

How can headteachers help teachers put continuous professional development into practice in their schools?

Introduction to 3MPower's research

This policy brief is based upon research into Anonde Ghonit Shikhi (AGS), a nationwide teacher professional development programme to 'make learning math fun' in Bangladesh. AGS is the most popular Teacher Professional Development (TPD) course on Muktopaath, the government's Bangla-language e-learning platform. Over 180,000 primary teachers have completed the initial online course. Nine online modules target grade 1-2 math skills. Each module contains three or more numeracy activities, explained through animated videos, and finishes with a quiz. Completion of the online course entitles teachers to participate in a week of face-to-face training. There is no follow-on support or monitoring for implementation in schools. AGS's approach to blended learning for TPD is aligned with Bangladesh's 'Blended Education Framework for All' (Akturazzaman and Chowdhury, 2022) and is common to government led TPD programmes across Bangladesh. Mobile phones are by far the most common way for people to access the internet in Bangladesh and most teachers accessed AGS on their phones. Hence, AGS is an example of mobile learning and of blended learning for TPD.

Mobile Learning for the Empowerment of Marginalized Mathematics Educators (3Mpower) was a research project led by The Open University (UK) in partnership with the Institute of Education and Research (University of Dhaka, Bangladesh). 3MPower was funded through the EdTech Hub (2021-2025). The project sought to understand both the processes and outcomes of the AGS intervention among teachers and schools serving marginalised rural communities. 3MPower was designed and carried out in collaboration with education decision-makers and with rural educators and education officers.

- Research Question: How are primary numeracy teachers using mobile learning for teacher development in rural schools and, in what ways does this change learning and teaching?
- Methods: large-scale, mixed-methods, multi-phase design—evaluating the processes and outcomes of Anonde Ghonit Shikhi (AGS), a nationwide teacher professional development programme to 'make learning math fun'.



- Sample: Over 400 teachers and 2,000 learners in rural primary schools actively participated in the research and were sampled from ten marginalised rural upazilas across four geographic regions—Chittagong Hill Tracts, Hoar, Coastal & Char. A further 1,300 teachers and headteachers responded to surveys.

The findings of 3MPower highlight the importance of school leadership and teachers' collaboration in mediating the intentions of professional development programmes into changes in teaching and learning in schools. For this reason, we also draw upon prior research and development in Zimbabwe which emphasised 'whole school development' to improve foundation skills (Power et al., 2022; Hedges et al., 2021) and the activities and experiences of head teachers in this context (IGATE, 2021).

The findings and recommendations have widespread significance for future blended TPD programmes in Bangladesh. The findings also address 'high potential evidence-gaps' in the global evidence-base, concerning the experiences and outcomes of technology-enhanced TPD among teachers and learners in marginalized rural communities.

Summary findings

The AGS blended-learning programme for TPD had significant but limited impacts on teaching quality and learning outcomes in foundational numeracy in schools serving marginalised rural communities. However, these results were only seen in the minority of schools where headteachers actively encouraged teachers to work together and explore using the AGS activities in their teaching. In these schools, 'ongoing use' of AGS has a lasting impact on teaching and learning. In schools where headteachers didn't give such encouragement and support, the impact was negligible. See policy brief below, Blended learning for teacher development: Evidence of impact.

Reflections on the findings

To improve the impact of future programmes of 'blended learning' for TPD in Bangladesh, it will be crucial to help all headteachers understand what they can do to encourage teachers to work together to put professional development into practice in their classrooms.



Recommendations:

How can headteachers increase the impact of blended TPD on numeracy teaching?

Drawing upon 3MPower and prior research with headteachers in Zimbabwe (Power et al., 2022, Hedges et al., 2021), this policy brief considers how school heads can help develop strong foundation skills among learners in their schools, by building a culture of collaboration and learning among teachers.

In schools where passionate headteachers had developed a culture of collaboration, teachers were encouraged and supported to explore the activities from professional development programmes like AGS in their teaching. Teachers and headteachers reported many benefits from doing this. How can other headteachers and schools reap similar benefits from AGS or other blended learning programmes for professional development in numeracy teaching?

Q. How can headteachers make sure everyone (learners and teachers) learns?

Establishing school norms

School heads can be champions and leaders of learning in their schools, not just administrators. Learning is not just for children and young people—teachers are also learning how to be better and more effective teachers.

By publicly promoting and upholding whole-school ‘norms’ (expectations of what is ‘normal’ for this school) about ‘learning for all’, heads can begin to change the school culture. An example of school ‘learning norms’ from Zimbabwe is given in the box below.

In our school:

- Every learner is improving their literacy and numeracy skills
- Every teacher is improving their teaching skills
- Everyone is safe and respected, regardless of gender

(IGATE 2021, p3)

Writing foundation skills into school development plans

Clear goals and guiding structures, like making time for literacy and numeracy and using the TPD modules regularly, can empower schools to act. School heads can write about strengthening teaching and learning—and establishing school norms—in



their school development plans.

Q. How can headteachers ensure teachers know which numeracy skills learners need help with?

Providing teachers with diagnostic assessment tools and discussing the findings together

It is often hard for teachers and headteachers to know who needs help with foundation skills. Diagnostic assessment enables teachers and school heads to understand which learners need help, what skills they need help with, and which learning activities will be most appropriate. IGATE schools used a more complex diagnostic assessment, but the formative assessment tools from the Foundation Literacy and Numeracy Hub provide a quick and easy starting point for assessing learning: <https://www.flnhub.org/focus-area/formative-assessments>. The 3MPower learning assessments were adapted from these.

Here is an outline for how to use diagnostic assessment tools during a TPD session in schools (after IGATE, 2021:6)

- Take time to look at the tool and read the instructions together.
- Put the teachers into pairs and ask them to take turns to use the tools to assess each other – with one teacher taking the role of a learner.
- Encourage all teachers to assess a sample of five learners from a class before the next TPD session. (Teachers should choose one ‘high attaining’, two ‘middle attaining’, and two ‘low attaining’ learners).
- Encourage teachers to identify which learning activities would be appropriate for these learners, and why.
- Invite teachers to discuss the findings at the next TPD session. Teachers are often surprised to find learners can do more, or less, than teachers expected.

In our school, continuous assessment has been initiated from the first grade, and students are regularly assessed in this method in every class (Headteacher, Char area).

Students are regularly evaluated in every class. This helps them learn in a good way. (Ongoing AGS user, Char area, Bangladesh).



Q. How can headteachers ensure teachers take time for professional development?

Planning regular time for teachers to practice professional development activities together

Professional Development Programmes are most successful when teachers regularly work through activities from the modules together in schools. Heads often schedule regular staff development meetings anyway but struggle to use this time well. The innovation is using this time for teachers to study and practice the activities from the modules together, and to share their learnings from using previous activities with learners.

School heads can set-aside regular time for staff-development meetings in school. Many found once a week or once a fortnight worked best. School heads actively participate in the meetings themselves and encourage all other teachers to do so too.

“Every week, I have meetings with the schoolteachers... we determine how to work to ensure students’ learning through sharing experiences among ourselves”
(Head teacher, Ongoing AGS user, Char area, Bangladesh)

“All the teachers in the school discuss teaching topics with each other and strive to make classroom activities effective ... sharing experience and ideas ... decisions are made on the methods that can be adopted” (Teacher, Char Area)

Q. How can headteachers ensure teachers learn from putting activities into practice in their teaching?

Encouraging action-in and reflection-on teaching among teachers

The modules provide classroom activities for teachers to use with learners. Teachers gain the most when they work through the modules and activities together with other teachers, put the activities into practice in their teaching, then share back what they learned from the experience. In this way, the classroom activities drive cycles of reflective practice—helping teachers build new insights and understandings together. The illustration below shows how the modules encouraged such cycles of shared action and reflection among teachers in schools in Zimbabwe.



Read an activity

Plan how you will use the activity

Do the activity in class with your learners

Reflect on what learners learned from the activity, what worked well, and what you would change next time.

Share your experiences and reflections with your colleagues



Through staff development meetings and private conversations, headteachers can encourage teachers to put the activities into practice, reflect on what they learn from this, and share their learnings.

“Before I took this course, I didn't realise that teaching maths to kids could be so easy and fun, using different methods and materials. Now, after completing the course, I feel much more confident as a teacher” (Teacher, Coastal Area).

Ensuring sharing of reflections-on-teaching in regular staff development meetings

One way headteachers can see how teachers are putting the activities into practice is by encouraging sharing of experiences during the regular staff development meetings. This enables heads to see how teachers have put the activities into practice, what difference the activities made to teaching and learning, and what teachers learned from the experience.

“I thoroughly enjoyed it. As a teacher, I felt a sense of joy when students were able to learn math happily without fear.” (Teacher, Chittagong Hill Tracts).

“The AGS course has played a pivotal role in overcoming these challenges. The shift towards a more enjoyable and accessible method of teaching mathematics has positively impacted both students and teachers. It was possible because of the teaching learning methods that we learned from the course” (Headteacher, Coastal Area).



Making time for classroom learning walks and coaching conversations during the week

Another way headteachers can encourage and monitor use in the classroom is by making time for classroom learning walks and coaching conversations. Finding just ten minutes in a week to observe lessons and later talk to teachers about the positive behaviours seen can make a big difference.

Classroom learning walks:

- Walk around your school, watching and listening to some lessons in progress.
- Drop into one or two lessons for short, quiet observations (five minutes can be enough). This is not an inspection! It's an opportunity to learn what's actually happening in lessons.
- After the observation, thank and show respect to the teacher. Save any feedback until later.

Coaching Conversations

- After observing a lesson, find time to talk privately to the teacher (five minutes can be enough).
- Focus only on positive features of the lesson you saw and would like to see more of, e.g.
 - Respectful behaviour between learners and teachers
 - Teachers trying activities from the TPD modules with learners
 - Times when learners were actively learning or enjoying learning
 - Learners talking about numeracy—asking questions or explaining their thinking

"Our headteacher regularly observes our classes" (Teacher, Char area).

"We sometimes observe each other's classes to see how we manage it" (Teacher, Chittagong Hill Tracts)



Q. How can headteachers ensure learners get the time they need for foundation skills?

Dedicating some regular math lessons for foundation skills, offering extra time to students who need it

It is important for headteachers to remember that literacy and numeracy are not an ‘extra’ on top of the curriculum—they are the foundations on which the rest of the curriculum builds. Because of this, helping all learners develop strong foundation skills is one of the ministry’s highest priorities. For most learners, it is not enough to offer ‘catch-up’ or ‘remediation’ just once a week. Many headteachers found at least twice-weekly lessons were needed to help learners catch up, if they were not at ‘grade-level’. Children who are furthest behind may need additional time and support, perhaps through lunchtime or afterschool clubs or through individual guidance.

“To address the challenges faced by these students who are falling behind, my colleagues and I need to dedicate extra time ... to ensure they catch up, so they can be at the same level as other students in their learning journey” (Headteacher, Char Area).

Offering supplementary materials and/or playing numeracy games for independent learning

Another approach is to offer supplementary materials so that learners can practice numeracy skills independently—on their own, in pairs, or in small groups—and to allow learners to play numeracy games outside lesson time (after the teacher has first introduced learners to the game during a lesson).

“The children were very enthusiastic. Everyone feels that they have learned math through the game” (Teacher, Chittagong Hill Tracts).

Conclusion

The 3MPower research findings show that what headteachers do in schools can have a profound effect on the outcomes of blended teacher professional development programmes like AGS. In schools where headteachers developed a culture of collaboration and encouraged teachers to try the activities from AGS in their



teaching, there were significant impacts on teaching quality and learning outcomes. In other schools, impacts from AGS were minimal.

The recommendations illustrate some of the key questions to consider, when thinking about the role of headteachers in:

- a) Helping teachers put the activities from blended TPD into practice in the classroom
- b) Increasing the impact of blended TPD on teaching and learning foundation numeracy skills

Examples from the research provide a practical framework of leadership activities which can be implemented in schools by headteachers themselves, or which can provide a starting point for future blended learning programmes thinking about maximising impact through clear guidance for headteachers.

Further reading

3MPower (2025) Policy brief: Blended learning for teacher development: Evidence of impact [3Mpower-Mobile Learning for Empowerments of Marginalised Mathematics Educators – EdTech Hub](#)

3MPower (2025) Policy brief: Towards a pedagogic framework for Teacher Professional Development through blended learning [3Mpower-Mobile Learning for Empowerments of Marginalised Mathematics Educators – EdTech Hub](#)

3MPower (2025) Policy brief: Designing blended learning programmes which impact teaching quality and learning outcomes [3Mpower-Mobile Learning for Empowerments of Marginalised Mathematics Educators – EdTech Hub](#)

Formative assessment tools and guidance from the Foundation Literacy and Numeracy Hub: <https://www.flnhub.org/focus-area/formative-assessments>.

Power, T., Hedges, C. and Griffiths, M. (2022) 'IGATE (2022) Knowledge Products: Whole School Development', The Open University [Online]. DOI: <https://doi.org/10.21954/ou.rd.21187597.v1doi>.

Hedges, C., Power, T. and Tengenisha, M. (2021) *IGATE Case Studies: Changing Learning* [Online]. Available at <http://oro.open.ac.uk/84410/>

IGATE (2021) 'IGATE Implementation Guide for School Heads and Literacy and Numeracy Teacher Professional Development Leads', [Online]. Available at https://www.open.edu/openlearncreate/pluginfile.php/663388/mod_resource/cont



[ent/5/2021%20IGATE%20MoPSE%20Implementation%20Guide%20Final.pdf](#) (Accessed 29 April 2022).

