K4D | Knowledge, evidence and learning for development

Effective learning strategies to improve basic education outcomes

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Question

Identify global evidence of effective priority strategies to improve basic education outcomes, especially for marginalised and highly disadvantaged children including in situations of emergency and conflict. Draw on evidence from interventions delivered in federal, resource-poor and/or conflict-affected contexts.

Contents

1. Overview

Improving basic education outcomes is a very broad research area. The time constraints of the helpdesk review directed focus on large-scale reviews of learning strategies in low- and middle-income countries. This was supplemented by rapid searching to see what research could be identified within the limitations of this report that focussed on outcomes on highly marginalised, conflict affected children, or those from federal states. Broader scope strategies to improve learning for other important marginalised groups for example, girls and indigenous populations, are also included.

Different systematic reviews emphasise different conclusions. Bashir et al. (2018) highlight a focus on teaching to improve learning. They recommend focus on teacher knowledge, teaching practice, and instructional time. Recommendations on teaching interventions include:

- Teacher training focus (Masino & Niño-Zarazúa, 2016; McEwan, 2015; Evans and Popova, 2015);
- Teacher performance incentives (Murnane & Ganimian, 2014; McEwan, 2015; Muralidharan, 2012);
- Tailoring teaching to student skills or 'teaching at the right level' (Evans and Popova, 2015; Banerjee, 2016), and
- Use of interactive teaching practices (Westbrook et al., 2013).

Snilstveit et al. (2016) found evidence on teacher-focussed interventions impact on learning to be limited. Classroom improvements combined with structured pedagogy made the greatest positive impact on learning. Materials and technology were found to be supportive but not sufficient alone to improve learning.

Alcott and Rose (2017) found wealth to be a strong determinant of learning disparities in India. A UNICEF report noted that one of the inequalities associated with teaching for the more marginalised is that higher-quality teachers tend to be concentrated in the schools attended by wealthier children (Chudgar & Luschei, 2013). Fair and transparent recruitment processes are required. Governments also need to recognise where teaching in marginalised areas requires greater compensation and support, with infrastructure and resources to make these areas more attractive.

Conclusions of the impact of community involvement and monitoring for accountability are mixed. A systematic review noted participatory management as a driver of improving learning quality in low-income countries (Masino & Niño-Zarazúa, 2016). However, programme design varies and local cultural factors and capacity affected outcomes. In Gambia it was found that local capacity, measured by adult literacy, had a large effect on whether school-based management improved learning (Blimpo & Evans, 2011). A review on the effects of monitoring on learning emphasised the need to train the local community to interpret monitoring results (Eddy-Spicer et al., 2016), and that for monitoring to improve learning, support for staff capacity was required. Murnane & Ganimian (2014) found that providing information on school quality had a greater impact on learning than more or better resources. In Malaysia, a high focus on results encouraged exclusion of the less able (Jelas & Mohd Ali, 2014). A single case study in Brazil found decentralised school management did not improve student achievement (Carnoy et al., 2008).

A report on Community Learning Centres in Nepal (Sharma, 2014) suggested good potential for learning outcomes, although more evidence is needed. Experience with 'Citizen Schools' in

Brazil noted the time commitment required in making community participation successful (Shepherd, 2014).

Evidence on effective strategies for improving learning for children in situations of conflict and emergency was not identified within the scope of this report. A rigourous evidence review confirms this (Burde et al., 2015). Education provision in these situations is a huge challenge, and the outcome of inclusion is a notable success in itself.

Education interventions for people living with disabilities have tended to focus on inclusion rather than learning. In many contexts there is still much work to be done on reducing stigma. This will support both learning and inclusion (Thompson, 2017). Teacher attitudes are found to be important for learner participation (Howgego et al., 2014). Teacher training is recommended to support this. Support such as eye glasses for the visually impaired can support learning (Glewwe et al., 2012).

2. Reviews on learning

A number of reviews were identified which investigated the impacts of educational interventions on learning in low- and middle-income countries. Some broad lessons emerge with some agreement between reviews, as well as some differences.

Bashir et al. (2018) draw lessons from Africa on 'what works' reviewing literature and analysing multiple datasets. The authors find teaching to be key and specifically identify three characteristics that positively correlate with student learning: 1) teacher knowledge; 2) teaching practice; and 3) instructional time. Teaching practices found to work include providing high quality instruction, the use of direct instruction, giving students feedback, setting homework, and engaging students with questions. The review draws on interventions evaluated as successful: greater teacher content knowledge and better pedagogical practices in Kenya and Malawi; better use of textbooks in Burkina Faso, Cote d'Ivoire (Ivory Coast) and Senegal; more pedagogical resources in Benin, Cameroon, Chad and Togo; better school facilities in Benin, Burkina Faso, Kenya and Malawi; and smaller classes in Burundi and Kenya. They also note school nutrition programmes as effective for increasing learning.

Snilstveit et al. (2016) synthesised evidence from 216 education programmes across 52 low- and middle-income countries. They concluded that programmes that improved the classroom environment with structured pedagogy made the largest and most consistent improvements in learning. Encouraging results were also found from remedial education strategies, additional instructional time and construction of new schools. Materials and technology was identified as supportive but not sufficient alone to improve learning. Programme design and implementation must be of a high standard. They found some small positive effects of teacher-focussed interventions, but limited evidence to draw strong conclusions. They found evidence of improved learning with community-based monitoring, however, school-based management showed mixed results.

Masino & Niño-Zarazúa (2016) conducted a rigorous systematic review resulting in the analysis of 38 studies to answer their research question: what works to improve the quality of student learning in developing countries? Three drivers of quality improvement were derived: 1) supply-side interventions (provision of resources, both human and material); 2) behaviour change incentives (teacher, student and household), and 3) participatory and community management strategies (decentralisation, knowledge diffusion, and management participation). The authors

recommend factoring in social norms and combining different drivers. Particularly, supply-side interventions should not be implemented without complementary community participation or behaviour change incentives.

McEwan (2015) reviewed 77 randomised experiments analysing intervention effects on learning in primary schools of developing countries. The author found no statistical evidence that monetary grants and deworming made a difference. Small positive effects were found from nutritional interventions, information dissemination strategies, and management improvements. Larger positive effects were found from ICT provision, teacher training, smaller classes, contract or volunteer teachers, student and teacher performance incentives, and instructional materials.

Murnane & Ganimian (2014) reviewed educational outcomes from 115 rigorous impact evaluations of education initiatives in 33 low- and middle-income countries. The positive effects of providing information on school quality were highlighted. They found that more or better resources do not improve achievement as they do not necessarily change teachers' instruction. They also recommend incentives for teachers to improve outcomes for students.

Evans & Popova (2015) discussed the divergent conclusions of six meta-analyses of strategies to improve learning in developing countries. The authors discussed the different sampling and classification methods undertaken in the reviews. Consistent among the reviews are the positive effects from pedagogical interventions that tailor teaching to student skills (often through ICT use); repeated teacher training programmes; and accountability improvements (including teacher performance incentives and contract teachers). There is agreement that health interventions do not impact on learning. Cost-reducing interventions also have low-effectiveness.

3. Teaching

A number of resources on teaching-focussed strategies emerged within this helpdesk review:

A rigorous DFID review of pedagogic practices in developing countries (Westbrook et al., 2013) found that student learning outcomes are better when teaching practices are interactive. Positive teacher attitudes towards their training and their students was positively associated with learning. Three strategies that supported interactive pedagogy were:

1) feedback, sustained attention, and inclusion;

2) safe and supportive learning environment; and

3) involving student background and experiences.

Effective teaching practices that support these strategies are: group discussions, learning materials beyond textbooks, two-way questioning, and use of local languages. Recommendations for teacher education and school curriculum include: peer support; needs-based professional development; support from head teachers; and aligning assessment with curriculum.

A large-scale study of teacher incentives in India found a large and significant impact on student learning outcomes (Muralidharan, 2012). The results suggest children received genuine human capital gains as opposed to information only 'taught to test'. Over the longer-term, individual

incentives were found to be more effective than group incentives. Further research in India looked at the importance of 'teaching at the right level' (Banerjee et al., 2016). The experiment aimed to address learning gaps, rather than follow an ambitious curriculum. Teaching according to level (following Pratham's approach[1] produced successful gains in language scores in the two models evaluated in Haryana and Uttar Pradesh).

A UNICEF report looked specifically at teaching and reaching marginalised children (Chudgar & Luschei, 2013), noting that higher-quality teachers tend to be concentrated in the schools attended by wealthier children. This is particularly a problem in developing countries. The report emphasised the need for transparent and fair recruitment processes, such as publishing the results of teacher assignment and transfers. Government recognition of the difficulties of teacher assignment in marginalised environments is necessary, so that they can be compensated accordingly. Adequate and consistent teacher training is also required to improve equality in teacher distribution and prepare teachers for working in classroom conditions particular to the context of the marginalisation. For female teachers safety concerns are crucial in difficult contexts. Government attention to local infrastructure and resources to make marginalised areas more attractive is recommended for sustainable teacher supply.

Another K4D helpdesk report focussing on learning for the marginalised looked at non-state education provision (Aslam, 2017). This report found evidence of certain types of non-state actors being able to achieve marginally better learning outcome than state school counterparts.

4. Community engagement and accountability

A randomised field experiment in the Gambia evaluated a comprehensive school-based management and capacity development programme called Whole School Development (Blimpo & Evans, 2011). The results were affected by local capacity: where adult literacy was high children's learning improved, but where adult literacy was low there was a small or negative effect.

A systematic review looking at evidence on the impacts of inspection, monitoring, and assessments on learning included 68 studies on low- and middle-income countries (Eddy-Spicer et al., 2016). Setting targets was found to improve learning outcomes only where support was provided to link the performance target with everyday teaching and learning. Outcomes were negative when the capacity of school staff was not considered. Monitoring can improve learning when there is consistent and clear feedback about accurate results, as well as training for the community to interpret results. The authors conclude that effective local school development planning needs to be allowed to learn from failure.

'Community Learning Centres' (CLC) have increased accessibility for learners in rural areas in Nepal. This includes basic education and literacy for all children, as well as non-formal education programmes for adults, farmer's schools and early childhood care. A case study suggests CLCs have good potential for improving learning outcomes (Sharma, 2014).

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[1] http://www.pratham.org/

'Citizen Schools' in Porto Allegre, Brazil, have participatory school councils (Shepherd, 2014). Primary schools were built in the most marginalised areas. Learning laboratories were established to support students with special needs. Specific reporting on learning was not described in the case study. It was recognised that significant amounts of time are required to establish councils, elect members and ensure participation. An earlier study of schools in Brazil with decentralised management found no evidence of improvement in achievements (Carnoy et al., 2008). Grade pass rates were similar, but averages were higher.

5. Situations of emergency and conflict

A rigourous review in 2015 by Burde et al. found an absence of robust evidence on what education strategies work for access, learning and wellbeing in crisis-affected countries. Some evidence suggests that community-based education and participatory monitoring improve achievement at primary school level. Some evidence suggests tailored teacher training and using mobiles and radio to deliver lesson plans in Pakistan, India, Tanzania and Somalia.

The literature suggests a focus more on inclusion and peace building rather than learning (Barakat et al., 2012). Understandably, there are often greater wellbeing priorities in these situations.

6. People living with disabilities

Traditionally there is a particular focus on inclusion and rights rather than learning for those living with disabilities. Attitudinal and institutional barriers must be overcome to support both access and inclusion (Thompson, 2017).

A study of inclusion policy and practice in Malaysia described a culture of elitism (Jelas & Mohd Ali, 2014). Parents want their children to go to high ranking schools, so schools are under pressure to produce high results. Exam focus means individual learner needs are not catered for. Children with special educational needs are not expected to compete and are therefore not fully included.

The HEART topic guide[2] on inclusive learning (Howgego et al., 2014) suggests some lessons. Teacher attitudes are found to be important for learner participation. In-service teacher education plays a key role in tackling stigma and encouraging inclusion. A number of toolkits relevant to inclusive learning have been produced.[3] Peer-to-peer approaches for students have been successful for self-esteem building, but impact on learning is unknown. The guide discusses itinerant teachers, resource rooms, and assistive devices and learning materials with little evidence on the effects on learning.

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[2] HEART was the health and education project which has now become part of K4D. The topic guide gathers resources and provides a synthesis of the key issues and debates as well as links to essential readings. http://www.heart-resources.org/topic/inclusive-learning/

[3] Eg. http://www.csie.org.uk/resources/inclusion-index-explained.shtml, http://unesdoc.unesco.org/images/0013/001351/135116e.pdf

Eye glasses for those with visual impairment have been found to increase test scores in primary school children in rural China, but social stigma and affordability discourage uptake (Glewwe et al., 2012).

7. References

Alcott, B., & Rose, P. (2017). Learning in India's primary schools: How do disparities widen across the grades? *International Journal of Educational Development*, *56*, 42-51. https://www.sciencedirect.com/science/article/pii/S0738059316303807

Aslam, M. (2017). *Non-state education provision; access and quality for the marginalised*. K4D Helpdesk Report. Brighton UK: IDS. https://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/13202/178%20non-state%20provision.pdf?sequence=1&isAllowed=y

Bakhshi, P., Kett, M., & Oliver, K. (2013). *What are the impacts of approaches to increase the accessibility to education for people with a disability across developed and developing countries and what is known about the cost-effectiveness of different approaches?* London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London. https://eppi.ioe.ac.uk/cms/Portals/0/PDF%20reviews%20and%20summaries/Education%20approaches%202013%20Bakhshi%20report.pdf?ver=2013-09-03-150231-427

Barakat, S., Connolly, D., Hardman, F., & Sundaram, V. (2013). The role of basic education in post-conflict recovery. *Comparative Education*, *49*(2), 124-142.

Bashir, S., Lockheed, M., Ninan, E., & Tan, J-P. (2018) *Facing Forward: Schooling for Learning in Africa.* International Bank for Reconstruction and Development / The World Bank https://openknowledge.worldbank.org/bitstream/handle/10986/29377/211260ov.pdf?sequence=2&isAllowed=y

Blimpo, M. P. & Evans, D. K. (2011). School-based management and educational outcomes: Lessons from a randomized field experiment. *Unpublished manuscript*. http://siteresources.worldbank.org/EDUCATION/Resources/Blimpo-Evans_WSD-2012-01-12.pdf

Burde, D., Guven, O., Kelcey, J., Lahmann, H. & Al-Abaddi, K. (2015). What works to promote children's educational access, quality of learning, and wellbeing in crisis-affected contexts. http://s3.amazonaws.com/inee-assets/resources/Education-emergencies-rigorous-review-2015-10.pdf

Carnoy, M., Gove, A. K., Loeb, S., Marshall, J. H., & Socias, M. (2008). How schools and students respond to school improvement programs: The case of Brazil's PDE. *Economics of Education Review*, *27*(1), 22-38. https://www.sciencedirect.com/science/article/abs/pii/S0272775706001440

Chudgar, A., & Luschei, T. F. (2013). *Study of teachers for children marginalized by social origin, economic status, or location*. UNICEF. https://www.unicef.org/education/files/Final_Report-Teachers_for_Marginalized_Children.pdf

Eddy-Spicer, D., Ehren, M., Bangpan, M., Khatwa, M., & Perrone, F. (2016). *Under what conditions do inspection, monitoring and assessment improve system efficiency, service delivery*

and learning outcomes for the poorest and most marginalised? A realist synthesis of school accountability in low-and middle-income countries. DFID, UK.
https://assets.publishing.service.gov.uk/media/5851931140f0b60e4c0000bd/SR_Q4_Final_Draft_for_Publication.pdf

Evans, D., & Popova, A. (2015). *What really works to improve learning in developing countries? An analysis of divergent findings in systematic reviews.* World Bank Policy Research Working Paper No. 7203.
https://openknowledge.worldbank.org/bitstream/handle/10986/21642/WPS7203.pdf?sequence=1&isAllowed=y

Glewwe, P., Park, A. & Zhao, M. (2012). Visualizing Development: Eyeglasses and Academic Performance in Rural Primary Schools in China. Center for International Food and Agricultural Policy. Working Paper WP12-2. http://ageconsearch.umn.edu/bitstream/120032/2/WP12-2.pdf

Howgego, C., Miles, S. & Myers, J. (2014) Inclusive learning. Children with disabilities and difficulties in learning. HEART, IDS, UK.
http://www.heart-resources.org/topic/inclusive-learning/

Jelas, Z. M., & Mohd Ali, M. (2014). Inclusive education in Malaysia: policy and practice. *International Journal of Inclusive Education*, *18*(10), 991-1003.
https://www.tandfonline.com/doi/abs/10.1080/13603116.2012.693398

Masino, S., & Niño-Zarazúa, M. (2016). What works to improve the quality of student learning in developing countries?. *International Journal of Educational Development*, *48*, 53-65.
https://www.sciencedirect.com/science/article/pii/S0738059315300146

McEwan, P. J. (2015). Improving learning in primary schools of developing countries: A meta-analysis of randomized experiments. *Review of Educational Research*, *85*(3), 353-394.
http://journals.sagepub.com/doi/abs/10.3102/0034654314553127

Muralidharan, K. (2012). Long-Term Effects of Teacher Performance Pay: Experimental Evidence from India. *Society for Research on Educational Effectiveness*.
https://eric.ed.gov/?id=ED530172

Murnane, R. J., & Ganimian, A. J. (2014). *Improving educational outcomes in developing countries: Lessons from rigorous evaluations.* Cambridge, MA: National Bureau of Economic Research.
http://schoolsandhealth.org/Shared%20Documents/Improving%20Education%20Outcomes%20in%20Developing%20Countries%20Lessons%20from%20Rigorous%20Evaluations.pdf

Sharma, T. N. (2014). Education for rural transformation: The role of community learning centers in Nepal. *Journal of Education and Research*, *4*(2), 87-101.
http://www.kusoed.edu.np/journal/index.php/je/article/view/116

Shepherd, A. (2014). Quality Formal Schooling in Marginalised Regions: Embedding Social Justice in Education. *POLIS Journal*, 278.
http://www.polis.leeds.ac.uk/assets/files/students/student-journal/Winter-2014/Shepherd-Quality-Formal-Schooling-in-Marginalised-Regions.pdf

Snilstveit, B., Stevenson, J., Menon, R., Phillips, D., Gallagher, E., Geleen, M., Jobse, H., Schmidt, T. & Jimenez, E. (2016). *The impact of education programmes on learning and school participation in low-and middle-income countries.* 3ie.
http://www.3ieimpact.org/media/filer_public/2016/09/20/srs7-education-report.pdf

Thompson, S. (2017). Education for Children with disabilities. K4D Helpdesk Report. Brighton, UK: Institute of Development Studies. https://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/13091/113-Education%20for%20Children%20with%20disabilities.pdf?sequence=150&isAllowed=y

Westbrook, J., Durrani, N., Brown, R., Orr, D., Pryor, J., Boddy, J., & Salvi, F. (2013). Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries. Final Report. Education Rigorous Literature Review. Department for International Development. https://pdfs.semanticscholar.org/6e4c/4b170c0d387addc4157c5f4e39a8b694b2fa.pdf

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