Moving from Evidence to Policy and Action: Can Teacher Quality Help Improve Learning Outcomes in Kenya?

“...your child is being taught math by a teacher who loves teaching but did not do well in math at school. Two-thirds of grade three and six children are taught math by a teacher who can score more than 40% in a primary teachers’ math knowledge assessment? how about the rest?…”

Teacher-training Program

In Kenya, primary school teachers go through a two-year pre-service training program and short in-service training programs. In addition, teachers benefit from the school-based professional support provided by Teacher Advisory Center (TAC) tutors and quality assurance officers from the Ministry of Education. The pre-service training program is a two-year training program that focuses mainly on primary school subjects’ content and pedagogical skills. During training, teacher trainees are trained in all the five subjects taught in primary school in spite of the fact that it is impossible to gain teaching competency in all the five. Trainee teachers attend an internship program to acquire practical skills in teaching as part of their training although it is important to note that this internship has been faulted for its ineffectiveness in addressing practical challenges faced by teachers and learners in the classroom.¹

Our study further shows that trained teachers do not demonstrate effective pedagogical teaching skills when compared with untrained teachers, raising questions as to the effectiveness of the teacher training programs. The good news is that 47% of the classroom lesson time is spent on teaching and learning activities that can enhance learning. Another 16% is spent on teacher dominated activities. The bad news is that 37% of the lesson time is on transition activities that do not directly influence learning, for example external interruptions, looking for writing materials and text books among others. Perhaps this may be an indication of inadequate pre-lesson preparations.

The in-service program is supposed to address the needs of teachers and head teachers, especially as they relate to school management and classroom practices. However, such programs are rare; in the 12 months prior to data collection for a classroom observation.


study, only 26% of teachers indicated that they had attended an in-service course which in most cases was theoretical. Inadequate professional support inside the classroom context makes it difficult for teachers to relate theory to practice and the challenges they face every day while teaching. For example APHRC findings show that about half of math lessons in government schools utilize non-basic teacher made learning materials; the proportions are much lower in formal private schools (35%) and low cost schools (25%). Use of non-basic teaching materials such as manila made charts is critical in facilitating learning through simplifying concepts and reinforcements among other ways.

A Dramatic Impact on Students

The current teaching practices are not effective and hardly lead to improved learning outcomes among the majority of pupils with learning difficulties. For instance, research by APHRC shows that in spite of a ‘no repetition policy’ in Kenya, average repetition rates are above 10% with some grades in low performing schools recording rates as high as 50%. At grade six, less than half of the pupils could score more than 50% of the items in grade six literacy and numeracy assessments. Consequently, many children are ‘pushed’ through the school system without acquiring competency in literacy and numeracy.

A Decline in Utilization of Government Schools

In large urban slums of Nairobi, Eldoret and Mombasa, more than half of the households take their children to fee-charging, non-government schools. In Nairobi a lone, two in every three children in Korogocho and Viwadani slums attend a non-government school. Apart from the inadequate number of government schools in these informal settlements, parents cite the quality of teachers as one of the major reasons that attract them to non-government schools.

Efforts

To mitigate the decline in quality of education, the Ministry of Education and the Teachers Service Commission have put in place a teacher’s professional development program as a way of improving the quality of teaching. In addition, schools have been supplied with teaching and learning materials under the Free Primary Education program. However, more needs to be done if these efforts are to bear the expected benefits.

Move Towards a Practical Approach to Teacher Training

The Ministry of Education and Teachers Service Commission should shift from theory based in-service teacher training to practical and classroom-based teacher support by 2015. The main concerns about implementing this solution is the inadequacy of evidence of what is happening in the classroom; teachers’ content and pedagogical knowledge; and how this impacts on classroom interactions and learning outcomes. While the current Ministry of Education and Teachers Service Commission strategy to improve quality of education through enhancing teachers’ pedagogical skills and knowledge is laudable, it can be enhanced to improve learning outcomes.

Focus on Improving Pedagogical Skills

While it is important to allow pupils to practice math tasks on their own, it is equally important to ensure that they conceptualize and develop mathematical procedures that show relationships for them to acquire mathematical proficiency. Effective teaching styles such as group work, cooperative learning and discovery approaches that were not witnessed in the lessons observed, in an APHRC study, should be practiced. From the findings of the APHRC study, two observations come out clearly. On one hand, teachers with less math knowledge avoid verbal interaction with learners and prefer individual desk work. On the other hand, teachers with higher math knowledge prefer ‘passing on’ or ‘telling’ the pupils all they know and hence practice teacher-centered teaching styles.

...across all the study sites and school types, more than half of the math lessons in grade three and six utilized individual desk work as the dominant classroom activity. Teachers who utilized individual desk work scored the least (50%) in a teacher test while those whose lessons were highly teacher centered score the most (54%).

Teachers need to develop fluency and automaticity in pedagogical skills so that they have alternative options of dealing with classroom situations without having to think about ‘how to interpret and act’. The current strategy is too theoretical to enhance fluency and automaticity in teaching skills.

Focus on Strengths

...The overall math scores for teachers ranged from 7.5% to 92.5% with an overall mean of 51%. In pedagogical knowledge assessment alone, the mean score ranged between 43% for teachers in low-cost schools and 47% in formal private schools.

Teachers go through a two-year pre-service program that trains them how to teach all the 5 subjects taught and examinable in primary school. Teachers need to concentrate on what they are good at so any teacher scoring 10% or below in a math content and pedagogical knowledge assessment should not be teaching math in a primary school. But such a teacher could perhaps teach another subject he or she is good at.

Focus on Continued Learning

The study also showed that having more years of teaching experience is not always enough to ensure an improvement in learning outcomes. This is because long serving teachers hardly improve their content and pedagogical knowledge. As a result, their quality is lower compared to that of newly or recently employed teachers, as demonstrated by the association between scores in the teacher test and their student math scores.

...In public schools, there was a negative and moderate (-0.4) statistically significant association between years of teaching experience and grade six student math mean scores.

Many practicing teachers have never been observed while teaching since they left college. Creating a system in the school that provides classroom-based teacher support can go a long way in enhancing teaching skills among long serving teachers. In addition to Teacher Advisory Center tutors, head teachers and senior teachers who are present in schools are better placed to provide coaching, lesson observation and feedback.

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Policy Recommendations

**Teachers’ professional development:** Continuous professional and academic development among teachers should be made mandatory with teachers being encouraged to take online courses to sharpen their skills as well as prepare their lessons.

For this to be achieved:
- The school management will have to facilitate teachers to access computers with internet resources.
- Primary school teachers and particularly early grades’ teachers have monthly professional in-class coaching and systematic feedback sessions by TAC tutors, Head Teachers or other senior teachers targeted at improved learning outcomes.

**Teacher Knowledge:** Teacher competency assessment should be part of the envisaged education reforms. To achieve this:
- Education stakeholders including but not limited to TSC, KNUT, MOE, KIE, KEMI, researchers, head teachers associations and teacher training institutions should develop acceptable levels of competencies both in pedagogy and subject content that can be periodically assessed.

All teachers leaving training colleges should be certified by KNEC on areas of subject competency by end of 2016 and should only be assigned teaching areas on the basis of those competencies.

**Teacher Work Assignments:** The study showed that some teachers who have been assigned to teach math in primary schools scored very low (below 20%) scores on a teacher knowledge test. Addressing this concern requires that:
- TSC should demand a minimum acceptable grade (preferably a grade C+ or higher) in a relevant subject in KCSE exam for one to be allowed to teach that subject. Such a move has implications on teacher recruitment and deployment and it should therefore be implemented gradually.
- School heads should assign better teachers to teach lower grades as these foundation years are critical for pupils to acquire the reading and numeracy skills that they need as they progress through the school system.
- Teachers and school committees should develop annual quality teaching goals that can be evaluated at the end of the year.

Primary school teachers’ math assessment mean scores in urban informal settlements

Math dominant teaching activity in urban primary schools in informal settlements

<table>
<thead>
<tr>
<th>School type</th>
<th>Individual desk work (%)</th>
<th>Recitation (%)</th>
<th>Teacher class observed</th>
<th>Total lessons activity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government schools</td>
<td>53.3</td>
<td>29.6</td>
<td>17.1</td>
<td>152</td>
</tr>
<tr>
<td>Formal Private</td>
<td>59.8</td>
<td>19</td>
<td>21.2</td>
<td>174</td>
</tr>
<tr>
<td>Low-cost Private</td>
<td>55.1</td>
<td>14.5</td>
<td>30.4</td>
<td>69</td>
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