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Zambian Education School-based Training (ZEST) Project

MIDLINE EVALUATION, May 2021

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Acknowledgements

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Contents

Acknowledgements.....	1
Executive summary.....	3
1. Introduction.....	5
2. Rationale and aims of the Midline Evaluation.....	5
3. The impact of the global pandemic.....	5
4. Midline Evaluation Exercise.....	6
5. Findings & Discussion.....	7
5.1. Teachers' Classroom Practice and professional skills.....	7
5.1.1. Time spent working in groups and in pairs.....	7
5.1.2. Teachers' confidence in using and reported use of participatory approaches.....	8
5.2. Teachers' collaborative practice.....	8
5.3. Teachers' participation in SBCPD.....	9
6. Conclusions.....	10

Executive summary

This brief Midline report builds on the ZEST Baseline report (March 2018). Details of the background and methodology can be found in that report, and in the Cohort 1, Cohort 2 and Cohort 3 evaluation reports.

Data was collected from 32 schools in Chisamba, Kabwe and Mwumba Districts, all of which are involved in ZEST. Data collection took place in November 2020 (Chisamba and Mumbwa) and February 2021 (Kabwe).

During 2020 the Covid19 global pandemic severely disrupted education in Zambia and prevented international travel. Schools closed in March 2020; they re-opened for exam classes in June and for all children in September. Social distancing meant that a shift system operated in Term 3 (from September) placing extra demands on teachers.

The restrictions have impacted on all aspects of the project. Group work in lessons was limited; some schools felt unable to hold Teacher Group Meetings (TGMs); and planned workshops to support Cohort 3 and the planning for scale-up could not take place as intended. However, the use of WhatsApp and Zoom meant that the project team could interact with the Cohort 3 schools, the District and the Province, and did so in 11 virtual meetings between June and December.

It is not clear what the impact of these restrictions has been on the data: opportunities for group work, for example, have been limited, but the regular virtual meetings provided a valuable opportunity for the project team to interact directly with schools and to model interactive meetings.

In this report, data has been analysed and reported against the logframe indicators.

Outcome Indicator 1: % of participating teachers demonstrating improved classroom practice (above the baseline, measured by the median proportion of time learners are working/talking in groups or pairs, in a sample of observed lessons)

Overall, this was found to be the same as the Baseline value of 5% of lesson time. When the data was examined for different grades, however, the value for Grades 1-3 was found to be 0% and for Grades 4-7 it was 10%. In 15/91 (17%) lessons, 20% or more of the lesson time was spent on group work or pair work, indicating that good practice is taking place. Overall, in 48% of lessons there was no group work or pair work observed; however this reduces to 33% when looking at data for upper primary classes (grades 4-7).

Output Indicator 1.4: % of teachers recording use of collaborative classroom practice

60% of teachers surveyed had made written notes on the use of collaborative classroom practice in their Teacher Notebook. The underlying assumption was that by providing a notebook, teachers would be encouraged to record their reflections on their teaching. There was some confusion, however, with some teachers expecting to be told what to write which explains the differences between cohorts from 30% in Cohort 2 to 75% in Cohort 3.

Outcome Indicator 2: % of participating schools implementing the school-based professional development programme (measured as participating schools which hold ≥ 3 TGMs per term)

The data show that 34% of schools held an average of 3 or more TGMs per term across the 3 terms. This is down from the Baseline value of 43% and reflects the fact that there was confusion in Cohort 1 and 2 schools (21/32) as to whether they could hold TGMs in Term 2 due to Covid19 restrictions. For Cohort 3 the figure was 64% of schools averaging 3 or more TGMs over 3 terms. Involvement in

Zoom meetings, which included discussions about meeting safety, probably impacted on Cohort 3. 66% of TGMs included aspects related to ZEST in their discussions.

There are many achievements from the first phase of ZEST that can be highlighted, including evidence of increased confidence and willingness of teachers to make changes to their teaching practice and collaborate with each other; good use of the ZEST contextualised resources and approaches in TGMs; work with school ICT champions to facilitate offline access to resources on teachers' personal devices; and the support provided to District and Provincial officials to support the training and sustainability of ZEST enhanced SBCPD.

The most significant finding beyond the logframe indicators is the mismatch between the teachers' reporting of the frequency at which they use group work and pair work and their confidence in doing so, and the data collected from classroom observations. From the teachers' reports, we would expect the figure for the percentage of lesson time in which learners have the opportunity to talk to each other in pairs or groups to be higher. This could possibly be a result of Covid19 restrictions, meaning that good intentions are not enacted in practice, but needs to be investigated further in Phase 2 before further evaluations take place.

More detail is included in the data that follows. Separate evaluations of Cohort 1, Cohort 2 and Cohort 3 are also available.

1. Introduction

The Open University (OU) and World Vision Zambia (WVZ) are working to deliver Zambian Education School-based Training (ZEST), with funding provided by the Scottish Government.

The aim of the ZEST enhanced Schools-based Continuing Professional Development (SBCPD) programme is to support the Zambian Government in the implementation of the Revised School Curriculum. The curriculum calls for more learner-centred approaches and a focus on the teaching of skills and values alongside knowledge. ZEST supports teachers through a focus on active teaching approaches and collaborative working, working within the existing system of regular teacher group meetings (TGMs) and collaborative planning. The main difference between ZEST and the current SBCPD model, based on the Japanese Lesson Study, is that resources have been provided to support TGMs and demonstration lessons have been replaced by an expectation that all teachers will try out the planned activities in their own lessons and reflect on how they went. Where possible, teachers are encouraged to observe each other informally for short periods of time and provide feedback. Thus, this enhanced School-based Continuing Professional Development (SBCPD) model involves all teachers as active participants.

Working with the Ministry of General Education (MoGE), the project has co-designed and tested resources for use by teachers, school leaders and education officials over a period of 3 years (2018-2021). Each year, the project has worked with a new cohort of approximately 200 teachers, school leaders and officials in a different District. As the finalisation of resources and delivery models comes to an end, the project is moving into its scale-up phase (2021-2022) which aims to reach up to 4000 teachers in 420 schools across 5 Central Province districts.

2. Rationale and aims of the Midline Evaluation

The aim of this Midline Evaluation is to establish progress against the project's baseline in 3 target districts (Chisamba - Cohort 1, Kabwe - Cohort 2 and Mumbwa - Cohort 3) with regards to active teaching and learning and teacher engagement in collaborative SBCPD. The three logframe indicators identified via the baseline and addressed in this midline report focus on active teaching and learning, and teachers' collaborative working:

- **Outcome indicator 1:** % of time participating teachers spend demonstrating improved classroom practice (above the baseline, measured by the median proportion of time learners are working / talking in groups or pairs, in a sample of observed lessons).
- **Output Indicator 1.4:** % of teachers recording use of collaborative classroom practice.
- **Outcome indicator 2:** % of participating schools implementing the school based professional development programme, recording an increase in collaborative work amongst teachers (above the baseline, measured as participating schools which hold ≥ 3 TGMs per term).

The findings from this report, alongside those of the more detailed Cohort evaluation reports, contribute to preparations for scale-up and ongoing discussions with education officials regarding progress, support and monitoring.

3. The impact of the global pandemic

COVID-19 started to emerge globally in January 2020. By March, most aspects of the project were affected – in Zambia, schools closed early ahead of Easter break, national travel was restricted, and education officials/WVZ staff were required to work from home. The UK went into 'lockdown' and all non-essential international travel was suspended. In Zambia, schools partially re-opened in June

(Term 2) for Grades 7, 9 and 12 (Exam grades) in small classes. All teachers were expected to return to school at this time. In September (Term 3) schools re-opened for all students but operated a shift system so that students could be taught in smaller classes. The result was that, with up to three shifts a day, some students spent less time in school than before the pandemic. Social distancing restricted the teaching approaches that teachers could use (e.g. group work), and disruptions to the school routine impacted on TGMs.

In ZEST, virtual working was introduced to counteract the inability to conduct face-to-face training workshops with schools/districts. This enabled discussion and support amongst schools, districts, WVZ and OU; however, it was a limited substitute for workshops where reflective activities, feedback and networking would normally take place and provide a source of valuable data for evaluations. In addition to this, school closures, home-working, travel and meeting restrictions all impacted on monitoring and support activities throughout the last year. Work, discussions and support have continued where possible but not to the extent that they would have if circumstances were the same as pre-pandemic.

The data collected in this evaluation reflects the conditions in/around schools during this time – particularly the requirement to maintain social distancing - and should therefore be considered in that context.

4. Midline Evaluation Exercise

The Midline Evaluation exercise was conducted as a mixed method study combining quantitative and qualitative data. 32 out of the 34 Cohorts 1, 2 and 3 schools participated (1 school was not functional at the time; entry was refused to the other by the farm owner. Both schools were from Cohort 1). Wherever possible, a similar approach to the baseline study and cohort evaluations was followed, involving face-to-face interviews with teachers and CPD leaders, a review of school documents and lesson observations. The lesson observations were undertaken using a ‘time sampling’ method in which enumerators employed an ‘instantaneous time sampling’ technique to record what the teacher and the learners were doing every 2 minutes throughout the duration of the lesson. (For a more detailed account of the interview and observation schedules, see the baseline report).

Data collection was overseen by WVZ and undertaken by 16 independent enumerators in 2 blocks – one in November 2020 (Chisamba and Mumbwa), and one in February 2021 (Kabwe). Data was collected on tablets using KOBOLCollect ; data analysis was undertaken by an external consultant, and this report prepared by the OU.

Overall, this evaluation included visits to 32 schools in which 91 lesson observations, 153 teacher interviews and 32 CPD interviews with headteachers (or school in-service coordinators/senior staff) were conducted.

Out of the 32 schools, 15 were from Cohort 1, six from Cohort 2 and 11 from Cohort 3. 75% were government schools (24) with the majority being rural schools (19). The six cohort 2 schools were urban or peri-urban, and there were no urban schools in Cohort 1. Overall, 81% of teachers were female and 19% male, while among learners the gender balance was 50%. Schools ranged from 3 to 54 teachers, and between 233 and 2015 learners.

In the next section, the tables referred to are from the Baseline report (dated 25/06/2018) and for the midline from the data document: ZEST Midline Evaluation - Data reportFinal_270521.doc.

5. Findings & Discussion

5.1. Teachers' Classroom Practice and professional skills

5.1.1. Time spent working in groups and in pairs

Outcome indicator 1: % of time participating teachers spend demonstrating improved classroom practice (above the baseline, measured by the median proportion of time learners are working / talking in groups or pairs, in a sample of observed lessons)

Baseline: 5% | Midline: 5%

Baseline Findings	Midline Findings
The data (across all representations) are suggestive of predominantly teacher-led lessons and passive involvement of learners	Lesson observations suggest predominantly teacher-led lessons and passive involvement of learners. Teacher interviews suggest otherwise, with increased confidence in the use of learner centred approaches. Teachers report the regular use of these techniques, but this was not seen in the observations.
Lesson observations suggest low levels of group and pair work in practice (Table 9)	Lesson observations suggest increased use of group and pair work with older learners (Tables 7b and 7c)
The mean (average) shows 9% (4 minutes) of lesson time was devoted to group or pair work activities (Table 9)	The mean (average) shows 8% (3 minutes) of lesson time was devoted to group or pair work activities (Table 7a)
The median however shows just 5% (2 minutes) of lesson time is devoted to group and pair work activities, suggesting that a smaller proportion of teachers are using more group and pair work helping raise the mean (Table 9)	The median however shows just 5% (2 minutes) of lesson time is devoted to group and pair work activities, suggesting that a smaller proportion of teachers are using more group and pair work helping raise the mean. (Table 7a) Breaking the data down by grade shows a marked difference in the use of pair and group work between lower primary (grades 1-3 – median 0%) and upper primary (grades 4-7 – median 10%). (Tables 7b and 7c)
41% of lessons observed have no evidence of group or pair work	48% of lessons observed have no evidence of group or pair work. (Table 8a) Breaking the data down by grade shows a marked difference, with 67% of lower grade lessons showing no evidence of group/pair work, but only 33% of upper grade lessons. (Tables 8b and 8c)

The use of group work (mean 8%) is more common than the use of pair work (mean 1%) (Table 9)	The use of group work (mean 5%) is more common than the use of pair work (mean 3%) (Table 7a)
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5.1.2. Teachers' confidence in using and reported use of participatory approaches

Baseline Findings	Midline Findings
Teachers report high levels of confidence and use of group and pair work (Tables 10 and 11)	Teachers report high levels of confidence and use of group and pair work (Tables 16 and 17)
The proportion of teachers reporting being 'confident' or 'very confident' in using group work is 87%, and pair work 66% (Table 10)	The proportion of teachers reporting being 'confident' or 'very confident' in using group work is 82%, and pair work 85% (Table 17a)
The proportion of teachers reporting using these in most or every lesson is 74% for group work and 37% for pair work (Table 11)	The proportion of teachers reporting using these in most or every lesson is 38% for group work and 48% for pair work (Table 16a)
Teachers report higher use of and confidence in using group work than pair work	Teachers report higher use of and confidence in using pair work than group work.
19% of teachers report never using pair work; 3% of teachers report never using group work (Table 11)	18% of teachers report never using pair work; 26% report never using group work. (Table 16a)

5.2. Teachers' collaborative practice

Output Indicator 1.4: % of teachers recording use of collaborative classroom practice.

Baseline: 0% | Midline: 60%

Baseline Findings	Midline Findings
Teachers did not have a systematic model to record their collaborative practice	<p>60% of teachers (92 teachers) had made written notes on the use of collaborative classroom practice in their Teacher Notebook. (Table 14)</p> <p>This can be broken down per district and indicates that the focus on the importance of recording practice identified as a result of the cohort 2 evaluation has had a positive impact.</p> <ul style="list-style-type: none"> • Cohort 1 (Chisamba) – 62% is a marked increase from the 47% recorded in the Cohort 1 Evaluation (2019). • Cohort 2 (Kabwe) – 30% is a slight increase from the 29% recorded in the Cohort 2 Evaluation (2020)

	<ul style="list-style-type: none"> • Cohort 3 (Mumbwa) – 75% is a great result for the first year of the new 2-year programme <p>During the Co-Design phase, participating teachers were provided with a ZEST Teacher Notebook in which to record their plans, practice and reflections. The Notebook has evolved over the 3 years and considering feedback received from C1 and C2, information was moved from the original Notebook into the resources as specific activities. Cohort 3 teachers were provided with blank notebooks.</p>
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5.3. Teachers’ participation in SBCPD

Outcome indicator 2: % of participating schools implementing the school based professional development programme, recording an increase in collaborative work amongst teachers (above the baseline, measured as participating schools which hold ≥3 TGMs per term)

Baseline: 43% | Midline 34%

Baseline Findings	Midline Findings
The average (mean) number of Teacher Group Meetings (TGMs) held per term over the past three terms is 3. The mid (median) number of Teacher Group Meetings (TGMs) held per term over the past three terms is 2, suggesting that a smaller proportion of schools are holding more TGMs and helping raise the mean (Table 12)	The average (mean) number of Teacher Group Meetings (TGMs) held per term over the past three terms is 3. The mid (median) number of Teacher Group Meetings (TGMs) held per term over the past three terms is 2, suggesting that a smaller proportion of schools are holding more TGMs and helping raise the mean (Table 19)
13% of schools did not have any TGMs in term 2 of 2017, 33% in term 3, and 19% in term 1 of 2018 (Table 15)	6% of schools did not have any TGMs in term 1, 38% in term 2 and 13% in term 3 of 2020 (Table 20) Apart from Term 2 (affected by school closures), fewer schools had no TGMs each term.
43% of schools held an average of 3 or more TGMs across the 3 terms (Table 15)	34% of schools held an average of 3 or more TGMs across the 3 terms (Table 20). For Cohorts 1 and 2 the number of TGMs are lower in Terms 2 and 3, possibly linked to the misunderstanding that TGMS were restricted in accordance with social distancing guidelines.
From the interviews and school record data, it was not possible to come to robust conclusions as to the proportion of TGMs which involved collaborative SBCPD. This would require a more complete qualitative study of the actual events	66% of TGMs were related to ZEST. Other topics discussed included responding to Covid19, exams, subject specific teaching...

<p>or a more detailed interview of teacher participants; however, even with a generous inference of what was implied, only about half (48%) of the activities recorded could be attributed as collaborative SBCPD. (Table 13)</p>	<ul style="list-style-type: none"> • A much higher percentage of Cohort 3 TGMs included aspects related to ZEST (C3: 82.98%; C2: 55.88%; C1: 41.86%). <p>In C3 WhatsApp and Zoom were used to counteract the inability of face to face meetings taking place due to the Covid Pandemic. Contributions of Head teachers and/or SICS at the 11 Zoom meetings indicated schools were 'using the learning and discussions from the ZOOM meetings and WhatsApp conversations in different ways to support SBCPDs: printing the meeting notes and filing them with access for HT/DHT/SIC, using them to facilitate discussions in TGMs and giving access to all teachers via files in school or by uploading to Raspberry Pi'. (Zoom, term 2, meeting 3). This suggests that TGMs taking place in C3 schools were very focused on collaborative SBCPD.</p>
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6. Conclusions

There is no doubt that the work of schools across all three cohorts has been severely disrupted since early 2020 by the pandemic and its impact continues to be felt, particularly in the observed use of group and pair work in classrooms.

One area of concern is around the mismatch between observed and recorded practice in evaluations and the teachers' reported use of different teaching approaches. This is an aspect that requires further investigation in preparation for further evaluations in the scale-up phase of ZEST.

Despite this there are key achievements visible at the midline point as the project moves into Phase 2 (scale-up):

- An 'Enhanced SPRINT' system which fits in with existing systems and processes, and actively engages teachers in continuing professional development focused on the delivery of the Revised School Curriculum which emphasises teaching skills and values alongside knowledge.
- Some evidence of increased confidence and willingness of teachers to make changes in their classroom practice.
- An enthusiasm for collaborative practice amongst teachers.
- Contextualised resources to support Teacher Group Meetings (TGMs) including written and audio-visual material, that show teachers how to be learner-centred in their approach. These resources offer specific guided support for TGMs over 2 years, as well as containing additional resources to be used over the longer term. These will be universally available on the internet with an open government license.
- Offline access to these resources via the teachers' own personal devices, connected to a Raspberry Pi computer.
- A network of school ICT 'champions' to support the use of the Raspberry Pi computers.
- Provincial and District officials equipped to train new Districts and experienced in using communicative technologies to engage with school leaders.