



## **Case Study:** Empowering Teachers with AI: Ziana Mhewa’s Journey in Enhancing Numeracy Through AI-Driven Assessments

**Name:** Ziana Mhewa

**Project:** AI TEACHERS: Improving Teacher's Competencies Through an AI-Driven Assessment Program

**Date:** February 26, 2025

### **Background**

Ziana Mhewa is a primary school teacher at Bunju B primary school in Tanzania, where she teaches Standard 1 (Grade 1). With more than 20 years of teaching experience, she joined the AI TEACHERS project, an initiative by Shule Direct, Lead for Ghana, and Effective Basic Services (eBASE) Africa, funded by the Bill and Melinda Gates Foundation. The project aims to enhance numeracy skills through an AI-driven platform that supports teacher competencies. This case study explores Ziana’s behaviors, attitudes, and perceptions toward AI as she integrates it into her teaching practice.

### **Initial Engagement with AI Tools**

Ziana began using the Shule Direct platform to acquire new teaching skills and strategies when the AI TEACHERS project was introduced at her school. She applies it to enhance her instructional methods rather than for direct student interaction, reflecting a self-directed approach to professional development.

### **Beliefs and Attitudes Toward AI**

Ziana views AI as a highly useful tool, emphasizing its efficiency in simplifying teaching tasks. She states, “Instead of using a lot of books, AI simplifies and shortens time to look for materials,” indicating a practical appreciation for its time-saving potential. She perceives AI as an assistive rather than a replacement tool, asserting, “It is not a threat rather our assistive tool to support us in teaching and learning.” This confidence stems from her belief that AI can modernize traditional roles like replacing paper-based assessments without undermining the teacher’s core responsibilities.

Her optimism extends to AI’s impact on numeracy skills, as she believes its interactive features (e.g., quizzes) foster student curiosity and engagement. Ziana also supports the idea of embedding local cultural values into AI platforms, noting, “It should do so in order to match with the local content.”

Ziana shows no significant concerns about AI’s integration, viewing it as aligned with broader technological trends in education, such as the use of **PEPMIS** for administrative tasks. She perceives a supportive teaching community with no cultural norms resisting adoption, reinforced by government directives promoting digital tools.



## **Behavioral Shifts and Classroom Integration**

Ziana used the Shule Direct platform weekly on average, aspiring to daily use but constrained by competing priorities, such as lesson planning and other teaching responsibilities, within a busy schedule. When engaged, she applies AI-derived skills to enhance her teaching, particularly benefiting slow learners and improving overall student performance. For instance, she notes that students ‘correctly identify numbers and do some arithmetic well’ with digital tools, a significant improvement over traditional methods. This selective integration reflects a behavioural shift toward using AI for pedagogical enhancement.

## **Perceptions of Colleagues**

Ziana’s colleagues responded positively to the AI platform, showing excitement and a desire to learn more. She notes, “They took it positively and excited to learn more on how to use AI,” suggesting a receptive environment. Their openness is influenced by familiarity with other digital systems and government encouragement.

## **Long-Term View of AI**

Ziana’s perception of AI has solidified as a powerful ally, capable of delivering “solutions to support teachers” quickly and efficiently. She credits the platform with sparking student interest and improving numeracy, particularly among slow learners, noting, “Even slow learners were able to perform well.” Looking forward, she envisions AI simplifying teaching and transforming student learning into a playful yet educational experience, stating, “They may feel like playing but at the same time learning.” She sees teachers’ roles evolving with AI as a supportive tool, not a replacement, and advocates for more training for teachers to deepen their skills in technology and resources to sustain its impact.

*Image 1: Teacher Ziana from Bunju B Primary sits nearby, ready to assist a learner using the Shule Direct Kids Learning App whenever needed.*





## **Conclusion**

Ziana's journey with the AI TEACHERS project reflects a proactive embrace of AI, using the Shule Direct platform to enhance her teaching skills despite time constraints. She views AI as an efficient, supportive tool that boosts numeracy and aligns with educational trends, showing no resistance and noting positive colleague enthusiasm. Her selective integration improves student outcomes, especially for slow learners, and she envisions a future where AI simplifies teaching and engages students playfully, advocating for more training to sustain its potential.

## **NB**

**PEPMIS** Utumishi (which stands for "Employee Self Service Utumishi") is an online system designed by the Tanzanian government to streamline human resource management processes for public servants. This portal offers Tanzanian government employees a convenient way to access their employment records, manage personal information, and perform various HR-related tasks digitally.

