EdTech Hub

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Let's Read — How Tusome Leveraged EdTech to Improve National Learning Outcomes

Governing Digital Transformation: Improving Outcomes in Education Systems

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About this document

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Contents

Abbreviations and acronyms

CSO	Curriculum Support Officer
MOE	Ministry of Education

Executive Summary

A common assumption made in EdTech programmes is that the decision about the choice of technology, be it hardware or software, is the most critical one in determining improved learning outcomes. In practice, however, this decision is only one of many other fundamental factors and questions that need to be explored. The case study discussed in this brief, Tusome in Kenya, presents an example of how technology should serve and not guide national reform programmes. What the Tusome programme and others like it illustrate is that there are many other factors at play. Trust, capacity, and accountability are some but not all of the considerations that can make the difference between adoption or abandonment of an EdTech intervention.

In 2013, the Kenyan government implemented an educational system reform aiming to increase education quality. It is widely known that national reforms to increase education quality take significant time to plan, implement, and realise results. The Tusome programme was implemented in Kenya in an attempt to fast track improvements using EdTech. This programme used tablets to enhance teacher coaching and oversight. Tusome is lauded as an EdTech success story, as it markedly improved national learning outcomes related to children's literacy, and the use of tablets positively impacted teacher behaviours.

> **"Interventions integrating EdTech must be appropriately targeted, well designed and robustly implemented to avoid wasting large amounts of money that could be invested in other interventions." (⇕Kaye, 2020, p. 197)**

Main takeaways

1. Tusome was a technology-enabled education intervention that successfully improved national learning outcomes. The programme leveraged tablets to support teacher coaching.
2. Pedagogy before technology. The Tusome programme focused on improving teaching practice before introducing any kind of technology.
3. Building teacher and stakeholder capacity was central to Tusome's design and success. The programme not only provided both pedagogical and technology training but clearly established roles and responsibilities.

4. Fostering trust among teachers and Curriculum Support Officers (CSOs) was a key success factor. Tusome did this through clear, transparent communication, and addressing local needs.

5. The use of tablets supported transparency and accountability, encouraging constructive feedback and shared responsibility.

6. Targeted use of technology. The tablets were not viewed as a silver bullet but instead used as a tool to support a very specific aspect of teacher coaching.

1. The Tusome programme

Tusome means 'Let's read' in Kiswahili. Appropriately, this programme focused on enhancing the quality of Kenyan early grade literacy. The programme focused mainly on improving teacher quality, and as such leveraged technology to support this goal. The programme targeted Grades 1–3 in all 23,000 Kenyan public schools by:

1. Providing textbooks and learning materials;
2. Training all teachers of Grades 1–3 in the new early grade literacy pedagogical approaches;
3. Training Curriculum Support Officers (CSOs) in new approaches to coach and support teachers;
4. Training senior leaders to use Tusome data to identify and address education system gaps.

1.1. EdTech in Tusome

EdTech is used in the Tusome programme to make teacher coaching and oversight more effective and efficient. All CSOs receive tablets to support classroom observation. Each tablet was equipped with five resources:

1. The classroom observation tool, Tangerine®: Tutor. CSOs use the tool to both observe the classroom and then assess the performance of three students. Results were used to identify ways to improve teacher pedagogy.

2. A digital version of all Tusome textbooks and materials for easy access during school visits.

3. Thirty videos modelling teaching using the Tusome instructional approach.

4. Papaya™ (an application based on pronunciation audio files) to help teachers identify and pronounce letters in Kiswahili and English.

5. A dashboard of data, which is accessible by CSOs, County Directors of Education, and central Ministry of Education (MOE) staff. The data presents national early grade literacy performance and can be used to support evidence-based policymaking.

The inclusion of EdTech in Tusome was built on the robust foundations laid by the Primary Math and Reading (PRIMR) programme (⇡RTI International, 2014).

1.2. Improving learning outcomes

The Tusome programme was celebrated as a success. Examples to illustrate this include an evaluation report presenting statistically significant increases in early grade literacy in both Kiswahili and English (⇧Freudenberger & Davis, 2017). Another study revealed the positive impact the tablets have had on CSO and teacher behaviours, reporting that 98% of CSOs either agree or strongly agree that the tablets facilitated more engaging feedback sessions (⇧Piper, et al., 2018).

> **"The Tusome programme has been so successful that it has generated trust amongst stakeholders not even involved in programme implementation. While CSOs received training and were equipped with tablets, county-based MOE staff did not participate in the programme. Based on the positive response from CSOs, MOE staff are requesting training and tablets to help them better support schools." (⇧Kaye, 2020, p. 196)**

2. Why did it work?

2.1. Capacity

Building capacity for teachers and CSOs was a core objective of the Tusome programme's design.

Training on pedagogy

Both teachers and CSOs first attended a two-day training session to learn about pedagogical approaches to improve early grade literacy. Teachers and CSOs were both trained to ensure alignment and common understanding related to these approaches and their implementation in classrooms.

Clarity on roles

During this training, the teachers and CSOs were also informed of the coaching roles that the CSOs would be given. Ensuring that teachers understood the CSOs' role meant they were willing to work collaboratively with CSOs when they visited schools.

Training on technology use

The CSOs also received one day of training focused on understanding how the tablets could be used. The training emphasised that the tablets were devices used to complement, and not to replace, the CSO's technical expertise. This was done in order to position the CSOs as trusted professionals who were invited to work with teachers to strengthen the Kenyan education system.

Defining objectives

Helping both CSOs and teachers understand the shift from inspecting and judging schools to supporting teachers to enhance teaching quality was an important step in building trust between them. This also created a feeling of collaborative accountability for children's learning outcomes.

2.2. Trust

The Tusome programme was based on a multi-faceted strategy to build trust among stakeholders and between different actors implementing the programme (↑Piper, et al., 2018).

Fostering trust through addressing local needs

The relevance of enhancing teacher quality to improve learning outcomes is globally recognised.

> *"Tusome's focus on enhancing teacher quality is also aligned with Kenya's needs, with education stakeholders agreeing that more and higher-quality teachers were required to support free primary education. Bringing international good-practices to Kenya to address this local need helped foster trust in the programme."* (↑Kaye, 2020, p. 195).

Robust programme communication

The programme's communication strategy included sharing various programme documents, training materials, and teacher guides, and making some of them publicly available. These presented the purpose and processes of the programme as well as the roles and responsibilities of each of the stakeholders involved. This clarity and access contributed to building trust in the programme and helped provide a foundation for transparency and accountability between stakeholders.

Communication of programme's goals

The programme's goals and performance were made publicly available. "This meant stakeholders understood programme progress, which generated even greater trust in the reform." (↑Kaye, 2020, p. 195).

2.3. Accountability

One of Tusome's most important contributions to Kenya's education system was to design and implement a positive approach to accountability.

Positive approach to accountability

↑Piper, et al. (2018) note that "the Tusome feedback data were utilized to encourage greater levels of instructional support" (p. 293), rather than targeting punitive measures for underperformance. This positive approach contributed to improving relationships, particularly between CSOs and teachers.

Shared responsibility

Due to this positive accountability approach, "the relationship between teachers and CSOs now focuses on growth and learning and rests upon mutual accountability whereby both parties are jointly responsible for learning

outcomes" (↑Kaye, 2020, p. 198). This differs from previous approaches, which required CSOs to ensure that teachers followed prescribed instructions and processes.

Positive feedback loop

This positive approach to accountability also triggered a positive feedback loop. Initial successes of the Tusome programme led to more robust data collection, which then led to greater sharing of successful practices and challenges. This contributed to enabling central- and county-level staff to provide more insightful support to schools and CSOs, which encouraged schools and CSOs to ensure the data they supplied was robust.

Transparent access of data

The use of tablets enabled various stakeholders to participate in processes of data collection and use, as tablets made these processes more accessible and transparent. Simplifying such processes by using tablets also led to empowering various stakeholders to collect and use data at multiple levels.

3. Conclusion

Tusome stands out from many other at-scale EdTech interventions, because it approached technology as a very specific tool within a broader programme, and not as the core of the intervention. The programme focused heavily on building the capacity of its teachers and coaches, leveraging the use of tablets only in so far as it supports this goal. Clear communication, coupled with established initial success allowed the programme to establish trust among internal and external stakeholders alike. This was further strengthened by the transparency that the data collection and sharing via tablets lent to the programme, as well as the culture of positive accountability that it promoted.

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5. Further Reading

Educational Technology to Improve Capacity - integrating Adaptive Education Programmes in Public School in Kenya. Tom Kaye (2020)

This paper was used in the development of this case study. Here, Tom Kaye contrasts two large scale EdTech initiatives in Kenya: the Digital Literacy Programme and the Tusome programme. Kaye highlights how the elements of capacity, trust, and accountability resulted in massively different outcomes in both programmes.

Scaling up successfully: Lessons from Kenya's Tusome national literacy program. Ben Piper et al. (2018)

This paper presents an analysis of the Tusome programme and presents findings related to whether Tusome's implementation was designed in ways that could enable government structures and officers to respond effectively to the programme and its outcomes.

EdTech and COVID-19: 10 Things to Know. EdTech Hub (2021)

EdTech Hub highlights 10 lessons on the use of EdTech based on the global experience with distance learning due to the pandemic. These lessons apply to EdTech use across different contexts.