Report

No Teacher is an Island

A case study on the enablers and barriers for effective school-based teacher professional development in Sierra Leone

Anne-Fleur Lurvink

Zainab Bangura

Alhaji Fortune

Alex H. George

Katie Godwin

Miriam Mason-Sesay

David Moseray

Ibrahim Tholley

Emmanuel B. Turay

Björn Haßler

April 2023

10.53832/opendeved.0284

About this document

Recommended citation

Lurvink, A.F., Bangura, Z., Fortune, A., George, A. H., Godwin, K., Mason-Sesay, M., Moseray, D., Tholley, I., Turay, E. B., & Haßler, B. (2022). *What are the enablers and barriers for effective school-based teacher professional development?* OpenDevEd. https://doi.org/10.53832/opendeved.0284. Available from https://docs.opendeved.net/lib/N665IBBE. Available under Creative Commons Attribution 4.0 International.

Licence

Creative Commons Attribution 4.0 International

https://creativecommons.org/licenses/by/4.0/

You — dear readers — are free to share (copy and redistribute the material in any medium or format) and adapt (remix, transform, and build upon the material) for any purpose, even commercially. You must give appropriate credit, provide a link to the licence, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

Contents

1. Introduction	4
2. Methodology	6
2.1. DBIR	6
Figure 1. DBIR iterative cycles	6
2.2. The experiment	7
Table 1. Background information on participating peer facilitators	7
Table 2. Overview of the timeline and structure of design-based implementation research cycles	8
Table 3. Overview of data collection activities*	10
3. Findings	11
3.1. TGM as an enabler for peer learning and support	11
3.2. Facilitators as enablers for peer learning and support	12
3.3. School leader engagement: a key factor for successful implementation	13
3.4. The limit of time	14
3.5. Materials as enablers for successful facilitation	14
3.6. TGM content can support peer learning and well-being	15
3.7. The lack of teacher motivation as a barrier to successful implementation of t model	he 17
3.8. Opportunities for the use of EdTech to support the community of learning.	19
3.9. Improved coordination and alignment of TPD initiatives could enable more teachers to benefit from TPD opportunities	19
5. Recommendations	20
6. References	21
Annex 1. Overview of the data collection process	23

Abbreviations and acronyms

DBIR	Design-based implementation research			
CPD	Continuous professional development			
FGD	Focus group discussion			
MBSSE	Ministry of Basic and Senior Secondary Education			
RCT	Randomised control trial			
SSI	Semi-structured interview			
TGM	Teacher group meeting			
TPD	Teacher professional development			
TSC	Teaching Service Commission			

1. Introduction

Sierra Leone is a country recovering from multiple crises: a civil war, landslides, the Ebola crisis, and, most recently, the Covid-19 pandemic. These crises have aggravated the already existing learning crisis in Sierra Leone. In 2018, Sierra Leone launched its Free Quality School Education programme. Although the primary school enrolment rate increased to 139% in 2019, children only receive an average of 4.9 learning-adjusted years of schooling by the age of 18 (†UIS, 2019; †World Bank, 2020). Teachers are under pressure to deliver quality education; however, levels of unqualified teachers are high, in particular at the primary level (†Mackintosh et al., 2020b).

Teachers in rural areas struggle to access meaningful opportunities for teacher professional development (TPD) due to their distance from teacher training colleges, a limited understanding of English language courses, and the absence of school-based communities of practice ([†]Crisp et al., 2017; [†]Kamara, 2020; [†]Junaid et al., 2016).

In addition, evidence indicates that women are significantly underrepresented as a proportion of the teaching workforce in all schools, particularly government-run ones. Outside the comparatively wealthy Western Area surrounding Freetown, the number of female teachers amounts to only 25% of the teaching workforce in government-run schools (*Mackintosh et al., 2020b*); it was as low as 17% in rural areas where schools are located more than 15 km from a major population centre (*Mackintosh et al., 2020a*).

The Ministry of Basic and Senior Secondary Education (MBSSE) and the Teaching Service Commission (TSC) have highlighted a need to identify the most effective way to deliver in-service TPD (*MOEST, 2017). To that end, this study investigates the barriers and enablers of a school-based and peer-supported model for TPD in Classes 1 to 3 of rural and semi-rural government primary schools (see here for inception report).

This study is set in Western Area Rural District in the Western Province of Sierra Leone. Primary school teachers in this district face challenges related to the lack of access to resources, and opportunities for teacher professional development (TPD) despite their proximity to urban Freetown. The district was selected by the TSC. At the time of the study, there were several periods of nationwide teacher strikes and negotiations between the government and unions about salary conditions. These events should be considered as part of the context of the study.

We conducted semi-structured interviews (SSIs), focus group discussions, and teacher group meeting observations with teachers, peer facilitators, and school leaders in 10 schools in Western Area Rural District. The next phase of the study will investigate if and how the model impacts learning outcomes, in particular numeracy and literacy, and if it improves social-emotional and mental health for teachers and learners. No Teacher is an Island: A case study on the enablers and barriers for effective school-based teacher professional development in Sierra Leone

2. Methodology

This section presents the methodology for the research.

2.1. Design-based implementation research

Phase 1 employed design-based implementation research, henceforth DBIR (*Penuel et al., 2011), in 10 schools. DBIR is a systematic method for refining interventions for later effective, contextually appropriate, large-scale roll-out (Phase 2). We researched collaboratively with school-based facilitators (peer facilitators), school leaders, and teachers to identify needs, barriers, and opportunities through a process of iterative, grounded inquiry.

Facilitators in experiment schools used printed TPD materials, received a short briefing event, and light-touch ongoing remote support.

Data collected explored which programme elements contribute to learning gains for teachers and which do not. It also explored whether and how these elements can be strengthened.

Phase 1 data was collected by the programme researchers in several cycles and analysed immediately. Results were used to optimise the TPD programme implementation and refine research instruments (see Figure 1).

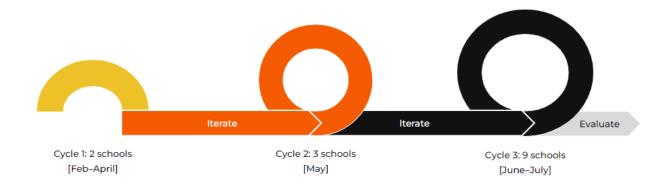


Figure 1. DBIR iterative cycles

Qualitative data collected includes:

- Observations of Teacher Group Meetings (TGMs);
- Audio-recorded semi-structured interviews (facilitators, head teachers, and teachers) investigating perceptions of the programme and change induced by the programme;
- Focus group discussions with head teachers, facilitators, and teachers.

No Teacher is an Island: A case study on the enablers and barriers for effective school-based teacher professional development in Sierra Leone

2.2. The experiment

This design experiment trialled a decentralised and school-based model, including materials, that had been trialled in a number of other Sub-Saharan African countries, including Zambia, Zimbabwe, and Ghana, and that focuses on interactive pedagogies. The materials (OER4schools) and model are Open Educational Resources and can be found here.¹ The model from OER4schools closely resembles the World Bank COACH² approach, which is unsurprising given that both approaches draw on a similar body of evidence.

The model relies on peer learning, facilitated by peer facilitators (hereafter facilitators), who receive training on TGMs and then return to their schools to run them weekly. Head teachers selected two teachers from their school as facilitators based on their ability to facilitate a learning session with their colleagues (see Table 1 for background information on participating facilitators).

	# teachers	Qualification*				Government payroll			
		ln training	тс	нтс	BA	Unknown	Yes	Νο	Unknown
Female	10	0	5	5	0	0	6	4	0
Male	10	2	4	2	1	1	5	4	1
Total	20	2	9	7	1	1	11	8	1

*TC: Teaching Certificate, HTC: Higher Teaching certificate, BA: Bachelors of Arts

Facilitators from each participating school were invited to an induction workshop. The workshops focussed on the purpose and facilitation of teacher group meetings (TGM) and offered modelling on interactive pedagogies and social-emotional and mental health strategies. Facilitators received a printed facilitator guide with a structure for TGMs, as well as activities for interactive teaching (Cycle 2) and socio-emotional and mental health (Cycle 3). The workshops had a participatory nature: participants reviewed materials and content and made adaptations based on their school contexts.

Through DBIR, we collected findings in three iterative cycles over the course of six months (see Table 2 for an overview of the DBIR process). In each cycle, different elements of the model were investigated. Findings from the first cycle informed the redesign of the model in Cycle 2. Consequently, findings from Cycle 2 informed the redesign of the model for Cycle 3.

¹ See https://oer.opendeved.net/wiki/OER4Schools retrieved 5 April 2023

² See

https://documents1.worldbank.org/curated/en/655161630089624409/pdf/Technical-Guidance-Note.pdf retrieved 5 April 2023

	Cycle 1	Cycle 2	Cycle 3	
Timeline	February to mid-April	Мау	June	
# of schools	2 schools	3 schools	9 schools	
# of facilitators	4 facilitators	6 facilitators	18 facilitators	
Content	Teacher group meetings	Teacher group meetings + interactive pedagogy	Teacher group meetings + social-emotional and mental health strategies for teachers and learners	

The TSC selected 10 schools in Western Area Rural based on their remoteness and rural context. This list of schools was revised during the DBIR after the first cycle because one of the schools was part of another extensive teacher professional development programme, which included teacher learning circles. Interviews highlighted that teachers did not distinguish between the two programmes. Teachers and facilitators also indicated that the two programmes were too much for them. Therefore, the research team and TSC decided to replace the school for the remaining cycles. The reasons for not continuing with the programme in that school were communicated to the head teacher and facilitators by the TSC district officer. In addition, one of the schools did not participate in the induction workshop of Cycle 2 and was therefore excluded. We included the same school for Cycle 3; however, they also did not participate in the workshop for Cycle 3. The head teacher indicated that teachers were on strike. We therefore ended up with three schools in Cycle 2 and nine schools in Cycle 3.

The aim of the experiment was to investigate the barriers and enablers for effective implementation of the materials and the model in Sierra Leone through the following research questions:

RQ1-A. What are the systemic enablers and barriers to effective school-based TPD in emergency contexts?

RQ1-A examines the national- and community-level factors, including policies, that impact TPD in emergency contexts. This addresses the need for a more holistic definition of emergency contexts in TPD research (Research Gap #3). We consider how such factors affect school operation, school resourcing (including teaching and learning materials), and wider factors such as teacher progression.

RQ1-B. What are the key enablers and barriers for making school-based facilitators and head teachers effective?

RQ1-B examines school-based factors, including the crucial role of facilitators, selection of peer facilitators and the role of head teachers.

RQ1-C. What are the key enablers and barriers for teacher learning?

RQ1-C considers teacher-level factors related to TPD structure, for instance, in Teacher Group Meetings (TGMs), the use of TPD programme materials and shared lesson planning. RQ1-C also considers socio-emotional factors for teachers (e.g. motivation).

The findings informed recommendations for the Continuous Professional Development (CPD) model for teachers in primary schools as part of the one tablet per school programme that the MBSSE and the TSC launched in September 2022. As a next step, the World Bank will evaluate the implementation of the programme.

We collected data through 34 semi-structured interviews (SSIs) with teachers, facilitators, school leaders, and the district officer; 8 teacher group meeting observations and 8 focus group discussions with teachers, including facilitators and school leaders (see Table 3 below for an overview of data collection).

Cycles	SSIs	TGM observations	Focus group discussions
Cycle 1	Teachers Facilitators Head teachers	1	2
Cycle 2	Facilitators Head teachers	3	3
Cycle 3	Facilitators Head-Teachers TSC District Officer	4	3

Table 3. Overview of data collection activities*

*See Annex for overview of data collection per school

During the study, we recorded and transcribed all interviews. We recorded all TGM observations, focus group discussions and induction workshops, and a team of two researchers took extensive notes during those activities. The transcriptions and notes were then coded inductively and analysed thematically.

Section 3 outlines the emerging themes.

3. Findings

This section details the findings from our research.

3.1. TGM as an enabler for peer learning and support

The most prevalent theme emerging from the study is the TGM as an enabler for peer learning and support. SSIs, FGDs, and TGM observations showed that the sharing of ideas, challenges, and solutions are the main characteristics of the community of learning that arise from the implementation of the TGM. First, our TGM observations showed that TGMs are set up to foster interaction and discussion. Teachers were engaged during the meetings, and the atmosphere is generally respectful. We observed discussions, the exchange of ideas, and the sharing of challenges and advice. This was affirmed by the statement below:

"You bring some ideas, we share the ideas together [...] you should not be ashamed to meet your friend if you have difficulties in your teaching, because no man is an island. We learn from each other."

However, facilitators were not always able to steer the discussion away from general classroom challenges and content to pedagogy. During interviews and focus group discussions, teachers mentioned that the TGMs positively impacted their classroom practice as well as their relationships with their colleagues. Teachers mentioned that TGMs make them work as a team, that they contribute to a culture of sharing and learning, and that they help build their confidence as teachers. Teachers also mentioned practising reflection and problem-solving skills during TGMs. One facilitator stated:

"The reason why sometimes we, as teachers, don't deliver well is when we are ashamed to ask. And that was what they taught us in the Tich mi ar tich dem; we should always learn to ask. How are we going to ask? When we meet in that teacher group meeting."

This suggests that TGMs can remove the barrier of asking for help, and that they can facilitate the process of sharing challenges and learning among teachers. It also connects peer learning to improved classroom practice. Interestingly, this statement also links asking questions with sentiments of shame (see also the quotation at the start of the paragraph). This implies that the TGMs can break down barriers between teachers and have the potential to create a safe learning environment during the sessions.

Our findings furthermore show that this climate extends beyond the TGMs. One of the teachers remarked:

"Because we are close, we talk frequently, so sometimes there are problems that someone is facing; I will call him and advise him. You know, this is a school, this is how it should go." This illustrates that teachers felt comfortable asking for help outside of TGMs. SSIs with facilitators and FGDs also showed that the TGMs contributed to a culture change in the school where teachers supported each other outside the TGMs. In one school, the head teacher used the mood tracker from cycle 3 to support teachers at the start of the day. Another school has created a rotation system where teachers help each other teach subjects they are less familiar with.

We have also observed peer learning between facilitators. After Induction Workshop 3, a school from Cycle 1 invited schools from Cycle 3 in their neighbourhood to join their TGM. They also gave advice on how to set up a TGM, how to engage the head teacher, how to motivate teachers and what adaptations could be made to the structure and time to adjust it to their context. Facilitators connected during the workshop, and facilitators from Cycle 3 expressed some concern about the implementation in their school. We observed a similar process with a school from Cycle 2 that supported a school from Cycle 3 located near the Cycle 2 school. This suggests that the school-based model has the potential to support peer learning at different levels: at the teacher level, at the school level, and between schools.

3.2. Facilitators as enablers for peer learning and support

Facilitators played a pivotal role in facilitating an environment of peer learning and support. Their motivation, facilitation style, and understanding of the content determined to a great extent the success of the teacher group meetings. Teachers were generally positive about their colleagues' ability to facilitate the meetings. They liked that facilitators "came down to their level" to explain.

Facilitators report that they have learnt from being facilitators. They say that facilitating the sessions allows them to learn from the challenges, solutions, and ideas that their colleagues share and that it improves their classroom practice. In addition, some facilitators indicate that the role changed their relationship with their colleagues positively, as well as their position in the school. One facilitator stated:

"I feel great, because for me to stand amongst my colleagues, to facilitate them, to ask them questions, to stand up as a role model, to guide them, is something utterly good for me."

This suggests that the role can support facilitators' confidence and that it can make them feel empowered.

Nonetheless, the role also posed significant challenges. It was difficult to find time during school hours, so TGMs often took place after school. This made it challenging for facilitators to motivate their colleagues to attend. Teachers are either on low salaries or unpaid. Therefore, appealing to them in their personal time is difficult, especially because there are no material incentives to attend (financial, lunch, certificates). In addition to the challenge of finding time to hold the session, facilitators and teachers indicated that the length of the session was also an issue. Due to the limited time for the

TGM, facilitators struggled to complete the structure of the session. Some facilitators mentioned that this puts a strain on their relationship with colleagues, as they were not able to discuss everyone's challenges during the session.

Additional needs mentioned are peer support from other facilitators and opportunities for career progression as a result of their role, and continuous coaching. As shown in the previous section, facilitators sought out support from their colleagues in other schools. Including peer-group-based learning for facilitators could support their professional development. Lastly, facilitators indicated that they also need encouragement from their colleagues and school leaders and financial support for their extra time and effort.

3.3. School leader engagement: a key factor for successful implementation

Interviews with facilitators and school leaders for the TGMs revealed that school leader engagement and support centred around several key functions: providing validity and resources for the TGMs; encouraging and reminding teachers to join the TGMs; participating in the meetings and within that, providing guidance and acting as a role model during the meetings. One facilitator stated:

"It was not really easy, but through the help of the head, she encouraged them that we should do this out of humanity, that we should all, because most of them [teachers] were complaining about the situation presently, due to the low salary. [...] But due to the help of the head, she encouraged them that we should try and do this out of humanity and forget about all other things around it."

This shows that the support of the school leader for the TGMs is essential to their successful implementation. Our TGM observations confirmed this. TGMs at schools where the school leader was highly engaged in the programme showed higher attendance and participation during the sessions than schools where the school leader was less engaged. Some facilitators also mentioned the positive effects of school leader attendance in TGMs, such as their providing guidance and serving as a role model:

"Well, he [the school leader] too he played a role because you know that he is a role model, he knows much more than us, because even this training that we have gone through, they have experience over that. Where we did not know, they stepped in, they guided us, even our deputy head teacher, he knows much about this training. Where we did not understand, he stepped in and guided us to let the training be successful."

Our TGM observations confirm that the school leader can support the facilitation of the TGMs. During the sessions, we observed school leaders encouraging facilitators, as well as teachers, to share ideas. They also provide input on questions and challenges teachers had related to their classroom practice. A few school leaders expressed interest in

undertaking training and serving as facilitators themselves. Nonetheless, we also observed a TGM where the presence of the school leader did not contribute to a safe learning environment. Therefore, moving forward with this model, school leader engagement in their role and support for TPD should be included.

3.4. Time limitations

The facilitator guide suggests a duration of one hour for the TGM. However, there is no time scheduled for the TGM in the school schedule and timetable, and sessions have to be organised after school hours. In addition, facilitators organised TGMs during lunch hours instead of after-school hours to incentivise teachers to attend. The main reason is that teachers cannot, or will not, attend meetings if they take place after school hours. Therefore, most facilitators limited the duration of the TGM in order to motivate their colleagues. Some facilitators reported that they initially had sessions that were longer but that they had to limit the time because of complaints from their colleagues. As mentioned before, this put a strain on having enough time for discussion, getting through the content of the session, as well as making sure all teachers felt acknowledged. Facilitators sometimes tried to negotiate these terms with their colleagues:

"Well, we try to increase the time we talk to them, to the teachers, to see if they can give us some updates on that: one hour. So that we are able to discuss at least, to take two or three problems of teachers to deliberate on, to find solutions to their problems. I think that's the most important thing."

This highlights the issue of time constraints and also the role facilitators play as enablers of successful implementation. In several of the TGMs we observed, the time limit was discussed at some point. Through a democratic process, time was sometimes extended, depending on the willingness of teachers and the level of persuasion of the head teacher.

We observed several sessions where colleagues or the head teacher were supervising children, while the TGM took place. For example, when the time for the session was extended during the lunch break. This meant that there were many disturbances by pupils, colleagues, and other community members who required the attention of specific teachers. This often meant that not all teachers were present for the full meeting or that the head teacher could not be present. Women, in particular, mention that they have domestic tasks that keep them from staying after school. In TGMs that took place after school hours, we observed that teachers had their own children with them during the session.

These findings suggest that for the model to be successful, time for TGMs needs to be scheduled within regular school hours.

3.5. Materials as enablers for successful facilitation

Our findings suggest that the materials for the TGM can enable facilitators, depending on the format and the medium through which they are provided. Initially, facilitators indicated that they thought the facilitator guide was good. However, our TGM observations revealed that the video content shared through the WhatsApp group, as well as the activities modelled during the workshop, were more popular than the activities from the guide. One TGM observation showed facilitators following the session as recommended in the facilitator guide. The other observations showed either the activities from the videos that were shared to visualise a pedagogy from the guide or activities from the workshop that were not in the guide. After probing facilitators more on the issue of materials, some indicated that they had not gone through the materials due to lack of time:

"As for me, only time, I don't have enough time to read, that is my problem. Because I have so much work to do after school. I'm a single parent, so maybe, like around two o'clock in the morning, I will be able to read my manual."

This indicates that although written materials can enable facilitators, other factors, such as their limited time, prevents effective use of the materials. Other facilitators also mentioned that there is too much text in the guide and that it needs to be more concise. Some facilitators mentioned that they require ICT in order to have access to teaching resources. These findings, combined with the observed success of the video content and activities modelled, suggest that different media for TGM content provision should be further explored. Facilitator materials have been mentioned in the previous section. Nonetheless, the TPD materials for teachers, as well as the general availability of teaching and learning materials, affect the success of the TGM. In Cycle 2, teachers received a notebook and a pen for the TGM. In Cycle 3, they received a teacher journal, a hand-out with content and activities to use during and after the TGM, as well as pens and crayons. During our FGDs, materials came up as a challenge, though sometimes in a more general sense. Materials frequently mentioned are vanguards, books, pencils, whiteboards and markers (to avoid chalk affecting teachers' eyes), and crayons.

3.6. TGM content can support peer learning and well-being

The content provided to teachers as part of our design experiment varied across the three cycles. In Cycle 1, the workshop focussed mainly on the facilitation of the TGMs but also introduced a structure for collective reflection (School A and School B). Based on our findings from Cycle 1, materials from **OER4Schools**³ focusing on interactive pedagogies were adapted for Cycle 2. They included activities for four TGMs in the facilitator guide and an induction workshop for Cycle 2 (schools A, C, D). Findings from Cycle 2 informed the adaptation of the content into interactive strategies for

³ See https://oer.opendeved.net/wiki/OER4Schools retrieved 5 April 2023

social-emotional and mental health for teachers and learners for four TGMs in Cycle 3 (schools A, C, D, E, F, G, H, I, J).

The feedback on the TGM content varied across cycles. During Cycle 1, teachers and facilitators valued the interactive character of the collective reflection the most. One of the facilitators mentioned:

"I learnt something new from others, especially their challenges. Because I was teaching, maybe I have never got such challenges as theirs. So now, getting these challenges and providing solutions, that helps a lot because if per adventure I am met with such challenges, I will remember that one of my colleagues has met this before. Then now, I'm ready to admit it. Then what will happen: I will apply the method that works for that. These are new things that we learn."

During SSIs and FGDs, teachers indicated that they valued learning from their colleagues in the collective reflection. Facilitators also identified the collective reflection as the most valuable part of the TGM.

Facilitators and teachers interviewed during Cycle 2 valued the interactive character of the TGM, as well as the content about interactive teaching. As mentioned before, the video content that was shared in Cycle 2 as examples of two interactive pedagogies was directly copied by the facilitators into the TGM in two out of three schools. The focus of the activity, however, was on the content rather than the pedagogy. For example, a video shared about brainstorming as an interactive pedagogy with the topic ' living and non-living things' was then copied by facilitators as an activity on how to teach the topic of ' living and non-living things', rather than using brainstorming activities as an interactive pedagogy. The third school did the collective reflection from Cycle 1 and some activities from the workshop.

The content for Cycle 3 focussed on strategies for learner and teacher well-being, and our findings suggest that this was picked up well and appreciated by teachers. One of the facilitators mentioned that she would continue with the materials after the summer holidays:

"This book is very interesting to me, like this exercise, this classroom strategy: social-emotional mental health. This exercise. I thought to myself that the next year when school re-opens [...] that every week I'm going to take one part of this exercise here because we have four exercises here. So, doing that can help you to know your children well."

Furthermore, during FGDs, teachers and facilitators indicated that they liked the content because it placed teachers at the centre. In particular, the mood tracker and active listening were mentioned as strategies they used to support each other. The activities allowed teachers to reflect on and share how they were feeling, what was bothering them and how they could deal with those issues. Teachers mentioned that personal issues can affect their mental state and that the activities made them more aware of that. They also talked about how they can impact their classroom practice. They reported that these activities also made them work as a team.

In Cycle 3, we also observed that more activities from the guide were implemented during the TGMs. Activities included role-play, discussion, practising active listening in pairs, and journaling. These findings suggest that the TGM content should emphasise interaction between teachers, and that interactive pedagogies and strategies for the well-being of both learners and teachers should be considered.

3.7. The difficult conditions of teachers as a barrier to successful implementation of the model

Our findings suggest that the lack of teacher motivation is likely one of the biggest barriers to successful TGMs. Lack of motivation is mostly due to the low and non-salary conditions, the lack of career progression, and the fact that TGMs are often organised outside of school hours. Teachers' salaries range between Le 700,000 and Le 1,700,000, which the cost of living far exceeds. Teachers have other obligations after school hours, such as domestic tasks, and may need to earn a supplementary income: 33% of primary school teachers are volunteers (*Ministry of Basic and Senior Secondary Education, 2021). During Induction Workshop 3, these issues came up as one of the discussion points and potential barriers to organising the TGMs. We also note that the role of gender in this TPD model requires additional research; in the context of Sierra Leone, significant gender disparities prevail (*Ministry of Basic and Senior Secondary Education, 2021), and career progression for women is generally lower (*Mackintosh et al., 2020b). Therefore, it is necessary to look specifically at what enables women to access opportunities for professional development.

The following quote illustrates that the lack of career progression affects teacher motivation:

"I have been a teacher for 31 years without promotion. 31 years, good years. Since I left school in 1992. I entered the classroom, no promotion. Up till now, I'm just an ordinary teacher. So, we are stressed. Well, no promotion, no additional salary. No nothing."

Teacher motivation also needs to be seen in the context of strikes. For example, facilitators were unable to organise TGMs in two out of ten schools in Cycle 3. The facilitators and school leaders in those schools indicated that this was due to teachers being on strike, as well as due to the timing of the intervention. Cycle 3 commenced in the last month of the school year, when teachers are busy with end-of-term activities, such as examinations. This, combined with poor teaching conditions for teachers, prevented them from organising the TGMs.

Teachers commented that refreshments could also be a strong motivating factor for attendance at TGMs:

"Again, to the Tich Mi I Tich you song: for it to be melodious, you people need to find something for us. Find something for us to eat."

In Sierra Leone, it is customary to offer food when you call people for meetings, and the school budget does not allow that. Furthermore, as meetings are often during lunchtime or after school hours, teachers are hungry and, therefore, encouraged by the availability of refreshments. Teachers indicate that nutrition is a significant struggle, both for teachers and learners. During our observations in Cycles 1 and 2, the lack of food was one of the most often mentioned classroom challenges, for example, in relation to learners sleeping or not performing in class. In one school, the school feeding programme takes place on Fridays, which is the reason the TGM is organised on that day: lunch will be available afterwards for the teachers. In terms of budget and sustainability, it would be difficult to provide refreshments for TGMs. Nonetheless, including a budget for refreshments in the school subsidies could be considered as a possible solution.

Finally, it should be noted that during SSIs (Cycle 1) and FGDs (Cycles 2 and 3), teachers repeatedly brought up resource challenges. Most of them mentioned poor seating arrangements, overcrowded classrooms, lack of teaching and learning resources, and related challenges of classroom management. In addition, the issue of children who are hungry was frequently mentioned. Our TGM observations also show that most of the challenges that were shared during collective reflection relate to such resource challenges. Therefore, for this model to be successful, the challenges related to the preconditions for teaching and learning need to be addressed.

3.8. Opportunities for the use of EdTech to support the community of learning

Through our engagement with facilitators and school leaders, we found that the use of EdTech has the potential to facilitate communication, support, and the provision of content. As mentioned earlier, facilitators in Cycle 2 seemed to prefer materials provided through the WhatsApp group We also observed the use of audio content shared via the WhatsApp group in Cycle 3. Furthermore, the WhatsApp group was especially active during Cycle 3, with messages offering general support and greetings, questions about the TGM content, and teachers used the group to get the contact information of fellow facilitators in order to initiate collaboration. The research team also used the platform to share content, communicate about school visits and share updates. This initial finding suggests that the use of EdTech to support TPD and, more broadly, the community of learning, should be further explored.

3.9. Improved coordination and alignment of TPD initiatives could enable more teachers to benefit from TPD opportunities

Alongside the DBIR work in the schools, the research team investigated the TPD landscape in Sierra Leone through engagement with government, NGOs, and other stakeholders in the education sector. We collaborated with EdTechHub and the TSC on a teacher continuous professional development mapping to gain a better understanding of the TPD landscape in Sierra Leone. From these engagements, as well as from our school visits and conversations with school leaders and facilitators, we discovered that some schools have multiple TPD projects at the same time, whereas others have none. Moreover, learnings and knowledge between organisations active in the field are not always shared, and there is little coordination across different programmes. During a learning workshop organised by our partner EducAid, TPD in Sierra Leone was described as "a jigsaw puzzle of which we all hold a piece". Improved coordination and alignment could enable more teachers to benefit from TPD opportunities.

5. Recommendations

Our findings suggest that school-based TPD in primary schools in Sierra Leone has the potential to be successful. However, teachers in Sierra Leone face significant challenges that prevent teachers from enjoying opportunities through school-based TPD. This study has investigated those enablers and barriers, and the following recommendations emerged from our findings:

- 1. Prioritise teacher well-being through the provision of sufficient salaries and basic needs, by validating teachers and their profession, and by providing opportunities for career progression for teachers.
- 2. Offer school-based and peer-supported TPD with an interactive character, including TGMs, and provide additional continuous coaching and peer support for peer facilitators.
- 3. Work with school leaders on defining their role in supporting school-based TPD prior to the intervention, including the selection of and support for facilitators, and support school leaders' autonomy through additional training and coaching.
- 4. Emphasise facilitation skills during the training of facilitators, as well as interactive and learner-centred pedagogies. Include strategies for teacher and learner well-being in the TPD curriculum.
- 5. Include time for bi-weekly teacher group meetings (TGMs) in the school schedule and within the school day, bearing in mind teachers' commitments to childcare, domestic chores, and additional jobs. The recommended duration is 1.5 hours to make sure there is enough time for interaction during the TGMs.
- 6. Deliver content for TGMs, and TPD in general, through video and modelling, supported by clear, concise, and visually attractive print materials that can withstand the climate (i.e., laminated or strong water-resistant materials).
- 7. Improve coordination of TPD by the TSC, and use data for school selection for TPD so that more teachers can benefit from TPD opportunities.

6. References

This bibliography is available digitally in our evidence library at https://docs.opendeved.net/lib/N665IBBE

Crisp, M., Safford, K., & Wolfenden, F. (2017). *It takes avillage to raise a teacher: The Learning assistant programme in Sierra Leone*. http://oro.open.ac.uk/49603/1/Sierra%20Leone%20LA%20Research%20Report%2 0170517%20FINAL.PDF. (details)

Haßler, B., Lurvink, A.-F., Beoku-Betts, I., McBurnie, C., Adam, T., & Blower, T. (2022b). *Tich Me Ar Tich Dem — Inception Report* (Tich Me Ar Tich Dem Output 1). OpenDevEd. https://doi.org/10.53832/opendeved.0269. Available from https://docs.opendeved.net/lib/3RTBA9FR. Available under Creative Commons Attribution 4.0. (details)

Junaid, M. I., Ogange, B., & Allela, M. (2016). Technology and Teacher Professional Development (TPD): the process and content of microlearning in a school-based integrated in-service teacher education (INSET) project. http://oasis.col.org/bitstream/handle/11599/3313/PCF9_Papers_paper_287.pdf?se quence=1&isAllowed=y. Available from http://oasis.col.org/bitstream/handle/11599/3313/PCF9_Papers_paper_287.pdf?se quence=1&isAllowed=y. (details)

Kamara, A. B. (2020). Challenges of Teachers on Teaching Practice: A Case Study of Students of Freetown Teachers' College in Sierra Leone. Asian Journal of Interdisciplinary Research, 32–37. https://doi.org/10.34256/ajir2012. Available from https://journals.asianresassoc.org/index.php/ajir/article/view/548. (details)

MOEST. (2017). *Education Sector Plan (2018-2020)*. https://www.globalpartnership.org/sites/default/files/2018-10-sierra-leone-esp.pd f. (details)

- Mackintosh, A., Ramirez, A., Atherton, P., Collis, V., Mason-Sesay, M., & Bart-Williams, C. (2020). Education Workforce Spatial Analysis in Sierra Leone. https://educationcommission.org/wp-content/uploads/2020/12/2-EW-Spatial-Analy sis-Paper.pdf. (details)
- Mackintosh, A., Ramirez, A., Mason-Sesay, M., & Bart-Williams, C. (2020). *Education Workforce Supply and Needs in Sierra Leone*. https://educationcommission.org/wp-content/uploads/2020/12/3-EW-Supply-and-Needs-Paper.pdf. (details)
- Ministry of Basic and Senior Secondary Education. (2021). 2020 Annual School Census Report.

chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.dsti.gov.sl/wp -content/uploads/2021/07/ASC-2020-Report.pdf. (details)

- Penuel, W. R., Fishman, B. J., Haugan Cheng, B., & Sabelli, N. (2011). Organizing Research and Development at the Intersection of Learning, Implementation, and Design. *Educational Researcher*, 40(7), 331–337. https://doi.org/10.3102/0013189x11421826. Available from https://doi.org/10.3102/0013189X11421826. (details)
- UIS. (2019). Sierra Leone | UNESCO UIS. http://uis.unesco.org/en/country/sl. (details)

World Bank. (2020). Human Capital Project - October 2020. (details)

Annex 1. Overview of the data-collection process

The table below provides an overview of data-collection activities in participating schools across the three cycles of DBIR.

	Cycle 1	Cycle 2	Cycle 3
School A	1 TGM observation 1 FGD 1 SSI school leader 3 SSIs peer facilitators 6 SSIs teachers	1TGM observation 1FGD 1 SSI school leader 2 SSIs peer facilitators	No data collected*
School B	1 FGD 1SSI school leader 3 SSIs peer facilitators 3 SSIs teachers		
School C		1TGM observation 1FGD 1 SSI school leader 2 SSIs peer facilitators	1TGM observation*
School D		1TGM observation 1FGD 1 SSI school leader 2 SSIs peer facilitators	No data collected*
School E***			1 SSI school leader** 1 SSI peer facilitators
School F			1 SSI school leader** 1 SSI peer facilitators
School G			1 SSI school

No Teacher is an Island: A case study on the enablers and barriers for effective school-based teacher professional development in Sierra Leone

		leader** 1 SSI peer facilitators
School H		1TGM observation 1FGD 1 SSI school leader 2 SSIs peer facilitators
School I		1TGM observation 1FGD 1 SSI school leader 2 SSIs peer facilitators
School J		1TGM observation 1FGD 1 SSI school leader 2 SSIs peer facilitators

* For Cycle 3 there were no interviews and focus group discussions planned for these schools due to the short time since the previous data collection activity. TGM observations were planned, but due to teacher absenteeism in the last weeks of the term, we were unable to conduct some of them.

**TGM observations and focus group discussions were planned for these schools, but due to teacher absenteeism and, in some cases, the lack of implementation in the schools, we were unable to conduct them.

*** These schools were unable to organise the TGMs in their schools. We interviewed the peer facilitators of these schools about the challenges they faced, and they indicated that it was due to strikes and exams.