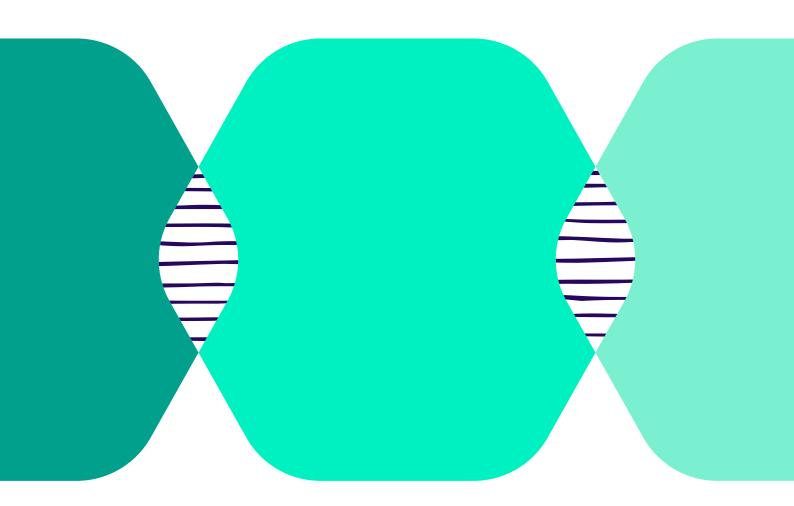




Exploring principles of effective continuing professional development for teachers in low- and middle-income countries



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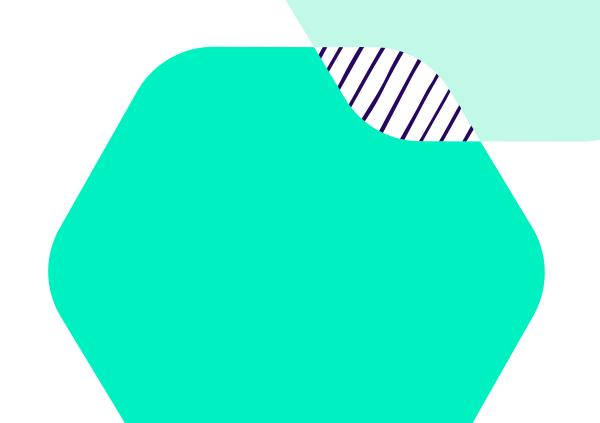
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Exploring principles of effective continuing professional development for teachers in low- and middle-income countries



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Part 1 Introduction

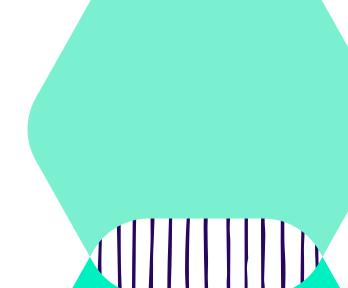
There is an increased focus among governments and international organisations on exploring how lessons from different approaches to education can be shared, learned and used to inform policy and practice on the ground. There is also a growing awareness of the need to understand not only what 'best practice' looks like, but also the extent to which this has relevance beyond the contexts where it has been identified. In particular, the challenges for education policy and its implementation in lower-income countries constitute a more complex problem than can be solved by simply emulating existing successful systems from higher-income contexts.

Nevertheless, it is widely accepted that 'the quality of an education system cannot exceed the quality of its teachers' (Barber and Mourshed, 2007) and their teaching, irrespective of the particular context. The quality of teaching is facilitated by initial and continuing professional development. Learning lessons about the factors enabling successful continuing professional development (CPD) that has a positive impact on student outcomes is therefore of paramount importance. Consequently – considering the importance of context – there is a growing appetite for exploring what the research literature has to say specifically about promoting high-quality CPD for teachers working in lower-resourced parts of the world.

This report describes the findings of a team at the Centre for the Use of Research and Evidence in Education (CUREE), who have worked with the British Council to explore the current state of high-quality research evidence around CPD for teachers in lower-resource contexts.

The aims of the review of evidence and this resulting report are to:

- consider the applicability of existing high-quality evidence on what factors create the most successful CPD opportunities, currently largely framed around high-income contexts, to low- and middle-income contexts (defined here as countries which are eligible for Official Development Assistance (ODA) from OECD countries)
- consider the availability of high-quality evidence from and about low-resource contexts
- 3. provide recommendations for evidence-based decision making in the design of CPD programmes in low-resource contexts
- 4. provide recommendations for increasing the availability of high-quality research from and about low-resource contexts.



This project builds on both (a) high-quality umbrella reviews of technical systematic reviews of rigorous research evidence and (b) literature describing effective, practically minded policy-reform initiatives. While it is not able to provide a comprehensive treatment of every practical barrier for enacting high-quality CPD policy in all low-resource contexts, it does cover key issues encountered in a cross-section of broadly representative contexts.

The report will briefly outline the methodology undertaken before describing the key findings. Finally, we will discuss challenges for effective CPD programming in low-resource countries and present a set of recommendations and draw conclusions for future consideration.



The quality of an education system cannot exceed the quality of its teachers

Barber and Mourshed, 2007, p.13



Methodology

This report summarises an umbrella review of effective CPD (associated with improved student outcomes) analysed alongside evidence about the challenges facing CPD providers and the teachers, leaders and students whom they are intended to benefit in low-resource countries. The principal sources of evidence were two previous umbrella reviews:

- Developing Great Teaching (Cordingley et al., 2015)
- Developing Great Leadership of CPDL (Cordingley et al., 2020).

The evidence about challenges and effective practices in low- and middle-income countries (LMICs) was gathered from two further systematic qualitative reviews and the most comprehensive and high-quality empirical studies we could find for three key regions: South America, South Asia and sub-Saharan Africa:

• Developing a systemic approach to teacher education in sub-Saharan Africa: Emerging lessons from Kenya, Tanzania and Uganda (Hardman et al., 2011)

- What are the impacts and cost-effectiveness of strategies to improve performance of untrained and under-trained teachers in the classroom in developing countries? (Orr et al., 2013)
- Pedagogy, curriculum, teaching practices and teacher education in developing countries (Westbrook et al., 2013)
- Bringing a student-centred participatory pedagogy to scale in Colombia (Colbert & Arboleda, 2016)
- Continuous professional development of school teachers: Experiences of Bangladesh, India, and Pakistan (Singh et al., 2020).

During this project, the research team moved through three key phases: identification of evidence, synthesis of evidence and mapping onto key practice-focused issues.



Phase 1: Identification of evidence

During this phase the research team:

- conducted an 'umbrella' review (Aromataris et al. 2015), i.e. reviewing reviews of the evidence about effective CPD
- developed a research framework to structure the overall scope, central research questions, data synthesis, analysis and approach to reporting
- established a baseline set of hypotheses, derived from two foundational umbrella reviews of the characteristics of effective teacher CPD (Cordingley et al., 2015; Cordingley et al., 2020)
- 4. carried out a literature search and screening with the aim of identifying:
 - a. whether newer systematic reviews showing evidence of impact on learner outcomes confirmed, provided additional nuance or necessitated an updating of the evidence from the baseline
 - b. the evidence which specifically has relevance for CPD in LMICs
- 5. identified:
 - a. no relevant robust systematic reviews showing evidence of effective CPD in the form of impact on student outcomes published since the two foundational reviews
 - b. a cornerstone study for South Asia, South America and sub-Saharan Africa (Hardman et al., 2011 and Colbert & Arboleda, 2016), along with two studies based on the review protocols established by the Evidence for Policy and Practice Information and Co-ordinating (EPPI) Centre at the University College of London (Orr et al., 2013 and Westbrook et al., 2013)

Phase 2: Synthesis of evidence

During this phase the research team:

- created a synthesis of the key messages for policy makers and funders from the evidence about effective CPD from across the two foundational reviews of reviews as a point of comparison for exploring implications for LMICs
- 7. systematically summarised the findings from each of the three cornerstone studies focused on the LMICs
- 8. compared the findings from the cornerstone studies and the two reviews based on EPPI protocols with the findings from step #6, to identify characteristics of effective CPD that made assumptions about or depended upon available resources, capacity or teachers' working contexts that would likely not apply in LMICs
- 9. described the assumptions or dependencies related to a range of factors encompassing the:
 - a. education and training of teachers
 - b. role of school leaders
 - c. skills and capacities of CPD providers
 - d. existing models of CPD and extent to which assessment practices have the potential to inform teachers' CPD.

Phase 3: Mapping onto key practice-focused issues

During this phase the research team:

10. mapped the assumptions (#9 above) onto the broad headline findings (#7 above), to highlight issues that need to be considered in applying and contextualising the findings from the umbrella review to support CPD offered in LMICs.

Key principles of effective CPD

There are 12 key principles for effective CPD as outlined in the evidence explored in the umbrella review. These are considered specifically in relation to lower-resource countries in the following section.

Effective CPD programmes:

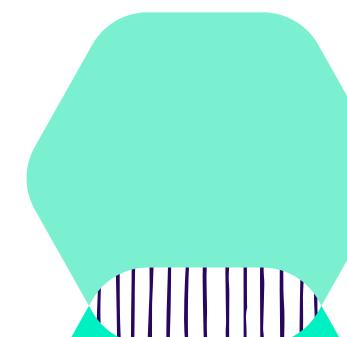
- are **organised around providers' aspirations for students' learning** and those of participating teachers and the school/system
- focus on enabling teachers to develop their pedagogy, practice and understanding of content and theory (e.g. about why things do and don't work) in connection with each other
- describe CPD as a process of taking **shared responsibility** (between programme providers, participants and their schools) **for excellence in student achievement and well-being**
- help to reinforce and enhance teachers' professional identities and professional growth as well as their knowledge and skills
- ensure that in order for teachers to achieve high-quality practice, providers:
 - make explicit the value and contribution of specialist expertise to professional learning
 - encourage teachers to value their own expertise and access that of their colleagues
 - build subject expertise and expertise about the community participants are serving, about how children learn and about school leadership into the CPD programmes they provide

- ensure that **combinations of iterative**, **evidence-rich CPD activities include assessment for learning (AfL)** for teachers
- encourage **school leaders to explicitly promote and model** professional learning for their colleagues
- **focus on CPD** by building on a deep understanding of teachers':
 - · professional identities, practices and motivations
 - existing knowledge, skills and beliefs especially as they relate to knowledge of local communities, local cultural beliefs and practices, and local languages
- provide **opportunities for peer-supported, exploratory dialogue** focused on:
 - exploring new practices
 - students' responses to changes
- provide opportunities for participants to explore their habits, assumptions and beliefs this is done by trying new approaches that disrupt the status quo sufficiently to enable new ways of looking at the curriculum
 - provide opportunities for sustained, iterative combinations of evidence-rich, enquiry-oriented activities which enable participants to try out, practise and refine new approaches and then integrate them in their day-to-day teaching
- provide opportunities for participants to access high-quality tools and resources for teaching and learning. These need to be relevant to the programme content and could include curriculum or lesson-planning templates, progression frameworks or student observation and assessment software. Robinson et al. (2009) highlight the value of 'smart tools' that are based on sound theories of learning and easy to use. These help participants manage complexity and take account of the practical, cognitive and emotional demands of applying the CPD.



Exploring principles and challenges for LMICs and recommendations

This section reviews the key principles in further depth and specifically in relation to ODA-eligible contexts. For each core principle, we highlight examples of practices in LMICs to consider, outline the specific barriers or challenges faced by many of these countries and provide recommendations for how these might be overcome. The findings from the foundational reviews about the importance of building principles of effective CPD into systems and processes will often be challenging to implement, but are also likely to be as important in LMICs as elsewhere.



CPD is organised around providers' aspirations for students' learning and those of participating teachers and the school/system.

Practices in LMICs to consider

Organising CPD around aspirations for students is implicit in the school development cluster model, now being explored in Pakistan as part of their latest CPD framework (Singh et al., 2020).

Potential challenge #1

Organising CPD around teachers' aspirations for students is challenging to apply even when class sizes are as small as 30. For teachers with larger classes, this will be even more difficult.

It is also probable that organising CPD around

aspirations for students is not common practice.

Recommendation(s) to overcome this challenge

- Invite teachers to focus on just three specific students (with different characteristics) when exploring new ideas and approaches via CPD.
- Illustrate programme goals in terms of the ways in which student learning experiences and outcomes will be enhanced.

Potential challenge #2

There is a tendency to assume that lectures and accreditation are reliable indicators that CPD is working.

- Ensure that planning for CPD is informed by good awareness of current practices in that context.
- Ensure that to measure success, professional dialogue is focused on how students are responding to the changes teachers are making to their approach (assuming they are making changes). Note that the students to focus on should represent diversity of classroom/school.

Effective CPD programmes focus on enabling teachers to develop their pedagogy, practice and understanding of content and theory (e.g. about why things do and don't work) in connection with each other.

Practices in LMICs to consider

EPPI reviews about CPD in sub-Saharan Africa make specific mention of the importance of developing pedagogy, practice and understanding of content and theory side by side, and this might also be inferred from the CPD model in Pakistan. In many LMICs, there is considerable linguistic diversity among the teacher population (and, often, specific geographical issues within those contexts, such as enclaves predominantly consisting of a particular ethnic and linguistic minority) and many teachers have to engage with CPD in a language which is not their mother tongue.

Potential challenge #1

Recommendation(s) to overcome this challenge

- Running long-term sustained CPD, which enables development of theory and practice in connection with each other, is very challenging when resources are constrained, for example large class-sizes or remote rural schools.
- Include CPD activities, tools and protocols for embedding new learning in day-to-day school practices and provide follow-up support, monitoring and coaching after CPD input sessions.
- Build into CPD design an explicit focus on how/why developing theory and practice together is useful.

Potential challenge #2

- The impact of CPD delivered in teachers' first language was significantly more effective.
 In multilingual contexts, CPD is often offered in the official language as opposed to the language(s) the teachers are most familiar with.
- Consider language skills when recruiting CPD facilitators and the benefits of translation of tools and resources.

Effective programmes explicitly describe CPD as a process of taking shared responsibility (between programme providers, participants and their schools) for excellence in student achievement and well-being.

Practices in LMICs to consider

There is mention of the way that lack of school leader involvement in CPD inhibits success in both the EPPI reviews (Orr et al., 2013) and in Kenya within the study for sub-Saharan Africa (Hardman et al., 2011).

Potential challenge #1

Recommendation(s) to overcome this challenge

- The perceived purpose of education may prioritise equipping students to perform well in standardised assessments rather than developing young people as citizens, for example. This might make it hard for policy makers to encourage well-being.
- Ensure that planning for CPD events and follow-up activities include specific student well-being questions and goals alongside achievement questions and goals.

Potential challenge #2

- School leaders may not emphasise student well-being or have access to the associated knowledge and skills.
- CPD providers can consider encouraging teachers and school leaders to seek out opportunities to talk about and explore what participants are learning and their reflections about the professional learning process during routine meetings in school and as part of debriefing ongoing in school development of, for example, new schemes of learning or curriculum content.

Effective programmes help to reinforce and enhance teachers' professional identities and professional growth as well as their knowledge and skills.

Practices in LMICs to consider

CPD in LMICs was often criticised in the studies as taking something of a deficit stance to teacher CPD. Treating teachers and their teaching practices as a joint enterprise for taking shared responsibility (between providers, participants and other stakeholders) for student progress and well-being rather than a problem to be fixed will seem quite radical. But it is likely that it will also be helpful in recruiting the interest of school leaders and teachers as well as increasing effectiveness.

Potential challenge

Participating teachers may have become involved in teaching as a stopgap form of employment or because of perceived social status or job security – all of which might affect the ability to bring about improvement via appeals to their professional status.

- Programmes can feature, as much as possible, a focus on igniting teachers' love of learning, kindling this flame in the learning of their students and in demonstrating the links between this, the CPD programme and professional status and growth.
- Ensuring CPD programme goals are conceptualised as working with teachers' best efforts, skills and motivations will be important in these contexts.
 Similarly, building in goal setting, high expectations about the potential outcomes of collaborative enquiries and debriefing after implementation of new ideas is likely to be helpful in this context.

In order to ensure that teachers can achieve high-quality practice, providers need to:

- make explicit the value and contribution of specialist expertise to professional learning
- encourage teachers to value their own expertise and access that of their colleagues
- build subject expertise and expertise about the community participants are serving, about how children learn and about school leadership into the CPD programmes they provide.

Practices in LMICs to consider

Challenges in securing access to specialist expertise emerged as a barrier to success in all three regions, but especially in South America. In South Asia, the lack of access to specialist expertise is noted extensively as a barrier to effective CPD. Some solutions were noted, via teachers' centres, but their effectiveness was severely hindered by poor conceptualisation of teaching and a model of initial teacher education, pedagogy and CPD which is mostly concentrated on the pure transmission of information rather than embedding new ideas within practice.

Potential challenge

 Access to specialist expertise from both within and beyond the serving teacher workforce may be problematic, particularly in the context of large countries with poor/restricted transportation infrastructure.

- Providers can consider how specialist expertise (including external) is embedded in the programme and ensure specialists have a good understanding of the local context.
- Providers can aim to include training for facilitators in:
 - illustrating new practices and students' varying responses to them
 - challenging orthodoxies
 - evaluating impacts on students with sensitivity
 - the CPD processes they are supporting.
- Providers can aim to give facilitators access to tools and resources (including videos) that have been developed in consultation with an appropriate range of specialists who are familiar with the needs of the local communities being served.

Effective CPD programmes ensure that combinations of iterative, evidence-rich CPD activities include assessment for learning (AfL) for teachers.

Practices in LMICs to consider

The evidence indicates that AfL practices and training are not widely available, as little mention was made of them in concrete terms in the studies explored for this project.

Potential challenge

Formative and summative assessment of students is not widespread. Training for teachers in AfL is not always valued or readily available.

- Start with a good understanding of the assessment systems teachers are working with.
- Provide formative and summative assessment tools for teachers. Participants can use them to explore how their own learning is intersecting with their students' learning experiences and outcomes.

Effective CPD programmes encourage school leaders to explicitly promote and model professional learning for their colleagues.

Practices in LMICs to consider

School leaders are often not knowledgeable about CPD process and content in the many countries where school districts, higher education institutions and/or teachers centres are the main providers of CPD, which is the case in many LMICs.

Potential challenge

School leaders are often not very knowledgeable about the process and content of CPD that their teachers experience.

- Providers can focus on developing leadership engagement with and capacity to support professional learning. Ways to do this include:
 - taking active steps to enable school leaders to understand the goals of their programmes
 - providing information that prompts and helps leaders in school to support their colleagues as they apply their learning from external courses to enhance students' learning
- setting out explicitly to encourage facilitators to model openness to their own professional learning, for example discussing how they acquired their specialist expertise and some of the key learning moments on the way.
 Facilitators might also be explicit about new insights they are gaining from participants during CPD activities.

Effective programmes focus on CPD by building on a deep understanding of teachers':

- professional identities, practices and motivations
- existing knowledge, skills and beliefs especially as they relate to knowledge of local communities, local cultural beliefs and practices, and local languages.

Practices in LMICs to consider

Engagement in CPD that is well constructed can have a positive impact on the professional confidence and motivation of teachers within their school and community. This was reported in 12 studies in the EPPI review of research about CPD in sub-Saharan Africa (Orr et al., 2013).

Potential challenge

There is not widespread understanding of the value of building on teachers' starting points. Expertise in how this can be done is not readily available.

- Identify and build on teachers' starting points (including the students they work with, the contexts they work in and their strengths, as well as areas for development) as part of enhancing identities as professional teachers through CPD.
- Develop and/or commission tools, classroom resources and protocols that take account of the practical, cognitive and emotional challenges the CPD presents to teachers, and give teachers choices about which strategies to adopt in which contexts.
- Organise and refine support for participants by giving them formative assessment tools that embody programme content to use in their classrooms, so that CPD facilitators can access evidence about students' learning as a tool for refining their support for teachers and so that teachers' professional conversations are rooted in the experience of their students.

Effective CPD provides opportunities for peer-supported, exploratory dialogue focused on:

- exploring new practices
- students' responses to changes.

Practices in LMICs to consider

Many studies reported on increasing use of collaboration among CPD participants and between participating teachers and their colleagues in school. This emerged particularly strongly in South Asia (Singh et al., 2020) and South America (Colbert & Arboleda, 2016). However, it was not always linked with positive outcomes. Success depended on a substantial focus on structuring and reinforcing peer support. In the studies from South Asia and South America, there was a specific focus on the tools used and the power they can add to CPD. This offers practice that could be built on.

Potential challenge

There are gaps in awareness and experience which exist in terms of the need for teachers to articulate and elaborate their practice through peer-supported, exploratory dialogue rather than more traditional, didactic, transmission-based approaches to CPD.

- Share evidence about the role of peer-supported exploratory dialogue in effective CPD, while noting the sensitivities involved for some colleagues in this kind of professional dialogue. Providers may also want to share with commissioners, with school leaders and with participants prior to the start of the programme.
- Create professional learning tools and teaching resources to illustrate and scaffold powerful professional dialogue. For example, coaching and mentoring talking frames and micro enquiry or lesson study templates could be used to help colleagues gain the benefits of peer-supported dialogue focused on evidence about students' responses to changes.

Effective CPD provides opportunities for participants to explore their habits, assumptions and beliefs. This is done by trying new approaches that disrupt the status quo sufficiently to enable new ways of looking at the curriculum.

Practices in LMICs to consider

The evidence from the localised cornerstone papers suggested little consideration of how CPD could support disruptions to practice.

Potential challenge

- More didactic and less professionally empowering traditions in delivering CPD tend to result in the maintenance of existing practices. This can make offering disruptions to practices seem like a politically sensitive challenge. This could occur even if they are successful in:
 - giving teachers new windows into learning
 - enabling exploration of student learning challenges and of teachers' assumptions and beliefs.

Recommendation(s) to overcome this challenge

 Positioning these 'disruptive' activities as powerful professional practice in LMICs is likely to be extremely helpful, but also a very significant learning journey for many teachers. It will be interesting and helpful to locate examples of collaborative enquiry and research lesson study to build upon in jurisdictions that have experimented with these approaches.

Effective CPD provides opportunities for sustained, iterative combinations of evidence-rich, enquiry-oriented activities which enable participants to try out, practise and refine new approaches and then integrate them in their day-to-day teaching.

Practices in LMICs to consider

There were some instances where CPD was more sustained, but it was often unsuccessful. Key inhibitors to success included a lack of:

- focus on and support for follow-up during workshops and distance learning
- · follow-up in school
- time for lead teachers in school to provide follow-up support.

Potential challenge

There is a lack of emphasis on iterative, sustained experimentation by teachers as they try to apply what they have learned. The emphasis was often more upon giving teachers new knowledge and approaches, expecting them to use them and monitoring that they did so.

- Ensure that the design and/or commissioning of CPD programmes includes the development of processes and tools for embedding learning in day-to-day practice.
- Use technology to help sustain ongoing specialist coaching and liaison between participants and facilitators.
- Organise follow-up work as collaborative enquiries designed to evaluate planned activities together and create a vehicle for debriefing what has been learned by all group members, as well as what has been achieved. In general, what is needed are structures that identify positive practice such as appreciative enquiry.

Effective CPD provides opportunities for participants to access high-quality tools and resources for teaching and learning, which function to make professional learning and specific pedagogical practices more manageable for practitioners. These need to be relevant to the programme content and designed to help participants manage complexity and take account of the practical, cognitive and emotional demands of applying the CPD.

Practices in LMICs to consider

While there are some good examples of textbook reform and resource development, tools and curriculum support materials are often thin, poorly expressed or presented, too abstract or not easily related to students' experiences.

The cornerstone literature reviewed for this project is closely aligned with the wider evidence regarding the impact of tools on CPD outcomes. Indeed, it is given, if anything, even greater emphasis within the literature reviewed for this project than it received in the wider umbrella review which underpins this report. In particular, there is extensive exploration of the role of tools and resources in helping teachers and CPD facilitators navigate complexity, including the complexity of responding to the differing starting points of students and of programme participants in South Asia (Singh et al., 2020).

Potential challenge

- The assumption that high-quality tools and resources are available.
- Developing curriculum tools to complement and illustrate CPD programme content in action is also likely to help teachers to navigate the complexity of putting the learning from workshops and distance-learning experiences into practice In classrooms.



Supporting the generation of and access to high-quality evidence

As the research team analysed the evidence to identify the core principles, issues and recommendations outlined in the previous section, they were also able to identify observations about the nature of the evidence. This section outlines these observations gathered from looking through the reviews and high-quality studies. Two key issues were the small volume of studies and the lack of depth of evaluation.

- **Volume**. There were far fewer studies of CPD in LMICs than higher-income countries.
- Depth of evaluation. Of the studies that exist, the majority are comparatively surface-level; often CPD programmes are part of larger school-improvement programmes, so evaluating the CPD has fewer available resources. In addition, evaluation of these kinds of programmes tends to be very narrowly focused and summative. This means that the research does not provide much information about processes or explore specific elements for effectiveness. Similarly, an understanding of the need to link CPD with starting points is often lacking, meaning studies can find what does not work, but not what does work.

Despite the issues identified above, there are positive signs, and some particular initiatives which demonstrate that the knowledge base is growing.

- Evidence about gaps in/failures of projects, while limited, is still useful, and in some cases it can highlight areas to target to improve practice. The problems linked with ineffectiveness are sometimes the result of a lack of processes needed to achieve effectiveness. While caution needs to be taken in presuming all issues are deficit based, this evidence about gaps/failures contributes to the knowledge base.
- Increasing awareness of the challenges is showing in the evidence. Research and development initiatives are starting to be planned to test what is needed to develop a more effective

model for ODA-eligible countries. One example identified during the project was in Pakistan, where a new CPD framework was being developed during the time of this research. Supporting researchers and research projects led from lower-income contexts must be a priority. This can be done in a number of ways, with additional responsibilities for organisations from higher-income contexts which commission research. Consideration needs to be given to the following areas.

- Funding. Funding for research can be made available more equitably so that researchers and institutions based in lower-income countries have greater opportunities to apply for budgets without the requirement to be linked to an institution based in a higher-income context.
- Communication about opportunities. Colleagues at universities in LMICs have reported that there is limited knowledge of funding opportunities made available within their institutions. Finding ways of building networks and improving access to this information is key.
- Language. Expectations remain around studies being published in English in order to be considered for review or inclusion in university syllabi, collections of papers or other forums where the findings might be disseminated. Flexibility in and acceptance of other languages for publication and/or improved facilities for translation into English will enable greater access to important knowledge often retained only in the country of origin.
- Roles in research projects. Researchers from LMICs are increasingly being invited to participate in projects led by individuals from institutions in higher-income contexts, with some organisations stipulating the need for country nationals to be part of teams as a prerequisite for funding. However, often the roles of these locally based researchers are limited to data collection and translation, sometimes despite their having extensive experience and qualifications. Analysis and reporting of results

tends to be conducted by researchers from the higher-resource contexts. The locus of power therefore remains firmly in the non-local context. Ensuring more equitable involvement at all phases of the research project (design, data collection, report writing, dissemination activities) with appropriate support for building skills is a better approach

- **Gender.** In some contexts, it is important to address differences between the ability of female and male researchers to become involved in international projects or publish their work. For example, in Nepal, Simkhada et al. (2014) found that just 32 per cent of the female faculty members they surveyed had published in peer-reviewed journals, compared to 68 per cent of their male counterparts.
- Sharing knowledge. Support for researchers to develop their understanding of international publication protocols or other dissemination strategies is often limited in institutions in lower-resource contexts. Finding ways to offer support and direction would help, including by enabling more experienced researchers from the same contexts to share their knowledge.
- Open-access publication fees. Waiving or otherwise supporting
 the payment of open-access publication fees will enable researchers from
 lower-resource countries to publish and also make their work more readily
 available to a wider audience. Some journals have tiered fees, based on the
 nationality of the lead researcher.



Conclusions – what this means for CPD funding and evaluation in LMICs

This research aimed to support the promotion of high-quality CPD for teachers working in lower-resourced parts of the world, examining the evidence available to validate proposed approaches. To do this we identified 12 key principles for effective CPD applicable to LMICs. For each principle we outlined the specific barriers or challenges faced by many lower-resource countries, along with recommendations for how these might be overcome. Looking across this evidence, we identify three conclusions to consider when funding, designing and evaluating CPD in developing contexts.

There are no shortcuts – focus on doing things well, not quickly.

 One dynamic which emerges consistently across different areas within the evidence base is that the core CPD principles identified in large-scale evidence are possible to enact in LMICs, but that doing so is challenging. This work has attempted to capture some of the key challenges, but must do so in a vacuum, whereas funders/providers are operating in specific contexts. As a result, not every challenge they face is captured here. Nevertheless, it is understood that funders/providers may find enacting the core principles for effective CPD to be demanding. Our first conclusion, therefore, is that funders and providers of CPD working in LMICs need to focus on a small number of these principles and ensure they are done well, rather than trying to work at large scale immediately.

Smart tools are valuable when dealing with resource limitations.

 Many of the principles of effective CPD address, either directly or in passing, the contributions which 'smart tools' (Robinson et al., 2009) (i.e. materials which help teachers navigate complexity while adding new practices to their skillsets) can and do make to improving student outcomes. The role of such tools is more strongly emphasised in the evidence from LMICs than in the evidence from higher-income contexts.

Such tools have an additional benefit in LMICs, which is that they are more resource-efficient, when taking CPD to scale, than specialist instruction (which increases knowledge but does not change practice) or coaching support (which is very resource-intensive). We would therefore recommend that funders and providers of CPD in LMICs place a strong emphasis on making as much use of smart tools as possible and helping teachers use them effectively.

Embedding effective use of assessment for learning is crucial in the long term.

 Assessment for learning (i.e. collecting evidence about learners' – or teachers' – starting points and tracking their progress as part of their development) is a crucial part of teaching practice and CPD, and helps position CPD as a professional responsibility. But understanding of what it is, how to do it well and why it is important is still incomplete, in the academic world as well as in practice. However, a large number of the principles of effective CPD either emphasise or depend on the existence of effective assessment for learning. Furthermore, evaluating the impact of CPD benefits enormously from strong assessment for learning practice. So enacting these principles effectively requires some courage to explore and experiment with this aspect of practice. In particular, embedding an ongoing learning and assessment cycle for teachers is crucial to getting the most out of that CPD. We recommend that CPD funders and providers aim to develop an understanding of assessment for learning within their own teams, as well as for the teachers they work to support.

References

Aromataris, E, Fernandez, R, Godfrey, CM, Holly, C, Khalil, H, Tungpunkom, P (2015). Summarizing systematic reviews: Methodological development, conduct and reporting of an umbrella review approach. *International Journal of Evidence Based Healthcare*, 13(3), 132–140. [Online] Available at: http://doi:10.1097/XEB.0000000000000055

Barber, M & Mourshed, M (2007). How the world's best-performing school systems come out on top. McKinsey & Co.

Colbert, V & Arboleda, J (2016). Bringing a student-centred participatory pedagogy to scale in Colombia. *Journal of Educational Change*, 17, 385–410. [Online] Available at: https://doi.org/10.1007/s10833-016-9283-7

Cordingley, P, Higgins, S, Greany, T, Buckler, N, Coles-Jordan, D, Crisp, B, Saunders, L & Coe, R (2015). Developing greatteaching: Lessons from the international reviews into effective professional development. Teacher Development Trust.

Cordingley, P, Higgins, S, Greany, T, Crisp, B, Araviaki, E, Coe, R & Johns, P (2020). Developing great leadership of CPDL. CUREE.

Hardman, F, Ackers, J, Abrishamian, N & O'Sullivan, M (2011). Developing a systemic approach to teacher education in sub-Saharan Africa: Emerging lessons from Kenya, Tanzania and Uganda. *Compare: A Journal of Comparative and International Education*, 41(5), 669–683.

Orr, D, Westbrook, J, Pryor, J, Durrani, N, Sebba, J & Adu-Yeboah, C (2013). What are the impacts and cost-effectiveness of strategies to improve performance of untrained and under-trained teachers in the classroom in developing countries? London: EPPI-Centre, Social Science Research Centre, Institute of Education, University of London.

Robinson, V, Hohepa, M & Lloyd, C (2009). School leadership and student outcomes: Identifying what works and why. Best Evidence Synthesis Iteration (BES).

Simkhada, P, van Teijlingen, E, Devkota, B, Pathak, SR, Sathian, B. (2014). Accessing research literature: A mixed-methods study of academics in Higher Education Institutions in Nepal. *Nepal Journal of Epidemiology.* 4(4), 405–414.

Singh, AK, Rind, IA & Sabur, Z (2020). Continuous professional development of school teachers: Experiences of Bangladesh, India, and Pakistan. In PM Sarangapani and Y Sayed (eds), *Handbook of Education Systems in South Asia*, 1–27. Global Education Systems. Singapore: Springer.

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. EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Working with the British Council, experts at the Centre for the Use of Research and Evidence in Education (CUREE) explore the current state of research evidence around the continuing professional development (CPD) of teachers working in low- and middle-income countries. This report aims to answer these questions: what does the evidence tell us is most likely to be effective CPD for these teachers? Is this similar or different to the CPD needs of teachers in higher-income contexts? What specific challenges are likely to emerge when offering CPD in these contexts? The report also explores the extent to which more evidence is required in order to draw firmer conclusions to inform the development of effective CPD programmes.

