Challenges in managing interventions for rural education improvement.

"resilience of ICT interventions"

Sifiso Dlamini CSIR MERAKA INSTITUTE



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BACKGROUND Scope

- Provide tablets to teachers, learners and district officials at 26 Nciba Circuit schools, within the Cofimvaba School District (1,11&14)
- 6 000 learners, 270 teachers, 50 district officials
- Test and develop various models, in terms of
 - ✓ Devices (tablets)
 - ✓Content
 - ✓Infrastructure
 - ✓ Connectivity
 - ✓ Integration into the school
 - ✓ Costs (TCO)
 - ✓ Sustainability
 - ✓Logistics
 - ✓ Support & Maintenance
 - ✓Operations
 - ✓ Change Management
 - ✓ Teacher training



- in order to use the **knowledge** to influence and support similar initiatives around the country via **decision support tools** (planning, costing, budgeting, implementation, operationalisation)
- Measure the effect of introducing technology on the 21st century skills of learners and teachers

HOWEVER...

Chalenges

- Readiness The South African education system is not ready to deal with the introduction of technology at schools, especially in the rural schools. There is less support for initiatives, and most initiatives are seen as projects (something that will end when the budget is finished) The skills needed to support the initiative exist in very few officials.
- Crime Technologies are the most targeted
- Lack of essential basic services This is a real challenge, both in terms of availability and the quality of essential basic services (water, sanitation, electricity etc.). There is a big relationship between the learning environment and learner outcome, the state is moving slow on this agenda
- **Community dynamics** The role of the community in supporting the schools VS the role of the schools in supporting the community



SOME LEARNING...

Some high level learning

Most challenges are "system", "people" or "soft" issues

• Critical to take a systemic approach – fix the underlying issues in the system. Examples are – lack of leadership, management skills, capacity and expertise (across the system)

Value the teachers

• Treat them with respect, empower them - generations of learners pass through their hands

Don't underestimate the change management challenges – we are talking about a paradigm shift

• At ALL levels of the system - national, provincial, district, schools. This is NOT business-asusual

Stay education-focused, NOT technology-focused

- Focus on educational issues (e.g. lack of pedagogical skills, curriculum &content knowledge)
- 1 people; 2 practice & processes; 3 technology

Teacher Professional Development is key

- Pre-service ICT integration needs to be compulsory at universities teachers teach the way they are taught
- In-service needs to be a massive undertaking
- Innovate learn from past mistakes

Think about intrinsic and extrinsic motivation

- E.g. Badge/points system used for micro-accreditation
- Technology should be "earned"

Some focused learning

CONTENT

 The problem is there is **TOO MUCH** and **TOO LITTLE**. Too little content that is interactive, engaging, targeted and linked to CAPS. An overwhelming amount of content that is old and in the wrong format.

ICT INFRASTRUCTURE, e.g. tablets

 It's not necessary to go big bang – i.e. one tablet per child. This can be phased in as the school becomes more able to use the technology productively. Start small to give the environment time to adjust.

OPERATIONS COSTS

• Operational costs are by far the **HIGHEST** costs in an implementation. **MUCH MORE EXPENSIVE** than you think. This is 50% of costs over a 5 year period.

CONNECTIVITY

- It is quite possible to have ICT integration in the classroom **WITHOUT CONNECTIVITY.** It's amazing how creative teachers can be if faced with challenges!
- If bandwidth is low, protect it as much as possible with local solutions (e.g. local content servers, controlled internet connectivity, etc.)

SUPPORT FROM DISTRICT & PROVINCE

• This is **CRITICAL**. Schools cannot sustain the change by themselves. They need ongoing encouragement and support. Roles and responsibilities need to be updated and new roles/positions need to be created if needed.

THEFT

• This is a serious threat. Design for it and harness the community to help.

WHAT WOULD OUR **ADVICE BE TO** SOMEONE PLANNING TO IMPLEMENT **TECHNOLOGY AT SCHOOLS?**

ONE MODEL DOES NOT SUIT ALL

A "BIG BANG" APPROACH WILL WASTE MONEY

FOCUS ON THE TEACHERS...

BUT MAKE SURE THE DISTRICT IS EMPOWERED TO SUPPORT THEM...

START WITH PRIMARY SCHOOLS

MEASURE, MONITOR & REWARD

TABLETS, TABLETS, TABLETS.

PROCESS BASED ON LEARNING FROM ICT4RED

- Ensure real buy-in and participation at all levels national, provincial, district, school. Top-down AND bottom-up approaches.
- 2. Setup a **joint project team** consisting of representatives at each of these levels in partnership with NGO and private sectors.
- 3. Select **schools physically close** to each other.
- 4. Work with the district to get an idea of the **readiness of each school** (we are developing a tool to help with this).
- 5. Categorise each school and apply the model most suited to the school. E.g. a school where there are leadership issues, would include a leadership course; fewer tablets would initially go to schools that are struggling (until they show they can manage the tablets).
- 6. Create **evaluation criteria** that takes into account where a school currently is.



Thank you Sifiso Dlamini sdlamini@csir.co.za



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