan, one in four trained teachers was transferred away mid-study.
- **What gets measured gets prioritised – and SEL isn't being measured.** The absence of credible, context-sensitive tools for social-emotional learning limits its legitimacy in classrooms and its weight in policy decisions. High-stakes exams crowd out everything else.
- **Even under severe constraints, some schools outperform expectations.** Very high pupil–teacher ratios, teacher shortages and resource gaps are real – but not deterministic. 'Positive deviant' schools show that active head teacher leadership, peer feedback loops and regular parent communication make a measurable difference.



- **Schools can't nurture whole children alone – but community engagement is largely unstructured.** High-performing schools communicated regularly with parents. Yet structured school–parent collaboration around holistic development remains rare. Parents largely expect schools to take the lead – and schools lack the support to share it.
- **Context shapes what children know, what quality means and what tools work.** In Kenya, children scored lower on picture-based tests not because they knew less, but because picture comprehension itself is culturally learned. In Kyrgyzstan and Tajikistan, communities described quality in ways national reforms did not recognise. Approaches that work do so because they were built with the people they serve – not designed elsewhere and imported.

## CROSS-CUTTING RECOMMENDATIONS

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The following recommendations apply across all five studies and reflect the synthesis of the cohort as a whole.

- **Make holistic learning a system-level priority, not a project add-on.** Embed whole-child outcomes explicitly in national curricula, teacher standards, assessment frameworks and accountability systems.
- **Invest in teachers as people, not just as delivery mechanisms.** Strengthen pre-service and in-service training for holistic competencies. Keep trained teachers in post. Address the wellbeing and professional expectations of teachers in under-resourced environments – not just their skills.
- **Build and use contextualised SEL assessment tools.** Introduce practical tools that measure non-academic skills alongside academic outcomes. Co-create them with local stakeholders. Pilot before scale. Make the data feed school improvement – not just research reports.
- **Design reforms that treat inequality as a core issue, not a side note.** Recognise the influence of socio-economic conditions and gender norms on learning. Target learner-centred approaches to schools serving disadvantaged learners. Reform cannot assume a neutral classroom.
- **Build genuine school–community partnerships.** Support structured collaboration between schools, parents and communities to reinforce holistic learning beyond the classroom. Move beyond one-way communication toward shared ownership of children's development.



- **Learn systematically from what already works.** Identify, document and scale positive deviant practices within existing systems. Use national data to find better-than-expected schools and connect their practices to classroom-level improvement cycles.
- **Contextualise everything – tools, materials and definitions of quality.** Test assessment tools locally before deploying at scale. Design visuals and learning materials with local educators and families. Co-create definitions of quality with the communities they are meant to serve. Reforms built without community input are less likely to work – and less likely to last.

## CONCLUSION

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The single clearest message from this research cohort is that there is no universal fix. Local context – how communities define quality, what children have been exposed to, how teachers are supported, and how schools relate to the families they serve – is the condition for everything else working. Tools designed elsewhere misrepresent what children know. Reforms built without community input fail to take root. Teachers under-resourced and under-supported lower their ambitions for the children who need them most.

This does not mean the findings are merely local. The seven themes that emerge across these studies – the gap between valuing holistic learning and systematising it, the fluency–comprehension divide, the centrality of teacher agency, the absence of meaningful SEL assessment, the persistence of inequality, the untapped power of community partnerships, and the evidence that constraints need not be deterministic – resonate across every country in this cohort. What differs is how each **manifest**, and therefore how it must be addressed. For policymakers, funders, researchers and practitioners, the implication is the same: invest in context, not just content. Build with communities, not for them. And treat teachers not as delivery mechanisms, but as the professionals on whom whole-child learning ultimately depends.