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Tanzanian Teachers' Experiences of Teaching With Technology

Recommendations for policy and practice

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Related outputs

This policy brief summarises recommendations emerging from this journal article:

Koomar, S., Hennessy, S., Zubairi, A., Kindoli, R. & Kreimeia, A. (2022). Reflections on technology, teaching, learning, and professional development: Findings from a teacher survey in Tanzania. *African Educational Research Journal* 10 (4), 342-368. https://doi.org/10.30918/AERJ.104.22.048

A Swahili version of this policy brief is also available: Hennessy, S., Koomar, S., & Kreimeia, A. (2023). *Uzoefu wa Walimu katika kufundisha kwa kutumia teknolojia nchini Tanzania Mapendekezo Juu ya Sera na Utekelezaji* [Muhtasari Wa Sera / Policy Brief]. EdTech Hub. https://doi.org/10.53832/edtechhub.0147 Available at https://docs.edtechhub.org/lib/ECXPS38I.

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Key recommendations

- Provide **ongoing and equitable opportunities at every level (regions, districts, wards, schools) for all teachers to engage in teacher continuous professional development (TCPD), including:**

  - To set aside time for teachers to participate in TCPD

  - To encourage and motivate teachers to participate

- Conduct **ongoing needs assessments** and gather feedback from teachers, school leaders and other practitioners

- Customise **TCPD for the needs of teachers and learners,** especially in rural areas, supporting **gender-responsive, inclusive pedagogies**

- Provide **holistic support for teachers' well-being**

- Investigate whether and how government-issued tablets are being used for teaching and learning purposes, particularly in rural schools where digital literacy may be lower

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- Support **school-level champions to promote pedagogy-driven technology use by teachers**

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Introduction

Educational technology (EdTech) can play a powerful role in supporting teaching and learning. However, the low uptake of technology by teachers across Tanzania is attributed to their lack of digital literacy, skill in integrating technology into teaching, and access to technological devices and connectivity (⇡Mgaiwa, 2018; ⇡Swarts & Wachira, 2010). Imprecise policies and limited opportunities for teacher continuous professional development (TCPD) have further obstructed upskilling (⇡Mgaiwa, 2018).

This briefing paper reports on a teacher survey in Tanzania (July-Nov. 2021) that EdTech Hub commissioned HakiElimu to conduct in order to inform the Government's ongoing national school-based TCPD reform (⬆MOEST, 2020). The survey items were taken from a landmark global survey of 20,000+ teachers' reflections, experiences, and challenges concerning EdTech access and use, teaching and learning, and professional development over the preceding year, reported by a team from T4 Education and EdTech Hub (⬆Pota et al., 2021). The subsequent survey captured the voices of 774 Tanzanian teachers spanning 22 out of 26 regions across the country (see Figure 1). The survey findings are based on teachers' experiences in 2020-2021.

The briefing summarises the Key outcomes and 20 Recommendations from the survey for policymakers, school leaders, TCPD designers, and teachers. These aim to inform decisions related to professional development and EdTech provision in and beyond Tanzania.

Figure 1. *Map of Tanzania, showing regions and districts of survey data collection.*

Note: *Data were collected in the districts named on the map, and these, in turn, were located in the 22 regions shaded in orange*

Key outcomes of the survey

■ **Teachers' use of technology was constrained by access**. 38% of teachers had no access at school to any form of device. 44% had one device per school. 21% had to bring their own devices to school (33% in primary schools). Since the survey, the government has distributed tablets to all teachers, so this situation will have improved. However, it is currently unknown how well teachers are able to use them and for what purposes.
Thirty-seven per cent of rural teachers (three times the proportion of urban teachers) never used digital technologies for teaching

over the preceding year. **However, three-quarters of teachers overall reported that they had internet access**.

- Teachers perceived that **learners from the poorest households and from rural areas suffered the greatest learning losses. Almost half reported** that girls suffered more learning losses than boys – far more than average figures from the global survey.

- **Only 24% of teachers in Tanzania participated in *some* form of TPD or training** over the previous year – yet 34% across sub-Saharan Africa engaged in *more than 10 days* of TCPD (⬆Pota et al., 2021). **Far more teachers working in urban areas (43%) engaged in TPD compared to those in rural areas (17%)**. Urban teachers found it more useful than rural teachers too (50% more).

- Encouragingly, two-thirds of those who did participate in TCPD said that **it changed their practice a lot.**

- The **most common foci of TCPD were "*engaging with parents and caregivers during remote learning*" (35%) and pedagogies for remote teaching and learning (34%).**

- **Almost a third of teachers (31%) wanted the government to focus more on their professional development needs.**

- 45% of teachers believed **the government should promote the teaching profession** in order to increase teacher numbers and address learning losses. **88% do plan to stay in the profession, though.**

- The **areas where teachers said they most needed support to improve practice** over the next year included:

    - *"developing skills and confidence in using digital technologies in teaching"* (57%);

    - *"caring for my mental health and wellbeing"* (51%);

    - *"pedagogy / teaching methods for my own professional development"* (37%).

- Few (6%) teachers wanted more TCPD on **addressing marginalised students' needs**. Gender-responsive pedagogies and safeguarding were also very low priorities.

Recommendations for policymakers

1. Provide more **specific, continuous and equitable opportunities – and dedicated time – for teachers to engage in TCPD**, especially reaching rural teachers and those with disabilities in ways that meet their specific needs.
   - For example, establish records of TCPD to understand how many teachers are (not) engaging in continuous professional development opportunities and calculate necessary resources to provide universal and inclusive TCPD. Ringfence financial resources in national budgets to support TCPD and ensure the model implements continuous needs assessment at the school level. Taking a broader, national view of these recorded needs can illustrate the diversified approaches that must be adopted to ensure equity, e.g. to understand how TCPD needs to be adjusted for rural teachers and/or to be gender-responsive.

2. **Ensure TCPD is focused on addressing teachers' need for technical and pedagogical upskilling, especially around using digital technologies in teaching, while ensuring the required digital materials are widely available across the system**
   - For example, collect data on teachers' technology skills and preferences. Then, work with partners to design TCPD approaches that build on existing knowledge and available technologies that teachers already know how to use. Ensure that this information is communicated to education actors across different levels so that stakeholders know the standards that must be met.

3. **Ensure that regions, districts, and wards have sufficient resources to support TCPD and teachers' wellbeing.**
   - Consider the different ways that existing actors within the system could support teachers' well-being. If existing resources are stretched, consider a dedicated role within Ward or District Education teams, which focuses on teacher welfare, well-being, and support.

4. **Provide support to head teachers** to promote both TCPD and technology use.
   - For example, provide head teacher training that includes developing their understanding of TCPD, methods to support

teachers, and how to approach using technology to support education. Overall, the training should focus on supporting headteachers to instil school cultures encouraging teachers to work with technology.

5. Following the recent distribution of tablets by the government to all teachers, a focus on **whether and how the tablets are being used** by teachers **for teaching and learning purposes** is required, as well as the extent to which this use is effective.

      i.   For example, teachers in rural schools may be constrained by issues such as digital literacy levels or the wider infrastructure around them. Understanding the constraints and working to overcome these barriers is critical to ensuring the tablets are used effectively to promote positive outcomes.

6. **Develop methods of systematically gathering design input and feedback data** from teachers, school leaders and other practitioners; act on this through **iteratively adapting the TCPD programme to meet the needs identified**.

    –   For example, work with stakeholders involved with existing / historic education data systems to learn lessons about (in)effectively recording, monitoring, and analysing school-level data. And use technology to undertake more reliable — and potentially more cost-effective — regular data collection on teachers' needs and preferences. The new Learning Management System will provide useful analytics which can support this systematic gathering of input and feedback data.

7. Establish more **robust mechanisms for** formatively **assessing student learning** continuously, particularly in rural areas; include training on this in TCPD.

    –   For example, ensure TCPD has a core focus on formative assessment to inform instruction and assessment for (improving student) learning, where teachers can continuously and organically collect rapid data on student learning during classes. Value this formative teacher assessment data by gathering and tracking this alongside summative assessment data.

8. **Promote the teaching profession** and recruit more teachers to help address learners' needs and fill predicted workforce capacity gaps. And ensure **clear career pathways tied to TCPD** are in place to retain good teachers.

–   For example, work with higher education institutions to strengthen understanding of teacher recruitment to inform promotion campaigns. Coherently link pre-service and in-service teacher education so that pre-service educators are adequately prepared when placed.

Recommendations for school leaders

9. **Ensure that all teachers** (regardless of gender, age, experience, location, etc.) **are equally encouraged and supported to undertake TCPD.**

–   For example, engage with local / regional education officers to understand what professional development opportunities are available for teachers and yourself, and provide teachers with these in an equitable way.

10. **Care for teachers' well-being**, providing holistic support at the school and community levels, which is responsive to the emotional support teachers require.

–   For example, make time to regularly check on how teachers are doing (e.g. in terms of workload, professional needs, stress, personal circumstances, etc.) and ask how you can best support them.

12. **Ensure teachers have enough focused time with learners** to understand their learning levels.

–   For example, speak with teachers individually to understand how they structure their lesson time and how and when they can best receive support to focus more on assessing learning needs.

13. **Act as champions for technology use in schools**, demonstrating the benefits of using it for pedagogical purposes specifically.

–   For example, work to learn (more) about the use of contextually available technologies in teaching and learning processes. Contact ward / district education officers to understand what relevant training and resources are available to support you.

14. **Ensure that all teachers** (regardless of gender, age, experience, location, etc.) **are equally encouraged and supported to use technology.**

–   For example, understand what individual teachers' needs and preferences are regarding available technologies and regularly speak to them to understand how they are progressing and how/if their needs are changing. Use regular Community of Learning sessions to check teacher preferences and support requirements.

Recommendations for TCPD designers

15. Conduct **ongoing needs assessments** and **customise TCPD for the needs of teachers,** especially rural teachers, to make it more accessible and useful for them.

–   For example, follow the adaptive and flexible Community of Learning design principles and communicate these during TCPD sessions, ensuring TCPD teams understand they have flexibility to engage in the most relevant content for their school.

16. **Iteratively test and refine programmes** to ensure relevance is sustained.

–   For example, strategically plan review and refinement processes at regular intervals throughout the TCPD programme. Assess whether these intervals need to be more regular and how progress/learning is being measured.

17. **Design TCPD focused on assessment and understanding learners' needs, especially gender-responsive pedagogies** – acknowledging both girls' and boys' obstacles to educational attainment.

–   For example, ensure that formative learner assessments are embedded into TCPD design and work with teachers to understand the enablers/barriers for undertaking assessments.

Continually adapt programme design based on learners' needs and preferences through data collection in schools.

18. **Focus on the quality of facilitation** of TCPD by teacher educators.

– For example, ensure national facilitators are modelling the same methods and practices proposed for use by peer facilitators for Communities of Learning in schools.

Recommendations for teachers

19. Continually reflect on personal development needs and **take up opportunities for TCPD** when offered either in school or externally.

– For example, think about the areas of support you would benefit from most. Communicate these to your head teacher, local education officers, etc., to provide support and / or resources for you.

20. **Focus remedial learning efforts in a gender-responsive way,** especially considering girls and learners from low-income households.

– For example, speak with girls and/or learners from low-income households to understand what issues they encounter and what support they need (and how this differs from other students).

21. **Take on 'champion' roles in schools** where opportunities are presented — formally or informally — modelling good practices and supporting peers to create caring and collegial environments.

– For example, actively participate and engage in weekly CoLs, helping establish the broader school environment to be one of collective learning and growth.

Final remarks
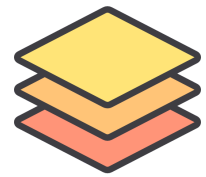
Teachers have spoken. Stakeholders throughout the education system need to listen and act on the emerging practical messages. We hope that the insights and recommendations from this paper will inform ongoing and future policy and practice around technology provision and TCPD in Tanzania, across East Africa, and in similar contexts beyond this. However, this survey is a snapshot in time. Ongoing dialogue and needs assessments are essential as the national, school-based TCPD reform is rolled out and embedded.

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