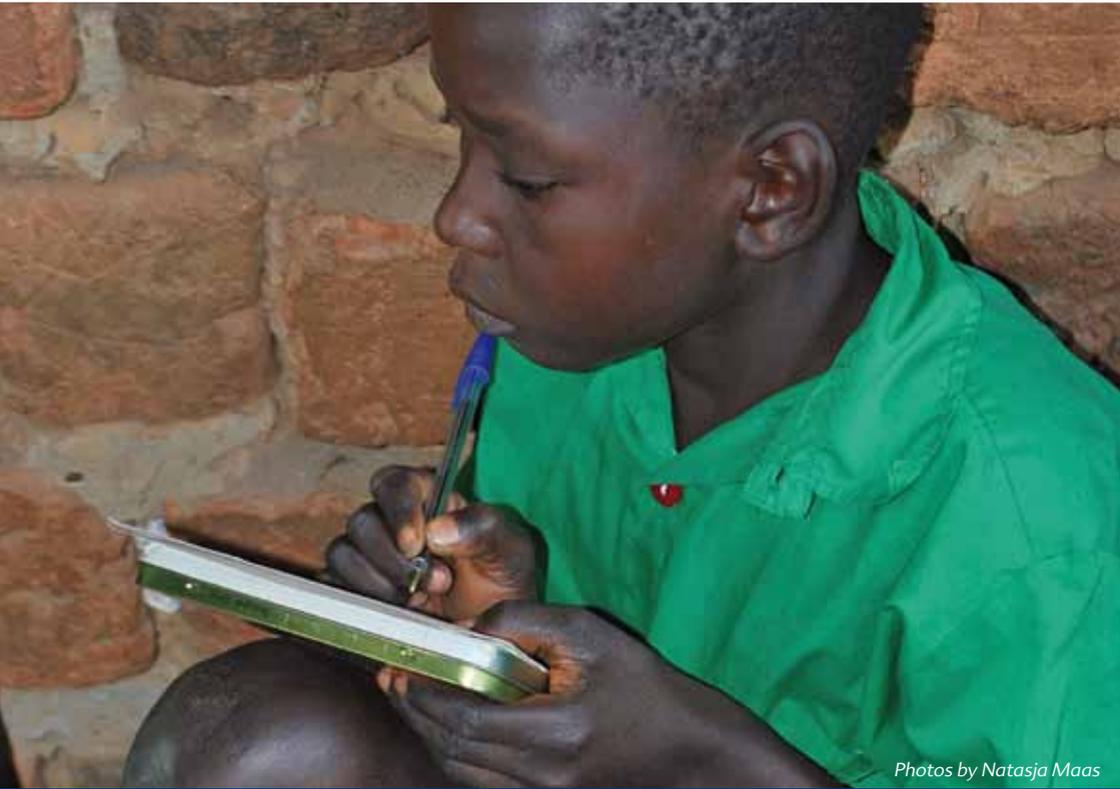


Learning in Process

Quality of Teaching and Learning in Rural Uganda



Photos by Natasja Maas

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Foreword

It is my pleasure to introduce to you the article “*Learning in Process*” produced by teacher educators of the Graduate School for Teaching and Learning of the University of Amsterdam.

Recently the focus on education has shifted from access to quality. Dealing with quality one has to enter the core processes of educating: teaching and learning. This implies that teachers as well as children are involved. We often talk of the ‘what’ of teaching and learning (content) and much less about the teaching and learning process itself. Are our children actually learning and how do they learn best? And what role can we teachers play to facilitate learning?

This article enters a discussion about the definition of quality education as well as about the usefulness of an approach, which already achieved remarkable results in teachers’ professional development in Ethiopia.

Also in Uganda the approach — popularly known as MOSIQUE - has shown significant results at 12 schools in Teso and Lango region, in close collaboration with two Primary Teachers Colleges.

According to Joseph Okurut, the coordinator of the project in Uganda: “MOSIQUE has ushered in a new era of what I would describe as “a new teaching and learning experience” for teachers and their learners in the 12 schools involved in the project. This is an experience that has resulted in more active, creative and committed teachers and increased learner participation during lesson delivery.” Nocolas Ogwang, a primary school teacher at Kawo, in Bukedia district testified that: “I now often have students work in groups, which has in fact simplified my work. And although I still have too few textbooks, I now know how to use them more effectively, through small-group exercises where students share the book or by referring to source pages in the text when I’m explaining content.

I have started to use games and competitions with my pupils to improve their literacy and numeracy skills. Absenteeism has dropped because of my new approaches, and I now feel more confident as a teacher.”

There are many calls for replications and up-scaling to other schools and districts. It is our belief that this evidence-based approach can be successfully applied in other regions of the country in order to reach out to many more students, teachers and training institutions.

The Edukans Foundation in the Netherlands, being the funding as well as the backing organisation of this pilot project strongly supports this practical approach. Its underlying rationale is that any effort to improve the quality of basic education depends on what is actually happening in the classroom: the so-called classroom interaction.

This article, along with the corresponding DVD, shows not only how to improve the quality of the teaching and learning process at classroom level, but also how to measure progress.

I would like to express my sincere thanks to Ries Sieswerda and Natasja Maas from the University of Amsterdam. Your professional approach played a key role in the success of this project. Acknowledgments of valuable help also go to St. Marys’ and Canon Lawrence Primary Teachers Colleges and all the participating teachers, school directors, supervisors and local education offices. Special thanks and appreciation go to Transform Uganda who coordinated the process.

The project is worth being integrated into the country’s education policy plan!

Kees de Jong
Director Edukans Foundation

Introduction

Educational reform seeking to improve the quality of basic education is high on the agenda of many – if not all – countries in Sub-Saharan Africa. Ultimately this involves changing the teaching and learning practices. As teacher educators at the University of Amsterdam we have been engaged in projects in Madagascar, Ethiopia and Uganda to support this change in classroom practice. It may be summarized as a shift from the dominant teacher-centred practice of teaching towards a more learner-centred approach.

Reasons for a developing country to modernize its educational system are abundant. As Lockheed and Verspoor (1) (1991) put it, the prosperity and quality of life of nations in the future depend on today's children and their ability to solve the problems they face. Nationwide programs in the countries we work in underline the urgency to achieve this shift. Changing teaching practice, however, is a huge challenge for many different reasons. For one, as Pontefract and Hardman (2) (2005) put forward, although teacher training colleges might advocate child-centred approaches, they are unlikely to be practiced or are little understood. Once in the classroom teachers will teach as they were taught themselves. Culturally, the teacher-centered pattern of interaction in the classroom is strengthened as it is coherent with the origin of African respect for tradition and authority.

We have noticed ourselves that most teachers are willing to change their way of teaching, and they are aware of the advantages, but they miss the skills to do so. Physical restraints such as a lack of materials and hugely populated classrooms (in Uganda some schools have a teacher – learner ratio of 1>200) make things far more complex.

The approach in our projects emerged from our background as teacher trainers at an institute with a strong tradition on educational design and years of working in schools in various African countries. It is based on the rationale that any efforts to improve quality in primary education must



focus above all on what is happening in the classroom. O' Sullivan (3), (2005) describes this as a 'classrooms level' approach; the starting point for improvement is the existing practice of teaching and learning.

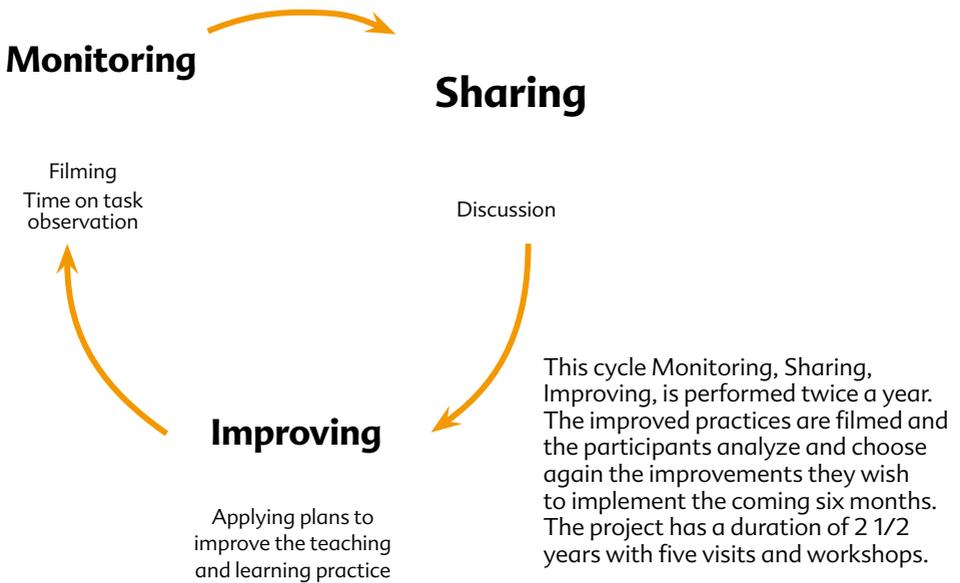
Over the years and while learning from the experiences in each country, we have developed an approach with a clear focus on teachers' analysis of the actual teaching and learning practice. Within this focus, we pay special attention to the relationship between teaching methods and students' learning behavior. To this aim we use innovative techniques such as digital video recording and analysis and a method to observe students' time on a learning task. Our experiences and the results convince us that we can make a modest but viable contribution to improve the quality of teaching and learning in Sub-Saharan African primary schools.

This article discusses our method and the results achieved in the Ugandan localities of Teso and Lango. We present a draft attempt to classify active learning in Uganda in a matrix; this draft is eventually to be used as a framework to analyze the quality of teaching and learning in Uganda and could be applied in other Sub-Saharan African countries.

In November 2010 a similar article was published with the results of our project in Ethiopia.

The third step is *improving* the teaching – learning process. The teachers in the workshop choose two or three teaching activities they want to improve to strengthen the learners’ activities. The training will be based on those chosen activities.

Figure 1. Monitoring, Sharing, Improving: a cyclic approach.



The cycle will repeat itself after each visit, starting with the monitoring of the intended improvements from the previous workshop.

In figure 2 the results are shown of the joint observation during the sharing phase in the first Teso workshop in September 2009. The listing of learning and teaching activities raised the question what the teachers could do in order to activate more pupils in the classroom.

Figure 2. Teso region, September 2009

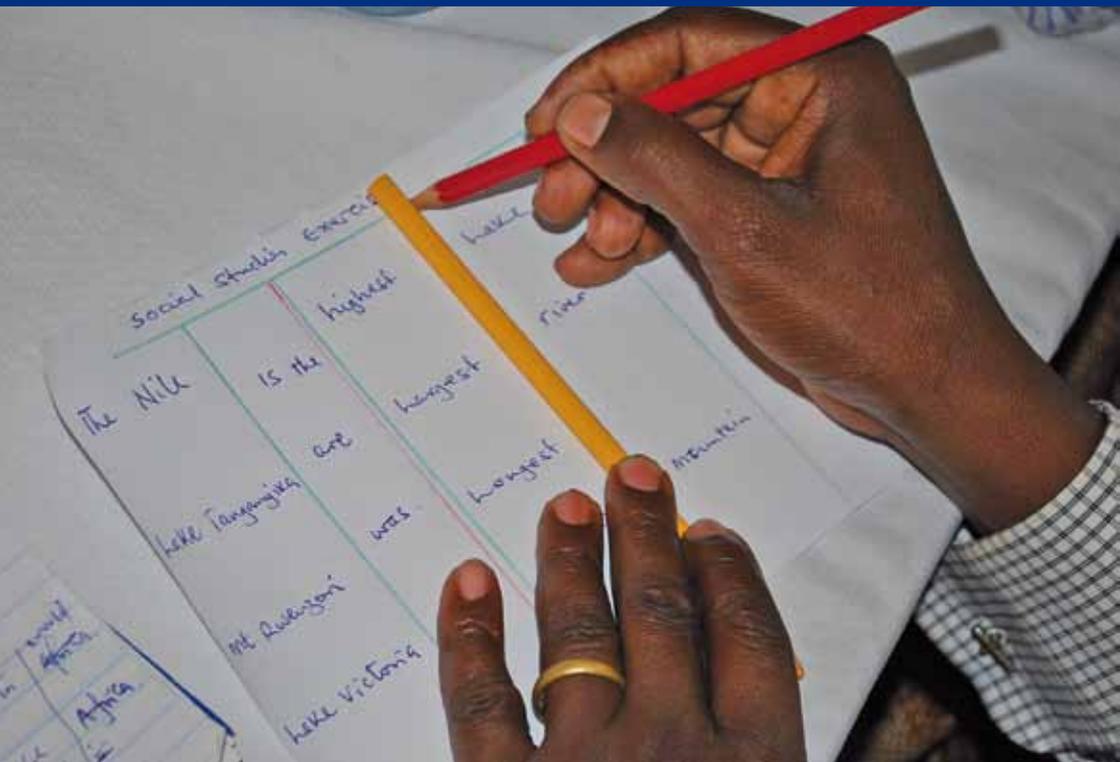
Teaching methods in Sept 09			
known	and	used (X)	
Phonic method	X	Brainstorming	X
Syllabic method		Role play	
Discussion	X	Problem solving	X
Explanation	XX	Field trip/excursion	
Question & answer	XXXX	Demonstration	XX
Look & say method	X	Simulation	
Group method	XX	Chalk talk	XX
Storytelling		Assignment	
Rote method	XXXXX	Research	
Observation	X	Projects	
Experimentation	X	Illustrating	X
Drama		Miming	
Discovery		Cooperative learning	
		Using textbooks	

Teaching strategies and learning activities known by participants compared with what was seen on the videos. The words the teachers give to a certain method or learning activity were literally copied down onto a poster. This figure shows the discrepancy between strategies and activities known and practiced.

Student activities in Sept 09

known	and	used (X)	
Reading	XX	Answering questions	XXXX
Writing	XXXX	Telling stories	
Drawing		Speaking	XX
Singing	X	Listening	XXX
Dancing		Doing exercises	
Reciting rhymes/poems		Naming	X
Rote learning	XX	Listing	
Identifying	X	Comparing	
Sorting		Homework	
Classifying		Debating	
Role play		Games	
Drama		Matching	XX
Modelling/constructing		Discussion	
		Demonstrating	
		Discovery/research/experiment	
		Observation	
		Counting	
		Measuring	

In workshops at the early stages of the project especially younger teachers tend to list an inexhaustible number of teaching strategies that could be applied to improve the teaching practice in an observed video clip. After acknowledging their know-how and enthusiasm we suggest that a selection should be made of small but feasible improvements (e.g. “in this example we observed a group of five pupils, two were working on an assignment in their text book, and three were seemingly idle with closed textbooks on their table. What can the teacher do to engage more pupils in this group?”). Planning small, concrete improvements, enhances the chance of achieving success resulting in higher teacher confidence. In accordance with this view a practical training is organized for the participants to support these intended improvements.



To this aim we apply a strategy, through lesson observations, feedback and video analysis, that involves the participating teachers and supervisors in monitoring their own improvement process and progress.

This strategy is a reaction to several studies on education improvement programs, which reveal a poor connection between the methods to be implemented and the local teaching practice. To leave out the local practicing educators, those who know most about schools, is often the reason of failure of implementation of new approaches (Heneveld, 2007).



Cooperation with local educators

Our counterparts in Uganda are L.E.C. (Local Education Centre), the front office of the Edukans Foundation, and Transform Uganda, a local NGO specialized in education. Both organizations have a large network within the community, with schools and local district educational offices. Maintaining and supporting the commitment of the local community will help the sustainment of the project. These organizations play a crucial role in informing all the parties involved.

The Primary Teachers Colleges (PTCs) are important partners in this project. They supervise the progress of the project, visit and support the teachers in the months between the visits of the University of Amsterdam experts. They also play an important role during the training sessions by training and coaching the teachers. Close cooperation between the experts from the Netherlands and the local educational experts is a key factor for the project's success.

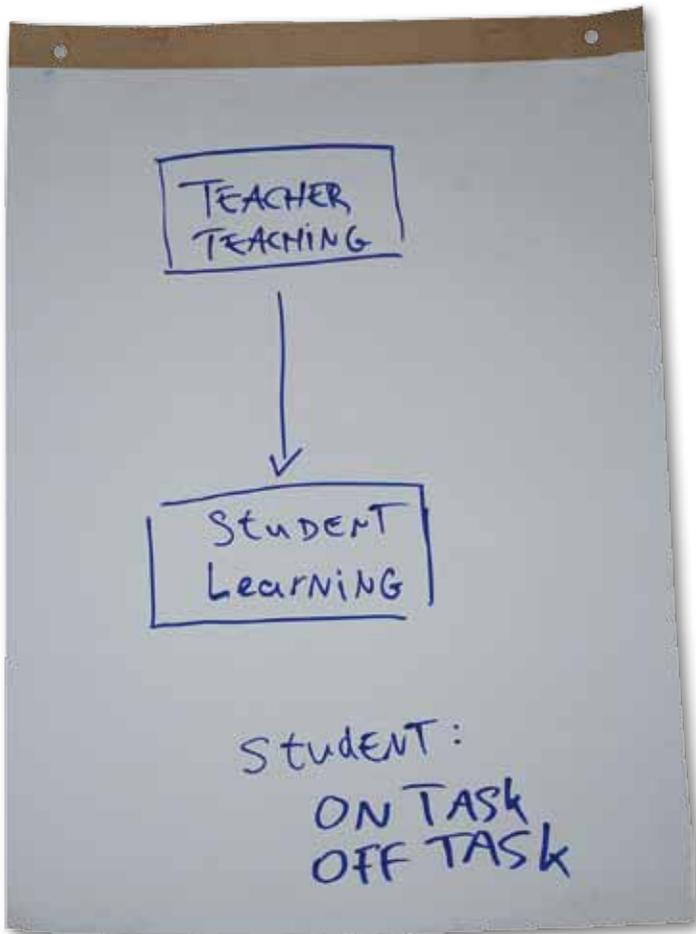


Evaluation of progress

The evaluation of teachers' progress is two-fold. The digital video recordings give us a database to analyze the progress made in different teaching methods used by teachers and in the different learning activities of the pupils. The projects in Uganda and in Ethiopia are among the few development projects in Sub-Saharan Africa in which video is used as a main instrument for professionalizing teachers. The filming is done during the six-monthly visits by the University of Amsterdam and in between those visits by the local experts.

The second evaluation tool is an instrument called '*time-on-task*'. With this method the time pupils are actually working on a learning task is measured. To do so, the University of Amsterdam has designed a form that is easy to use for all participants.

A main goal of this project is to increase the active participation of pupils in their learning. One way to achieve this is by doing different learning activities (Hattie, 2008). With the 'time-on-task' evaluation we not only measure the amount of time the pupils are either on-(a learning)task or off-task but also the variety of learning activities used in a certain lesson. With the help of the time-on-task observations one can for example learn which activities appear to motivate students; also one can compare the intended and actual student behaviour on a given task. A fair amount of research is available on the validity of this method.



The time-on-task observations are done by our colleagues of the PTCs, whom we trained in September 2009 on how to use this tool. The observers will select a pupil randomly and observe this student for 2 minutes, split up into periods of 20 seconds each. For these 20 seconds (= 1 'episode') the main activity of that specific student will be observed and noted down, see box in figure 3. After this observation the observer selects another student randomly. He or she will continue doing this, taking the occasional minute off to rest, during the whole lesson. In general the observers try to monitor about 20 pupils in one lesson. Figure 3. Time-on-task observation (the student observed in this example was off-task for 40 seconds, after that she read something in her textbook and discussed with other students.

Episode -> Behaviour	20sec	20sec	20sec	20sec
Off-task	x	X		
Reading			X	
Writing				
Discussing				X
Active listening				
Other learning activity				

After completing the observation the observer will calculate the average percentage of on- and off-task behaviour of the pupils in that particular lesson. The observer, in most cases a teacher trainer from the PTC, then shares his observation with the teacher observed. A discussion will take place between the two on strong points and points to improve concerning active pupil involvement. With the help of this method the teacher receives direct feedback based on data.



Time-on-Task

Time-on-task observation works on the assumption that concrete behaviour of pupils is an indication of their emotional and cognitive functioning. On the basis of the observations one could for example conclude which activities appear to motivate the students; also an analysis could compare the intended and actual student behaviour on a given task.

Much research is available on the validity of this assumption e.g.: Fudge D., C. Skinner, J. Williams, D. Cowen, J. Clark & S. Bliss. (2008), J. Fredericks, P. Blumenfeld & A. Paris (2004). Strong points of this technique include its potential to correlate student behaviour with teaching strategies and to provide the specific feedback to the teacher observed. On the other hand, this instrument is purely quantitative, it does not provide insight in the quality of the learning activities in terms of learning outcomes.

The time-on-task observation technique has proved itself effective in our projects in various ways. The most important effect is that it draws the focus of attention to the learning of the student. It is a practical instrument to engage participants in monitoring the process and it stimulates continuous monitoring. It focuses the progress of a teacher's individual performances and progress in the project as a whole.

The cycle of monitoring, sharing and improving repeats itself during the scope of the project. In each project the aim is to share experiences and results in order to systematically improve and expand the scope of the project. E.g. key teachers and supervisors support other teachers in their schools, school directors discuss possibilities of facilitating improvement of the teaching and learning process in other schools, teacher educators, like teachers from the Primary Teachers Colleges and the experts from L.E.C., take part in the school visits and discuss possibilities to apply what they learn in other professional contexts.

In our experience this approach provides the teachers with recognition of the problems they encounter in their practice and gives them concrete tools for improvement and the confidence to bring it about. Evidently their success depends not just on the quality of monitoring, training and assistance, but also on various factors that cannot be controlled within the project, such as commitment by local officials, the quality of school management, the high turnover of teachers who gain promotion and the high turnover of officials for political reasons.



Project results in Uganda

In this section we will give an overview of the progress made in Uganda during the project's life cycle. The main objective of the project is to change the Teaching - Learning process from teacher-centred to learner-centred, and to increase learners' on-task activities.

In the figure below an overview is given of improvements that were made by the participants during the course of the project. These themes have in common that they are expected to enhance learning results according to educational theories (Kyriakides, et. al. 2007; van de Grift 2010). Also they are highlighted in Ugandan national policy documents to improve the quality of teaching and learning through 'active learning strategies'. In general we found that the lack of know-how on how to put theory into practice was what hindered most teachers. The training focused on bridging the gap between theory and practice by gradually and continually valuing the try-out improvements of the teachers and by coaching them, step by step, in the right direction. The trainings were valued greatly by the participants.

Figure 4. Overview of intended and realized improvements

Intended improvements in teaching and learning in the course of the project

Practical application of the lesson subjects.
Improved classroom management.
Encouraging students.
Varying pedagogical and didactical methods.
Planning use of textbooks in lesson plans.
Applying teaching and learning aids.
Mixing individual, pair and group assignments.
Increasing time-on-task.
Using textbooks.
Using learning aids (media).
Organizing learning activities outside the classroom (field work).
Assessing the students in a variety of (positive) ways.

To gather data in a systematic way we designed criteria. These criteria have been observed in classroom situations, or outside the classroom as part of so-called fieldwork. The criteria listed in Figure 4 are structured into two categories: *student behaviour* and *teaching approach*.

1. Student behaviour and use of learning resources

- a. Diversifying of student activities, e.g.: listening, reading, writing, discussing, singing, acting, drawing, measuring, explaining to another student, manipulating objects/ researching.
- b. Average time-on-task, i.e. students' attention is directed towards learning.
- c. Use of teaching resources within the classroom.
 - c1. Textbooks used by students individually or in groups.
 - c2. Use of media by students individually or in groups.

2. Teaching approach

- a. Attention for practical application of subject knowledge.
- b. Assessment of learning by students in the classroom.
N.B. Terms such as classroom assessment and continuous assessment are used by participants and in policy documents, in our project attention has been directed more towards formative than towards summative assessment.

- c. Encouragement of students' confidence.
- d. Classroom management.

The results, based on the above criteria and over a period of 2.5 years are shown in Table 1. The results give us an overview of the improvements made in 12 schools, based in two rural regions of Uganda, in Teso and Lango. In Teso region we mainly worked in the Bukedea district and in Lango region we worked in the Amach district. The time span is structured according to the twice-yearly visits of the experts of the University of Amsterdam when the monitoring and the training workshops took place.

The information in the table is an illustration of the positive effect of the training on the relation between teaching strategies, learning activities and on-task behaviour of pupils.



Table 1.: Overview of progress in teaching and learning practice correlated with training given in basic education.

Criteria for quality education		Activities monitored September 2009 – October 2011	
1. Student activity		September 2009, visit 1	March 2010, visit 2
a.	Variety of student activities observed during one day	2 – 3	4
b.	Average time on task observed	60 %	70 %
c1.	Use of textbooks	None or very occasionally	1 - 2 textbooks in class, occasionally used
c2.	Use of media / worksheets	None or very occasionally	Frequently present, sometimes used
2. Teaching approach			
a.	Attention for practical application knowledge and skills	None	None
b.	Assessment	None	Poor
c.	Encouraging students' confidence.	Discouraging (e.g. frequent verbal punishment of weak students), students are addressed at class level.	No verbal punishment observed, encouraging good performers by clapping
d.	Classroom management	Poor organisation hinders effective student-teacher and student-student interaction and on task behaviour.	Start with group work, still poor interaction

Training given on: creating teaching aids/worksheets; classroom management, using the textbook; to make the students more active; Time on Task method

	September 2010, visit 3	March 2011, visit 4	October 2011, visit 5	
Training given on: questioning – answering techniques, classroom management, worksheets; making the students more active	8 – 9	>10	> 10	Training focussed on: good practices of the participants, challenges still remaining, the value of cooperation/peer learning within the school
	85 %	88 %	85 %	
	If available the books are used	If available the books are used, photocopies are used	If available the books are used, photocopies are used	
	In all classes present, and used	Varied and used	Varied and used	
	Frequently referring to the world outside the classroom	Frequently referring to the outside world, occasionally demonstrating objects in class	Standard reference to outside world. Sometimes practicing assignments outside the classroom,.	
	Teacher walks around and helps individual students	Teacher walks around and notices students' work	Teacher walks around and notices students' work	
Incidentally, when physical conditions allow this, supporting and encouraging students individually.	Structurally (given the right physical conditions) supporting and encouraging individual students	Structurally (given the right physical conditions) supporting and encouraging individual students		
Frequent interaction in lower grades.	Frequent teacher student interaction on learning subject in lower grades and higher grades.	Frequent interaction on learning subject in lower grades and in higher grades		



The results of Table 1 are based on our monitoring sessions during the 5 school visits each half year from 2009 till 2011. Data were also gathered by continuous monitoring (e.g.: through time-on-task observations) by the teacher trainers of the PTCs and the professionals of the LEC and Transform Uganda office, in between two half-yearly visits.

The variety of student activities has improved from 2-3 in September 2009 (mainly listening and repeating the words of the teacher) to 8 – 12 different activities in October 2011 (discussing, practicing, active writing, reading, presenting, comparing, researching in fieldwork, explaining, etc). It means that teachers have been experimenting with more activities and lessons can be interpreted as more learner-centred. It does not say much yet about the quality of the activity.

The textbooks were absent in the classroom when the project started in 2009. We have seen an attempt at using the textbooks more often in almost all schools. Textbooks are present in very small numbers and almost absent in the higher grades. We strengthened the photocopying facilities in the PTC to overcome the textbook problems in the primary schools. After several visits the use of educational media and worksheets was accepted and used by almost all participants. Testimony of the students makes it clear that they like this way of learning.

The teaching approach has changed considerably; the teachers learned to link knowledge to the world outside and learned to assess their students. The assessment was made easier by better classroom management.





Time-on-Task

The average time-on-task presented in the table is based on the analysis of video films and the filled in observation forms by participants in 12 selected schools. These schools together are expected to represent an 'average quality' for the two regions. For each region two schools have proven to perform above average, two are average and two are less than average. The schools in each region that are regarded to be exceptionally strong or weak are left out of this analysis.

Per school two/three specific key teachers actively participating in the project were observed and filmed 3 or 4 times at half year intervals. Each 6 months another teacher in each school (not actively participating in the project workshops) is filmed and the average time-on-task is calculated. The teachers selected for this purpose are filmed once and together are meant to represent an 'average' practice for their specific school. This method was chosen to gain insight into the extent to which the learning results of the participants are shared with their colleagues in the schools; as was intended in the project set-up.

Time-on-task was defined as the average time students were on a learning task like actively listening to the teacher, observing, reading, writing, discussing with each other or with the teacher, or engaged in a learning activity not covered by these categories.



Figure 5: Discussing the use of time-on-task observation for monitoring

The primary aim of our time-on-task method was to use it as a practical tool for individual and peer feedback at a local level. By calculating the average time-on-task during the duration of the project, we could also use the data for a second aim: the overall monitoring of project progress.

Although the method itself seems to have a good potential to do so, questions may be raised regarding the validity of this method in the context of time allocated to monitor progress in the project. Decisions have to be made for example on: what data to select systematically throughout the project; how to judge the validity of data provided by participants; how to cope with selected teachers that drop out of the project due to job turnover.

The selected categories of on-task behaviour pose questions at another level. In the end the category of 'active listening to the teacher' is hard to observe as ultimately 'listening' is not easily observed. Another problem of 'listening' in the context of our project is that on the one hand it is relevant as a clearly dominant and important pupil activity and on the other hand it is the most passive of the learning activities. In other words, a teacher may achieve a high average of time-on-task in his lesson, but if it mostly consisted of listening it would not give a good indication of active learning.

Our approach to systematically collect time-on-task data for the aim of monitoring is presented above. We believe that in spite of the questions raised, it does nevertheless meet the need to gather concrete and objective data on progress in general. Figure 6 shows some quotes by several participants from their evaluation of the project.

Figure 6: Evaluating the progress with the participants

Questions	Answers
What are the advantages of the students-centred approach?	Learners are more active. They are happy to go to school, there is less absenteeism and I am proud of my work (Stephen, Kajamaga). The children are less shy, they can express themselves better. It makes the teaching real, sometimes they do research by themselves and they solve problems on their own. I have time to monitor and to guide them.
How did you change your teaching?	We use many materials now and learning becomes easier for the children. We use a lot of different materials; like puzzles and word games. I don't lecture any more but use worksheets and textbooks (Nicholas, Kawo). I use a lot of materials in my classroom, it makes my job easier because children understand better (Mary, Kajamaga)
What are the challenges now?	We have a textbook problem. Especially in the upper grades there are only two or three books available.
Other remarks	It is time consuming, it requires good preparation.
Comments by our colleague trainers from St Mary PTC (Bukedea), Nyondo PTC in Mbale and some tutors from Canon Lawrence PTC in Lira	We learned the importance of the use of time-on-task as an instrument to identify student activities. The focus is on the learner now instead of on the teacher. We learned the necessity to go into the classroom to identify the problems. We now use the good practices filmed in the primary schools as learning material for our own students. They benefit a lot, because they see real classroom situations. (Jane Ichapo, tutor of St Mary's PTC).



Classification of the quality of the Teaching- Learning process in Uganda

The question “How do we define quality of education?” is both basic and essential for everyone involved in educational development programs. We stated that our contribution is geared towards the teaching and learning process, there is no debate possible on the importance of this process to support learning of children at school. Of course other perspectives play a major role in this area of quality education; e.g. good school administration, physical conditions and availability of learning materials. As teaching and teacher training is our core business, it is no surprise that we choose to focus on the essential elements of the teaching and learning process.

Indicators for defining the quality of teaching and learning will always be debatable as they can be suggested from different perspectives and will never be nearly as hard and concrete as for example indicators for physical quality of schools. We would like to use our experience to contribute to defining the quality of the teaching and learning process – coming to grips with a clear vision of this process, and going beyond output indicators such as the teacher-student ratio or the number of graduated teachers. That is not to state that these indicators are not important; basically the theme we address is classroom learning in interaction between teachers and students. How can this process be monitored learning from our lessons in Uganda and in Ethiopia?

The result of this attempt is presented in the form of a draft matrix in Table 2. If we could develop and apply a matrix in this fashion, we will have a format that gives us not only a concrete idea of the destination of our journey towards an effective teaching and learning process, but also an idea of the various stages one needs to pass to get there in the end.

As an exercise we have applied this matrix to the schools that participated in our project. On top of defining various key issues and development stages we have forced ourselves, again as an exercise, to judge the level of development in our schools in four possible qualifications: insufficient, moderately sufficient, sufficient and good. Figure 8 presents the results of this exercise; please note – we cannot be careful enough – that this does not imply a final verdict or blame or even praise. We are well aware that many complex factors have to be taken into account, for a great deal these are factors that can hardly be influenced directly at grassroots level.

Figure 7. Development of schools in improving teaching and learning

Progress of schools in the project	Legend: see table 2 for the criteria
<p>45% of the schools in our project have made progress from sufficient to good, one of them even from insufficient to good.</p>	<p>Good quality: No criteria score less than moderate, the average score on all criteria is more than sufficient.</p>
<p>40% of the schools have changed from insufficient to sufficient.</p>	<p>Sufficient quality: A maximum of 1 criterion is scored less than moderate, the average score is sufficient.</p>
<p>10% of the schools have changed from insufficient to moderately sufficient.</p>	<p>Moderate quality: The average score is less than sufficient, and/or more than one criterion is scored insufficient, and/or the total score is more than insufficient.</p>
<p>5% of the schools remain insufficient.</p>	<p>Insufficient: More than 3 criteria are scored as weak; the average score is less than moderate.</p>

In 2009 we started with 12 schools and 36 teachers. An important aspect of the project was dissemination to other teachers. In 2011 almost 100 teachers were trained and were able to make their students more active on a learning task. In 2009 60% of the pupils were on-task. The student activities were mainly listening and answering teacher questions. In 2011 this percentage was 85% and pupils' main activities were writing, reading and discussion, all of them student activities that elicit more in-depth learning. Another effect of the project was that six of the 12 schools involved witnessed a drop in absenteeism and a rise in student registration.



Table 2: Draft observation matrix to classify the quality of the Teaching-Learning process.

Criteria for quality education		Not sufficient	Moderate
1. Student activity			
a.	Variety of student activities	<4	4 - 5
b.	Time-on-Task	<60%	60 - 80%
c1.	Use of textbooks	None.	By the teacher only.
c2.	Use of media / worksheets	None.	Few, demonstrated by the teacher.
2. Teaching approach			
a.	Attention for practical application knowledge and skills	None.	Referring to the world outside (pictures, objects).
b.	Assessment in the classroom	None.	Using 1 method.
c.	Encouraging students' confidence	Discouraging (e.g. punishing weak students).	Neither discouraging nor encouraging.
d.	Classroom management	Poor organisation hinders effective student-teacher and student-student interaction and on-task behaviour.	Elementary organisation skills. Insufficient coherence between organisation and tasks (e.g. group work without group assignments).
e.	Lesson planning	None.	Using a rough lesson plan with activities to do for the teacher.

Future plans: Mosque Phase 2

During the project many visitors joined the field visits and training workshops in different regions. To be able to do so we have realized the need to focus on future teachers. They requested an extension to other areas and many more schools. In order to do this we are planning to establish Teacher Training Centers (PTCs).

	Sufficient	Good
	6 – 8	>8
	80 – 90%	>90%
	By the students occasionally.	By the students regularly.
	Regularly, demonstrated by teacher and used by the students.	Daily use by the students.
	Demonstrating in class.	Students learn and practice inside and outside of class-room.
	Using 2 methods.	Using >2 methods.
	Occasionally encouraging students, mostly at class room level.	Encouraging students on a regular base, at individual and group level
	Organisation facilitates on-task behaviour at individual and group level. Insufficient responsibility for learning is delegated to students.	Organisation facilitates on-task behaviour at individual and group level. Insufficient responsibility for learning is delegated to students.
	Using a rough lesson plan with objectives and activities for teacher and students to reach the objectives.	Using an elaborate lesson plan with objectives and activities.

and left feeling enthusiastic, believing that this project should be expanded into more schools, the students in the PTCs. The project also inspired the Ugandan authorities, and we were able to answer this question we propose to run the program in (Core) Primary

A focus on PTCs means that we will not only reach the tutors and the supervisors (CCTs), who are responsible for the pre- and in-service training. Most importantly we will reach the pre-service teachers and the in-service teachers. The impact will therefore be large.

In Mosique Phase 2 the teacher trainers will be trained in *how* to teach active learning, in *developing* their own training module and in *conducting* quality research. A training module, with film clips, assignments and literature, will be made available on DVD. At the end of the project the PTCs will have designed their own digital training module. We work towards a digital learning environment (e-learning) so that tutors from different PTCs in Uganda, but also from Ethiopia, can share their knowledge and materials.

The teacher trainers will be trained to teach *how* to apply active learning in the classroom; they will train the student teachers and the teachers of the schools that are in their care. Next to the training program in the application of active learning, all participants are trained in doing research into the results; they will monitor (in the schools and in the PTCs) the progress in the classrooms with a variety of research instruments designed by the UoA experts. This research will help them to coach their teachers and to focus on their own practice.

After 4 -5 years we expect a measurable improvement in the quality of education in the participating PTCs and in primary schools. Due to the intensive training and research components we expect the trained teacher trainers to be ready to train their colleagues in other PTCs. During project years they will have designed their own training course (modeled after ours) to do so.

In November 2011 a team of experts of the University of Amsterdam together with an Edukans trainer went to Ethiopia to start Phase 2. We hope to also continue the project in Uganda in 2012.



Conclusion and Recommendations

In year 2 our approach really got the momentum we had hoped for. Apparently the participants need time to get familiar with the proceeding of the project and its trainers. A project must assure that training is a process that takes several meetings well-spaced in time, the participants need time to try out the techniques learned and get familiar with an approach new to them. The training has to be very practical, participants must be able to use the things learned immediately.

Participants have to choose themselves what training they need, and the level of training must fit with the level of the participants. Video registration may be daunting; good and bad performances can be seen. The trainers are to be very aware of this and must choose carefully what to show the audience. The atmosphere throughout the training must be positive and sincere; the participants must feel safe and appreciated by all other participants.

The included DVD illustrates 2.5 years in Uganda. It shows the progress in the Teaching - Learning process. The project has made a contribution to the improvement of the quality of education in basic education in Uganda. Based on these results and the criteria we have made to qualify quality of education (as a first draft), we hope to have made a contribution to the discussion about the definition of quality education and how to improve it.

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References

- Courtney, J. (2008). Do monitoring and evaluation tools, designed to measure the improvement in the quality of primary education, constrain or enhance educational improvement? *International Journal of Educational Development* 28: 546 – 559.
- Fudge, D.L., Skinner, C.H., Williams, J.L., Cowdon, D., Clark, J. Bliss, S.L., Increasing on-task behaviour in every student in a second-grade classroom during transitions: Validating the colour wheel system. *Journal of School Psychology* 46 (2008) 575-592.
- Grift, W.J.C.M. van de (2010), *Ontwikkeling in de beroepsvaardigheden van leraren (Professional development of teachers)*. Discourse, University Groningen.
- Hattie, J. (2009). *Visible learning; a synthesis of over 800 meta-analyses relating to achievement*.
- Heneveld, W. (2007). *Whose reality counts? Local educators as researchers on the quality of primary education in Sub-Saharan Africa*. Washington DC: The World Bank.
- Krash, D., Carter, D.C. (2009). Monitoring classroom behaviour in early childhood: using group observation data to make decisions. *Early Childhood Journal* 36: 475-482.
- Kyriakides, L., Creemers, B.P.M., Antonioua P., (2009). Teacher behaviour and student outcomes: Suggestions for research on teacher training and professional development. *Teaching and Teacher Education*, Volume 25, Issue 1, Pages 12-23.
- Lockheed & Verspoor, (1991). *Improving Primary Education in Developing Countries*, Oxford University Press, New York.
- Ogwan, N. (2010) Applying best practices, despite major challenges, article in *Association for Supervision and Curriculum Development (ASCD)vol.16/623*. <http://www.ascd.org/ascd-express/vol6/623-newvoices.aspx>
- O' Sullivan, M.C.(2005). What is happening in the classroom? A common sense approach to improving the quality of primary education in developing countries. *Teacher development*, 9, pp. 301-314.
- Pontefract, C., Hardman, F, (2005). The discourse of classroom interaction in Kenyan primary schools. *Comparative Education* 41 (1); 87-106.

