



Monitoring Guideline for Edo AI Pilot

AI for Youth in Edo, Nigeria- May 2024

Dear Monitor,

This is the monitoring guideline for an after-school pilot on the use of Artificial Intelligence (AI) in the classroom. Congratulations and thank you for being part of this Education Technology (EdTech) innovative in Edo State, Nigeria.

This guideline will focus on supporting you in developing required skills and tools for effective monitoring of the AI pilot program in your assigned school(s). It will also address some possible challenges you may face during these sessions and propose solutions.

Sincerely,

Table of Contents

INTRODUCTION	3
PILOT OVERVIEW.....	3
MONITORING PILLARS	3

MONITORING ROUTINE.....	4
KEY MONITORING ACTIVITIES	4
MONITOR MATRIX:	4
CODE OF CONDUCT	7
ANNEX 2: MONITORING QUESTIONNAIRE.....	12
ANNEX 3: MONITORING REPORT TEMPLATE	ERROR! BOOKMARK NOT DEFINED.

Introduction

Pilot overview

The AI Pilot for Youth in Edo, Nigeria is an after-school program, designed to assess the effect of using a large language model (LLM) for improving learning outcomes in English among students in senior secondary schools in Edo state, Nigeria. The program seeks to improve learning in English by allowing students to interact with an LLM chatbot in semi-structured sessions that take place in their school lab twice a week, for one and a half hours.

Program Monitors' will participate actively throughout the implementation of the program to ensure that an effective implementation takes place, inform implementation bottlenecks, and provide cross-support to teachers in the classroom when necessary. Therefore, your role as a monitor for the AI Pilot program in Edo State is crucial for the success of the after-school activities across schools. This guideline will provide you with a step-by-step approach to effectively monitor and support the program.

Monitoring pillars

The monitoring routine starts when the Monitoring officer arrives at the school and finalizes after the session closes. Along this journey, the monitoring officer will sequentially capture objective and subjective information covering the following critical pillars:

1. **Physical assets and lab's condition:** review the general state of the lab(s) where the sessions are conducted, the availability and condition of the computers and other physical assets needed for the correct rollout of the program.
2. **Session attendance and session structure:** record teacher and student attendance, start and end punctuality, and the development of the session according to the lesson plan, both in terms of timing and content.
3. **Lab performance:** assess the performance of the digital devices, connectivity, electricity supply, etc. during the session. Record the existence and intensity of session interruptions due to unexpected individual and general issues.
4. **Session development:** observe the ability of students to conduct activities proposed by the lesson plan, their behavior, engagement, and interaction, and the capacity of the teacher to conduct the session and support students during the session.
5. **AI skills and English knowledge acquisition:** Observe and capture (qualitatively) individual and class-level gaining of skills in the use of the AI tool, through practical exercises or projects provided, and learning of the topics practiced during each session.
6. **Feedback and Satisfaction:** capture students and teacher satisfaction with the training program, relevance of content, and effectiveness of instructional methods and materials.

Monitoring Routine

Key Monitoring Activities

Every monitoring officer is expected to cover the six monitoring pillars stated above by conducting monitoring activities that start before the commencement of each session and finalizes after it is closed. Below, you can find some key activities that are further detailed in the Monitoring Matrix below in this document:

- Conduct a visit to the designated schools before the commencement of the program.
- Verify the participation of both students and teachers in the program.
- Observe the delivery of AI-related activities and ensure they align with the program objectives.
- Document any issues, challenges, or successes observed during monitoring visits.
- Assist teachers and facilitators during the after-school sessions, especially in the event of teacher shortages.
- Assist in communicating the need for minor repairs or troubleshooting of ICT infrastructure used in the program.
- Provide feedback to the teacher to improve the implementation of the program.
- Produce the weekly monitoring report and present or discuss the findings in team-meetings, if necessary.

Monitor Matrix:

The following AI Monitor Matrix categorizes the thematic areas of monitoring, their milestones, and a summary of the activities that the monitors have to cover within the AI pilot implementation, prior and post-school visit.

Theme	Guidelines	Summary
Pre-program and visit preparation	• Familiarize yourself with the schedule and locations of the after-school program sessions. • Review the program objectives and activities of the program to understand what to expect during monitoring visits.	- Monitors must know the locations of after-school sessions they cover. - Monitors must know the expected number and conditions of the labs, computers, internet connectivity, furniture, etc. - Participate in the teachers and monitors training sessions. - Review and understand the program objectives, acquaint yourself with schedules.

		- Review and understand the procedures and guidelines for monitoring visits. - Know who to contact in case of any issues or emergencies.
Session check-up	• School and lab condition assessment • Attendance and session start	a. Arrival: - Arrive at the designated school no less than 15 minutes before the start of the session. - Introduce yourself stating the purpose of your visit. - Ask the teacher how the session will be structured b. Lab assessment: - Review the general condition of the lab. - Fill the questionnaire about existing devices, furnitures, and the rest of the hard assets. - Respond the questionnaire about hard and soft assets functioning. With particular focus on the number of devices and internet working correctly. - Check the designated teacher is in the classroom. - Record the time session starts. - Observe that the teacher is taking attendance following the list. - Particularly, check that only students on the list are present. No other students must be in the classroom - Respond to other questions in your monitoring form.
Monitoring session development	• Assess teacher's capacity to start the session and support students during the session.	- Check that the teacher follows the three-parts structure of the session. - Observe the teacher explains students the day's topic

	- Students' activities, as proposed by the lesson plan. - Plan the day's activity with the school staff and document arrival time of students/teachers into the computer lab for the AI session. - Cross support - Feedback and satisfaction	- Observe the teacher explains step-by-step how to set up the chatbots to start interactions. - Observe the ability of students to set up and introduce the first prompt. - Observe students' engagement with the Chatbot, teamwork in pairs and how they take turns to use the computer. - Check if students continue to ask the chatbot after the interactions from first prompt finishes. - Record interruptions in the power supply and internet connectivity, and how long it takes the class to resume their activities. - Respond the questionnaire about students attentiveness, teacher support, etc. - Take notes and photographs to document other observations that reflect the dynamics of the classroom. - Provide assistance and support to teachers or facilitators if needed. - Assist in resolving minor technical issues, repairs with ICT infrastructure or equipment during the sessions. - Provide assistance to teachers or facilitators during the session, when students' demand exceeds teachers capacity. - Provide guidance to students and encourage active participation in AI-related tasks. - At the end of the session, discuss with students and teachers to assess their experiences and get feedback.
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		- Discuss with the teacher and facilitators your main findings, and provide feedback on what to adjust for the following session
Post-Visit Reporting	- Review and produce monitoring reports - Reports submission.	- Review your monitoring notes and responses. - Determine the main findings across the six monitoring pillars. - State key findings, successes, challenges, and recommendations, following the template provided. - All reports must be submitted weekly to the program coordinator or supervisor by Sunday 5 pm.

Code of Conduct

Monitoring officers must follow and comply with the following principles throughout the program:

Professionalism:

- Maintain a professional demeanor at all times when interacting with school staff, students, and program participants.
- Treat all individuals (students, teachers, executive principals, vendors) with respect and courtesy.

Confidentiality:

- Respect the privacy and confidentiality of students and school personnel.
- Do not disclose sensitive information without authorization.

Respect:

- Treat all individuals with respect and courtesy, regardless of their role or background.

Neutrality:

- Remain impartial and objective in your observations and reporting.

Safety and Security

Health and Safety:

- Adhere to health and safety protocols, especially when conducting repairs or troubleshooting ICT infrastructure.

Security:

- Ensure the security of program materials, equipment, and data during monitoring visits.

Emergency Procedures

Emergency Contact:

- Familiarize yourself with emergency contact information for the school and program coordinator.
- Promptly report emergencies to the appropriate authorities.

Reporting Emergencies:

- In the event of an emergency, promptly report to the appropriate school authority and inform the program coordinator or supervisor.

Data Reporting

What/how to report:

Program monitors should prepare an internal report after every program session, and must produce the weekly report. Such weekly reports will be submitted to the coordinator and the monitor should expect a follow-up discussion to address the main findings. **Reports should follow the particular reporting order provided in this document as an Annex;** activity title, activity date, brief narration, key points, challenges, lessons learned, and action points. Maintain detailed records of training sessions, including attendance before and after the class, topics covered, and feedback received from questions and answer session.

Reporting tools:

Data tools will be provided for capturing certain activity data, while other data will be abstracted from the class attendance daily register. Monitors to ensure quality assurance of activity documentation and provided tools must be used, completely and correctly filled. **No fields or indicator should be left blank.** E.g if the indicator is zero (0), that field should 'not' be left empty; it should have a "0".

Reporting frequency/timeline:

While daily activity monitoring will be done at the selected schools, state-level reporting will be weekly. Reports will feed directly to the State Ministry of Education.

Who to report to:

Program Monitors will report to the State Ministry of Education and field program coordinator for the entire project life unless stated otherwise. All reports will be sent to the field program coordinator no later than every Sunday 5 pm.

Conclusively, the monitors play a vital role in ensuring the successful implementation of the AI Pilot program in Edo State. By effectively monitoring activities, providing support and adhering to these guidelines, you contribute to the overall success of the program and help create valuable learning opportunities for students.

If you have any questions or need further clarification, please reach out to your field program coordinator or supervisor.

Annex 1: Monitoring Brief for Consideration

- 1. Conduct System Performance Monitoring:** The LLM is technology and has the potential to give incorrect answers/responses if the appropriate “prompt” is not used. Here, monitor should look out for
 - the performance of AI algorithms and models
 - the accuracy, precision, response appropriateness, and other relevant metrics
 - identify any deviations from expected performance levels and take corrective actions.
- 2. Data Quality Monitoring:** Here we ensure the following are assessed for hands-on modifications if there are gaps
 - Monitor the quality of data captured for each session; names, gender, dates, attendance etc
 - Check the data inconsistencies, errors and implement processes for data cleaning, normalization, and augmentation as needed.
- 3. Feedback Monitoring:** This is to course-correct, serve as early-warning and not waiting for the pilot to be completed on a wrong note but provide real-time feedback to adjust implementation
 - Gather feedback from stakeholders (students, instructors, executive principals) on AI tools and pilot processes.
 - Analyze feedback to identify areas for improvement or enhancement.
 - Incorporate feedback into iterative development cycles with the teachers and principals to continuously refine the program.
- 4. Compliance Monitoring:**
 - Ensure compliance with ethical guidelines, regulations, and suggestions provided in the documents and trainings provided.
 - Monitor students interaction with AI systems for potential biases, discrimination, or ethical concerns.
- 5. Resource Monitoring:**
 - Monitor resource usage, including computing resources, power supply, and internet bandwidth.
 - Optimize resource allocation to ensure efficient implementation of the AI pilot.
 - Identify bottlenecks or resource constraints and take remedial actions as necessary.
- 6. Security Monitoring:**
 - Monitor AI systems for potential security vulnerabilities and threats.
 - Implement security controls such as access controls, encryption, and intrusion detection.
 - Conduct regular security audits for blocked websites to ensure students are not interacting with explicit contents online and mitigate risks.
- 7. Adoption Monitoring:**
 - Track the adoption and integration of AI tools into the curriculum and learning activities.
 - Identify barriers to adoption and develop strategies to overcome them.
- 8. Impact Monitoring:**
 - Ask participating students about their class performance, and learning experiences since the pilot (self-reporting).
 - Ask participating students about the broader knowledge (societal impacts of AI adoption in education).
- 9. Continuous Improvement:**

- Use monitoring data to inform iterative improvements to the next day's activities/processes.
- Engage stakeholders in ongoing dialogue to identify opportunities for enhancement.
- Implement a culture of continuous improvement to ensure that the AI program evolves in response to changing needs and challenges

Annex 2: Monitoring Questionnaire

To access your monitoring questionnaire, **you need a KoboToolbox account:**

1. If you already have an account, provide your username to your Field Coordinator.
2. If you do not have an account, proceed to <https://kf.kobotoolbox.org/accounts/signup/> and create one. If you have any questions or need guidance in this process, you can check the following site https://support.kobotoolbox.org/creating_account.html Once you have finalized this process and your account is active, provide your username to your Field Coordinator

Download the KoboToolbox app on your smartphone (*note that iPhone is not supported*): on Google Play store.

1. You can find it directly to your Google Play store by typing KoboCollect
2. You can download it via the following link: <https://play.google.com/store/apps/details?id=org.koboc.collect.android&hl=en>

Familiarize how to set up your Kobo account using the following link: https://support.kobotoolbox.org/kobocollect_on_android_latest.html

Once you have provided your username to your field coordinator, he/she will share the Project (questionnaire) for your training and monitoring activities in each session.

If you have any questions, please reach out to your field coordinator, Eliot Jolomi Dikoru via email: edikoru@worldbank.org or mobile +234 803 877 2614

A summary of the questions and information you are asked to collect as part of your monitoring activities are listed below:

BEFORE SESSION STARTS, complete the following questions

Your arrival time:

What school are you at today?

Record your current location

How many devices are in the lab? (both on and off!)

Was the teacher early to start the session on time?

What is today's topic?

You completed the 1st part. Thanks! let's move to the 2nd

Fill the following questions AT THE BEGINNING OF THE SESSION:

What time did the session start?

Count the number of students present in the classroom

Did the teacher take assistance?

Are there students not on the list present in the classroom?

Count the number of computers/ laptops currently working

Did the teacher explain the topic of the day, how to use Copilot and the first prompt?

Percentage of students able to log in to their email and Copilot?

You completed the 2nd part. Now observe how the session evolves.

Complete the 3rd part AT THE END of the session.

Fill the following questions AT THE END OF THE SESSION:

Percentage of students engaged with the chatbot and working in pairs?

Percentage of students that continue to interact with the Chatbot the first prompt finished?

Did the session experience any power cut?

Was the internet fast enough for the chatbots to work?

Your assessment of teacher(s) support students:

Your assessment of student engagement:

Time the session ended:

Feedback from students:

Feedback from teacher(s):

You have completed this form. Thank you!