Overview of the Innovation
Know Zone Rwanda (KZR) was the country’s first edutainment TV programme created specifically to support Primary 6 students and teachers ahead of their primary exams. The lively series included 13 x 28-minute episodes featuring key sections of the Primary 6 national curriculum for Maths, English and social studies and comprised studio activity, a serial drama and animations. Based on successful experience in Kenya, the project’s original focus was broadcast-led in order to produce and pilot a TV programme that supports pupils’ learning in the home at no cost. The Rwandan pilot additionally used the content of the programme in classrooms in order for teachers to improve on classrooms practices and make lessons more interactive.

During pilot implementation it was soon realized that access to electricity and televisions was extremely limited in rural parts of Rwanda, thus restricting the number of viewers at homes and communities. Moreover, Rwanda’s recent change in ‘language of instruction’ and subsequent poor levels of English, meant that a more school based model, with modified, slower-paced and more targeted formats would potentially have greater impact for students. Therefore, towards the end of the innovation, a trial in eight schools using re-edited existing TV footage produced a suite of eight simplified, 12 minutes, subject-specific episodes with slower spoken English, more graphics and some additional voice-overs to repeat and consolidate learning concepts. These adapted versions of the TV series were specifically designed for use in schools with the aim to change teachers’ practices and promote the use of a range of technologies in the classroom.

In-service and pre-service teachers were trained in using the package for teaching. The project was implemented in 18 project schools and two teacher training colleges (TTCs) in Kigali and Northern Provinces. In addition, a number of staff of the national media sector were trained on animation and TV production, including the Africa Digital Media Agency.

Total reach of the innovation was 28 teachers and 999 primary school students, in addition to the viewers of the national broadcasts.

Grant Recipient:
The programme was implemented by The Mediae Company.

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What makes it innovative?
This project introduced the country’s first edutainment TV programme, based on the KnowZone experience in Kenya. The use of TV content in classrooms was new to Rwanda. It set out to trial different TV platforms and technologies for use in the classroom and aimed to impact on teaching practices and teacher performance and use of ‘smart’ ICT devices.

Relevance to education priorities:
Main theme: Effective teaching and learning;
Sub theme: Technology
The project was relevant to the ESSP priorities through its aim to trial technologies to improve the quality of learning and learner centred methodologies in Rwandan primary schools. It also gave learners and teachers the chance to become more familiar with a range of different ICT platforms and so develop their ICT skills, a desired key outcome of basic education in the 2010-15 ESSP. Another ESSP priority is to develop ‘a skilled and motivated teaching, training and lecturing workforce’. Rwanda is experiencing the growth of child-friendly schools with modern teaching approaches being encouraged. The project complemented this movement and provided resources to motivate teachers to use interactive and creative techniques in their teaching.
Project learning (activity/output to outcomes level)

- Limited access to electricity and TVs, especially in rural homes, was an early identified learning point.
- The technology in schools worked well and teachers felt competent to use the technology, but some schools faced occasional issues with regard to power supply.
- Teacher support was provided through SMS and classroom visits from an allocated methodology advisor, which was appreciated by teachers.
- The broadcast-led model did not give teachers sufficient flexibility to use the content in classrooms on a weekly basis. Teachers wanted and needed to be able to ‘pick and choose’ from various episodes in order to have better control of the lesson content and activities, in line with their school’s syllabus. The increased focus on video for classroom teaching applied in the final stage of the pilot provided this flexibility which helped the teachers to use a wider variety of teaching methods.
- There were some issues with the level of English used in the videos for the classroom and a realisation there is a need ‘pitch lower’ to make content more accessible for teachers and learners. This learning was taken on board in the final stages of the pilot.

Project outcomes and reflection on monitoring and evaluation:

The evaluation design was a quasi-experimental study (teachers with general exposure and intensive exposure to the programmes evaluated at baseline and end-line), though the samples are too small for this to be considered truly ‘experimental’. The study focused on quantitative measures of student learning outcomes in English and mathematics (using tests developed by the project), and questionnaires to teachers and trainee teachers on their subject knowledge and their behaviour and attitudes towards pedagogy (including the use of ICT). This was accompanied by a small number (15) of systematic classroom observations to consider the changes in teachers’ pedagogy. Student and teacher information on their access and viewing of KnowZone programmes was collected along with interviews and Focus Group Discussions with teachers and students.

Results from the final evaluation suggested that the project had limited impact on student learning outcomes; in fact mean scores declined in English (-5.6%) and Maths (-1.9%). Teachers’ difficulties in utilising the new resources in class and, possibly, the distracting nature of the new technology at start up may have contributed to this. Teachers reported an initial lack of confidence in using the technology but this rapidly improved and their performance in the
English test did improve (from 69% to 81%: +12%). Although teachers claimed to be using more participatory pedagogy, this was only partially borne out in the observations of their classroom practice. There was a difference between the general and intensive exposure teachers, the latter using more mixed teaching practices with less ‘lecturing’. Given the inconclusive results on changes in classroom practice it is not surprising that there was little impact on student learning, even taken into account the short exposure time of students to the programmes.

The study was carefully executed and reported, but could have been more transparent in methodology and reporting of results. The evaluation design and sample were problematic and instrument validity and, in some cases, reliability were not explored. An extension to the project had an associated evaluation that revealed some useful qualitative information, but this was less carefully constructed and it was rather diffuse in focus and findings.

**Conditions for success**

The successful implementation of this project was dependent upon the technology. Teachers needed time to become accustomed to and feel confident in using a range of technologies in the classroom. Technology also needed to be seen as something which enhanced students’ learning across the curriculum. The technologies were expensive and were reliant on access to electricity.

The content, style and format of the episodes must be relevant and useful to teachers, so they can pick and mix the order in which they show the content to suit their personal approach to delivering the curriculum. This, however, will result in shorter episodes which may not be attractive for broadcasting. Hence the project may have to make a choice between TV production and focussing on edutainment outside the school environment, or go for using targeted TV episodes (or video clips without any TV production) as a professional development tool, which stays much closer to the curriculum, but may not attract a large number of TV viewers.

There is potential to capitalise on REB’s and the Rwanda Broadcast Agency (RBA) interest in using TV for educational purposes.

**Scale up and sustainability considerations**

The project proposed 2 costed scenarios for upscaling its intervention over a period of 4 years:

1. Support REB to produce its own teacher-training TV programme, SMART LEARNING, both for learning at school for in-service and pre-service teachers and at home for parents/carers. This was trialled by REB in 2011 and is included in REB’s draft ICT Masterplan. However, it is unclear whether this scenario applied similar methods and approaches as this was not the intervention tested by Mediae.

2. Support REB to develop their own broadcast-quality educational TV programme aligned to the curriculum, along the lines of Know Zone Rwanda, for national broadcast and use in schools. The issue with the first model is that it is not a scale-up option for KnowZone Rwanda, but bringing in a new idea of ‘TV for Teachers’. Apart from not being a scale up of the KnowZone pilot, the question is how much scope there is for a TV programme for teachers only. The second option indeed is a continuation of KnowZone, particularly the broadcast element, with increased levels of involvement from REB.

As indicated before, it is necessary to make a clear choice between broadcast educational TV programmes and a focus on supporting teachers in classrooms. The latter option would be about using video for teacher professional development (TPD), which is better done using mobile
phones as a delivery platform rather than TV. The new style videos that were used during the extension of the pilot were considered more useful for classroom teaching and could be used and expanded on, but this is not necessarily TV content. If scale up considerations point to a TPD focus, the content will need to be linked to the new curriculum and it will also require a strong teacher training component to support teachers in using the content in a classroom setting. The use of video for TPD may be a good element within a wider teacher training programme of REB and Mediae could liaise with PLAN International that also uses video for TPD.

Given the experience built during the pilot, the lack of edutainment for children on Rwandan TV and the specific profile of the Mediae Company, there may be most potential in deciding to go for the TV broadcast option. However, the programme should focus on 'learning at home', targeting children in a broader age range and delivered in a 'fun way', which also implies the TV episodes being more loosely connected to the curriculum than in the pilot programme. The Mediae Company has the right expertise to be supporting REB and the Rwandan Broadcast Association (RBA) to be able to produce and broadcast these programmes. The TV content could still be re-packaged for use with children (rather than for TPD) in schools.

**Cost considerations**
Scenario 1 has total projected costs of GBP 1.02 million, which is high for an audience of teachers only, without clarity about future impact.

Scenario 2 assesses the costs of scaling up the activities that were tested during the pilot extension, including slimmed down and simplified episodes that are closely aligned to the curriculum and attached to lessons plans giving teachers more control in using the content during their class. These slimmed down episodes can be produced more cost-efficiently in comparison with the original production of the pilot phase. Mediae’s involvement will be primarily related to developing capacities and skills for the Ministry to make quality educational and entertaining TV programmes.

The general issue with a media intervention is that production costs are high. While scenario 2 presents teacher support cost of GBP 13.16 per teachers/teacher trainees, this is only a fraction of the entire package. Production and equipment comprise over 50% of the scale up version. Total cost for scenario 2 comes to GBP 1.46 million, which, with a reach of 17,416 teachers, comes down to GBP 84 per teacher/teacher trainee.

These costs may become more justifiable if the focus is on reaching all primary children in Rwanda with an entertaining TV programme for informal learning at home (though limited access to TV in the home would still restrict the total audience).

**Immediate Next Steps**
- Make a choice where to focus: edutainment for TV or TPD video material production
- If the TPD option is selected, consider the consequences in terms of delivery (TV, mobile phones, or others) and engage in dialogue with REB, other relevant agencies and the TWG on TPD on how to make this happen. Try to integrate this work within the broader context of REB in-service teacher training. Make sure that the video is part of a wider package of support, including peer learning (a "blended approach")
- If the TV edutainment option is selected, engage with the relevant stakeholders and try to attract funding for a high quality TV learning show for Rwandan children, building elements of further improving the capacity of the Rwandan media industry and REB. The interest of RBA to invest some of its own funds in such a TV production could assist in attracting additional investment.