



Nokia MoMaths Project Report

May 2011- August 2011

Background

In 2009, 260 learners in Gauteng, the North West and the Western Cape provinces formed part of a test group for a mobile phone project funded and developed by Nokia. During 2010, a total of 4000 learners from 30 schools in the three provinces had access to the service to practice mathematics, to test their skills by competing with other learners in mathematics and to collaborate in maths related problems with their friends. The case study sample of 513 learners saw a 14% increase in competency at the end of the test period.

MXit became a partner in this project in order to allow many more learners the chance to participate free of charge. Nokia brought more partners on board: SAFIPA, the Department of Education, MXit, Cell C, Maskew Miller Longman and MTN. Each of the partners involved in the initiative have committed to ensure that this project will continue in South Africa. Nokia's role is to further develop the service, integrate this service into the South African learning environment and guarantee the sustainable implementation model for South Africa.

SchoolNet's Role

SchoolNet SA was appointed in May 2010 to carry out a project coordination role for the MoMaths project in more provinces and with responsibility for:

- Organizing teacher training when needed
- Creating and editing user accounts for teachers
- Enrolling teachers in courses and assigning them to groups
- Following up the learner/teacher usage and proactively supporting the usage via e-mails, text, phone calls, Moodle messages
- Gathering information about schools and classes
- Coaching learners frequently via Moodle messages
- Distributing enrolment keys to teachers
- Encouraging teachers to use the service
- Supporting teachers
- Gathering data about learner/teacher activity in the service
- Organizing national competitions

The future planning included the programme being further extended to Grade 11 in 2012.

Progress in Implementation

SchoolNet organized training workshops in each of the provinces of Eastern Cape, Free State and North West. At least one workshop per district was organized. BitVille in Finland is the company that has been editing user accounts. Once training commenced for the Free State Provincial Department of Education SchoolNet took on this role of creating teacher accounts and this was successfully completed for the five teacher workshops. The Provincial Department personnel were coached by Mr Solane Mlambo, SchoolNet Nokia MoMaths Project Manager. Seeing that district coordinators were allocated to be responsible for specific districts it made sense for the provincial officials to start taking over this task as ultimately this responsibility would reside with them.

SchoolNet followed up on the learner/teacher usage and proactively supported the usage via e-mails, text and phone calls and via Moodle. Use of the Moodle learning management system has been and continues to be a strong focus area for SchoolNet. Learners leave many messages which peaked both prior to the middle of August as well as prior to the competition. In the weekend 26-27 August 2011 in excess of 400 messages were received and in the main were responded to via the general MoMaths profile on the Moodle site.

SchoolNet sourced a bulk SMS system that allows multiple SMS communication to be sent out to teachers. This system was used to assist teachers to communicate major changes and urgent matters. This has included communication around any change in the MoMaths URL as well as the communication such as the following notifications relating to the competition:

"16.08.2011

Dear Provincial Official, District Official, Principal, HOD and Educator, We are finally excited to announce that we will be running a Momaths competition on the 29 August 2011 from 08h00 to 20h00. We are appealing to you to support learners in preparation for the competition. Educators always play a pivotal role in ensuring that learners access momaths and practise daily and this will help them prepare for the competition. Kind regards, Solane- SchoolNet 0786142642"

"20.08.2011

Dear Educator, I am excited to inform you that our competition will have one topic only: TRIGONOMETRY. Remember the competition will take place on the 29 August 2011 from 08h00 to 20h00. There will be 7 Questions: 3 easy; 2 medium; and 2 challenging/hard. Random questions to the competition will be asked. So encourage your learners to practise easy, medium and hard ones. LEARNERS WILL BE ALLOWED TO TRY THE COMPETITION ONCE! Regards, Solane-SchoolNet 0786142642"

"26.08.2011

Dear Educator, MoMaths Team encourages learners to practice all difficulty levels, so they should also try medium and hard ones. Practicing has been limited to 300 tries per single quiz in a 30 day period. This means, that in one month the learner can try in every topic practice Easy/Medium/Hard - each of them 300 times. Regards, Solane - SchoolNet"

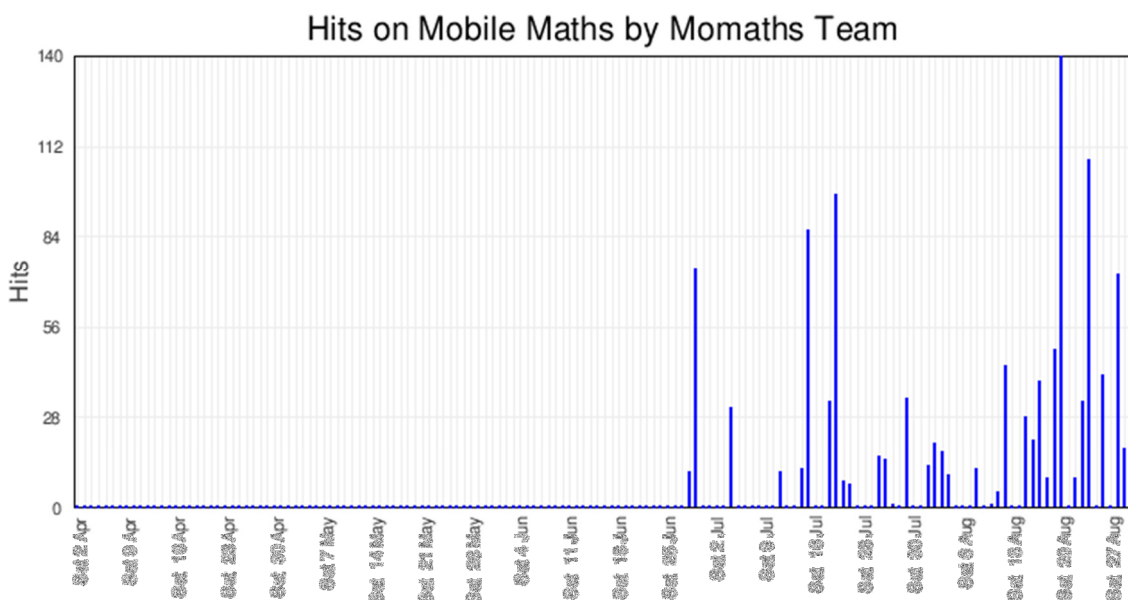
During the roll out SchoolNet focused on gathering information about schools and classes. This task has in the main been successful. In the North West, information on all schools

listed were detailed and complete. In schools where there was inactivity, District officials were proactive in visiting schools to obtain the required details and were continually updating information and encouraging teachers and learners to participate.

There was a challenge with Eastern Cape schools which was escalated to the provincial head office. However due to a number of special circumstances as well as Matric trial exams and National exams for Grade 10's and 11's being written this did not have the desired response.

The Free State province had their provincial departmental training in August 2011 and completed three of their 5 teacher workshops. Information was finalised as workshops were completed and teachers were actively encouraged to participate in this service by both SchoolNet and the respective district officials.

Coaching learners via Moodle messages was continually being carried out and evidence of the positive impact is clearly visible using the generic MoMaths profile on Moodle:



The above table displays activity on the MoMaths generic profile and from the periods of activity one is able to establish that SchoolNet has been instrumental in trying to recruit and encourage use of the service for Mathematics learning as well as active participation in the MoMaths competition.

All enrolment keys were distributed to schools where contact details were sourced. In instances where these were not forthcoming district officials were called upon to firstly update school details and even further visit schools. All district coordinators were supplied with all enrolment keys, usernames and passwords via email.

There has been an ongoing process of encouraging teachers to use the service and this has been done via SMS and Moodle as well as telephonic conversations with teachers which are considered

to be the most effective. The sustainability of this mode of communication as well as contacting teachers during working hours is however the challenge.

Teachers are being supported directly and indirectly; directly in terms of messages coming through the Moodle site. Teachers are furthermore encouraged to analyse reports on learner activity as diagnostic assessment. Indirect support is provided by encouraging learners to request assistance of their teachers when they experience challenges in understanding Mathematics content.

While gathering of data for learner/teacher activity, we believe that this is a task that needs to be more carefully monitored. Although statistics are drawn for specific time frames it does not adequately track learner activity versus inactivity within the period and therefore we look forward to engaging more proactively with this task.

National competitions

On the 29th August, SchoolNet organised the first MoMaths competition. Prior to the competition Ms Jacqueline Bachelor consulted with SchoolNet personnel on two occasions to ensure that both rules and processes were fully understood.

Mr Mlambo, contacted active participating schools from each of the respective provinces. It was established that the competition could be based on three topics on recommendation from teachers viz. Trigonometry, Factorisation and Data Handling. However it was suggested that since this competition was being held so late in the year, SchoolNet would only base the competition on one Mathematics topic and based on majority consensus Trigonometry became the choice.

Going forward ...

Training of Personnel

SchoolNet is focusing on training District officials because in many instances their current roles can merge seamlessly with the needs of the MoMaths project. Therefore personnel from Provincial departments of Education are being trained to handle administrative queries.. The North West province and Free State provinces have been most proactive in this regard.

Dissemination of Information

A dedicated resource person has been appointed for this purpose as well as ad hoc administrative support for telephonic support with schools. This has resulted in trust being earned between the SchoolNet personnel and the Momaths champion within each participating school. Support is being provided to teachers and district officials during work hours and addition learner support via Moodle messages as they arise.

Information has not been shared adequately with the Service manager despite actions being in place to provide exactly this. SchoolNet will endeavour to improve on these processes in the forthcoming months so that more streamlined dissemination of information as well as

questions/ challenges encountered on the MoMaths service are dealt with in an efficient and coordinated manner.

Encouraging use of the service

SchoolNet will further undertake to source university students and/or teachers to provide mentor/tutor support to learners ie by means of SMS/Moodle to encourage further use and advertise upcoming competitions especially during weekends.

Monitoring and Evaluation

SchoolNet will be providing regular reports on a two weekly basis to keep the Service Manager updated on all activities as well as monthly progress reports.

The schools usage audit has indicated that communications are being received whenever contact details are updated. In circumstances such as emails bouncing, Mr Mlambo had already sought updated email addresses. SMS's and Moodle messages are being received by teachers and in cases where not all teachers from a school were contacted, evidence is available to show that at least one teacher per school was contacted via some form of communication from SchoolNet.

Although we believe that there is a great deal of engagement with the programme and constant activity, there are always processes that can be improved and SchoolNet will undertake the following:

- Improved communication between us and the Service manager
- Being more proactive in encouraging activity and in the absence of initial school requirements being met, a recommendation be submitted for removal of those schools from the project
- Follow up with school champions in order to keep schools and learners active and encourage teachers to use the service for diagnostic analysis of learners understanding.

It has been a pleasure to be associated with the Nokia Mobile Maths project. It is hoped that SchoolNet SA will receive continued support from the Service manager to fulfil the deliverables in the time lines agreed upon.

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30 August 2011