



TAMPERE UNIVERSITY OF TECHNOLOGY

Nokia Mobile Mathematics - Supporting Learner's Motivation to Study Mathematics with Mobile Technology

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In collaboration with Nokia

Background

- Nokia Mobile Mathematics- project aims to support learning and teaching of mathematics with mobile devices improving the quality of education.
- **Nokia Momaths Introduction (video):**
<http://www.youtube.com/watch?v=PQSu6tlxNkA>



Research Questions

- How to design a service supporting teaching and learning providing added value for both teachers and learners?
- How to make mathematics an interesting and relevant topic for kids to learn?
- How to design a good quality mobile learning solution that could be taken into use easily and be spread out effectively?



Context

- The project has been carried out in amongst secondary school teachers and pupils in urban and rural areas in South Africa and Finland.
- The project started 2009 and is ongoing reaching now already some 50 000 learners and 700 teachers.
- The service is developed to be used in f2f classroom and outside classroom and by nature is encouraging informal learning.



Methods

- Longitudinal study was conducted in two phases: mainly during the years 2009 and 2010, pilot tests were conducted in 2008.
- To gather the data, both quantitative and qualitative methods were used.
 - log files of the actual usage of the mobile learning systems
 - questionnaires
 - focus group interviews, observation of lessons and thematic interviews
- We analyzed the provided data with descriptive statistics and content analysis



Findings 1/2

- The solution gave teachers new ways to supervise and plan the teaching and learning.
- Teachers gained better digital literacy skills and a possibility to communicate with pupils outside classroom.



Findings 2/2

- Teachers did not need much specific training to take the mobile learning solution into everyday use.
- Pupils' attitudes towards learning mathematics changed during the use from negative to positive.



Discussion and Future work

- Nokia Mobile Mathematics is designed for all learners.
- Cross-cultural design to fit the solution to different local learning contexts.



References

- Nokia Mobile Maths Web-Page:
<http://projects.developer.nokia.com/Momaths>
- Nicky Roberts & Riitta Vänskä (2011):
Challenging assumptions: Mobile Learning
for Mathematics Project in South Africa,
Distance Education, 32:2, 243-259.



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