Teachers and Teacher Development: A Rapid Review of the Literature

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This rapid review of international literature on the teaching profession and teacher development was conducted for the Strengthening Education Systems in East Africa (SESEA) project sponsored by Aga Khan Foundation Canada and the Canadian Department of Foreign Affairs, Trade and Development (formerly CIDA). This is one of a set of rapid reviews on key dimensions of school improvement developed as input to a research agenda setting process for East Africa for the Learning and Dialogue component of the SESEA project. The complete set addressed the following themes: teaching and learning, teachers and teacher development, school management and leadership, parent and community involvement and early childhood education and development.¹

The review addresses current salient issues related to the teaching profession: Selection and recruitment, initial education, hiring conditions, retention, in-service teacher development, incentives and evaluation, and gender considerations. The review incorporates information and findings from research internationally, as well as information on developing countries generally and East Africa more specifically. Several gaps in the research are noted in the final section.

Rapid Review of the Knowledge Base

Recruitment and Selection: Seeking Great Teachers for All Students

Research suggests that attracting the best possible candidates to teaching is essential (OECD, 2011; SABER, 2012; UNESCO, 2013). Competitive candidates can best take advantage of initial education and, furthermore, research suggests there is a relationship between the quality of candidates and the quality of teachers. Also, talented people attract others, helping to make teaching a more valued profession (SABER, 2013). Thus, many countries are attempting different strategies to attract the best to the teaching profession, such as: active recruitment campaigns and making teaching a more attractive profession (see “Retention: Keeping great teachers” section below) (OECD, 2011; SABER, 2011; UNESCO, 2013).

One big issue in teacher recruitment is how to get teachers where they are needed most, either in hard-to-staff schools or in subjects where there is a shortage of teachers (Hauge, Klees, Stromquist, Lin, Choti, & Corneilse, 2011; OECD, 2011; SABER, 2012; UNESCO, 2013). Different studies mention different strategies (OECD, 2011; UNESCO, 2013), such as higher salaries; bonus pay; good housing and transportation assistance for remote areas; addressing safety concerns; professional development activities; fee waivers, scholarships and forgivable loans; recognition of previous work experience; non-salary strategies such as less class contact time or smaller classes as well as hiring local teachers and ensuring their ongoing training. However, if more experienced teachers are given priority for transfers, it is possible underserved schools will constantly have less-experienced teachers (SABER, 2012).
A further concern is attracting underrepresented groups into teaching (Haugen et al., 2011; OECD, 2011; UNESCO, 2013). In the case of Africa, increasing the number of quality female teachers is seen as essential, as they seem to affect both student enrolment and performance, especially that of girls (Haugen et al., 2011). Teachers of ethnic minorities, “... familiar with the cultural context and local language” have also been shown to increase the number of disadvantaged children who are learning (UNESCO, 2013, p. 37). Recruitment strategies such as affirmative action policies (UNESCO, 2013), broadening selection criteria, recognizing experience other than formal education and creating flexible teacher education options have been proven effective in some contexts (OECD, 2011).

**Initial Education: Preparing Great Teachers**

Research suggests that quality teachers are essential to increase student learning, and quality teacher education is considered essential for teacher quality (Nag, Chiat, Torgerson, & Snowling, 2014; OECD 2011; UNESCO, 2013). The quality of teacher education depends in large measure on the quality of teacher educators, which is why UNESCO (2013) urges policy-makers to assign a high priority to their training (especially giving them adequate exposure to the challenges teachers face in the classroom, which they have not all experienced).

The expectations for teacher education, at least one that prepares teachers to help students meet contemporary learning goals, are high. Existing studies (Nag et al., 2014; OECD, 2011, UNESCO, 2013) identify an ambitious range of teacher education curriculum content goals, including: subject-matter knowledge, knowledge of how to teach 21st century skills including global citizenship, general and subject-specific pedagogy (especially student-centered strategies), reflective practice and action-research, diagnosis and strategies for responding to students’ needs, special learning needs, use of information-communication technologies (ICTs) and involvement of care givers in student learning. Also, it is argued that teachers should play (and thus their education should prepare them for) “an active role in the design and running of education, rather than just following standardized practices” (OECD, 2011, p. 13). Especially in developing countries, to be able to increase student learning, teachers need to be able to understand gender issues, use assessment tools to detect and tackle learning difficulties (allowing low achievers to catch up), enable students’ monitoring of their own learning, teach basic literacy and numeracy effectively as well as manage large, low-resourced, multi-grade, multilingual and multicultural classrooms with many disadvantaged children (Nag et al., 2014; UNESCO, 2013). Some also highlight the need, especially in Africa, for teachers to be trained in HIV/AIDS education (UNESCO, 2007a). Finally, studies show it is crucial for future teachers to gain practical experience in classrooms during their initial training (OECD, 2011; SABER, 2012; UNESCO, 2013). In order for women and underrepresented groups to enter the profession, and to expand teacher education programs where there is great need, one option is offering flexible teacher education programs that combine part-time/distance options with face-to-face training and monitoring where possible (Haugen et al., 2011; OECD, 2011; UNESCO, 2013). More comparative research on these kinds of alternative programs and their outcomes would be useful.

It is difficult to discern what is known from research about effective teacher education programs and strategies from advocacy about the content and forms of teacher education.
Given the wide array of important yet competing curriculum goals for teacher education, there remains a lack of empirically-based consensus on what type of teacher training content and delivery strategies best enhance teaching effectiveness in East Africa or in developing countries.

**Hiring: Teacher Shortages and Contract Teachers**

In order to address critical teacher shortages, especially in the most disadvantaged areas, some countries have resorted to hiring teachers on limited term contracts (UNESCO, 2007a), rather than as public sector civil servants on permanent contracts often negotiated with teacher unions. Research suggests that some of the benefits of contract teachers include the flexibility to address teacher shortages (UNESCO, 2007a); a possible increase in the performance of struggling students (but the evidence for this is not strong) (UNESCO, 2007a); and more cost-effectiveness (possibly, as there are many hidden costs) (Bruns, Filmer & Patrinos, 2011; UNESCO, 2007a). Research on the use of contract teachers suggests that such arrangements can also address teachers’ wishes, as some wish to have part-time, flexible contracts (Bruns, Filmer & Patrinos, 2011; OECD, 2011). Furthermore, by placing the hiring process (and the renewing of contracts) in the hands of schools and/or parent committees, some research suggests that the use of contract teachers can lead to closer monitoring of teacher performance and absenteeism, with consequent effects on student performance (Bruns, Filmer & Patrinos, 2011; Duflo, Dupas & Kremer, 2011; Glewwe, Holla & Kremer, 2008; Kremer & Holla, 2009; OECD, 2011). On the other hand, it may be necessary to integrate contract teachers into the teaching force to avoid attrition (UNESCO, 2007a). Qualified candidates will not always work for less than regular teachers and some teachers only accept contracts with the expectation that they will later gain tenure (Bruns, Filmer & Patrinos, 2011). It is often argued that contract teachers demoralize the teaching force and that teacher conditions should be improved instead (UNESCO, 2007a).

**Retention: Keeping Great Teachers**

In addition to recruiting and preparing great teachers, a further concern is ensuring adequate induction processes, working conditions and supports that motivate teachers to stay in the profession as well as facilitate their work and continuous improvement. Many studies highlight the importance of high quality teacher induction programs (OECD, 2011; SABER, 2012; UNESCO, 2013). Having a mentor with previous experience in the same school as well as the number of contact hours are important factors to consider (SABER, 2012).

Another way to motivate the best teachers to stay is to ensure the teaching profession is an attractive profession with attractive working conditions (Glewwe, Holla & Kremer, 2008; OECD, 2011; SABER, 2012; UNESCO, 2013). This includes reasonable teacher-student ratios (i.e. approximately 30 students in primary, 20 in secondary); the quality of school infrastructure (having toilets, covered classrooms, non-dirt floors, electricity, a school library, etc.); competitive pay; flexible hours and conditions allowing for a good work-life balance and/or for learning new skills; quality relationships with students and colleagues; high-quality professional education; attractive and varied career opportunities/paths and a high occupational status. This also includes being responsive to teachers’ desire for a sense of personal contribution,
professional autonomy and decision-making power: viewing teachers “as active agents in school reform, not just implementers of plans designed by others” (OECD, 2011, p. 24).

Finally, several studies mention crucial ways in which school leaders and administrative staff can support teachers’ work (Westbrook, Durrani, Brown, Orr, Pryor, Boddy, & Salvi, 2013; OECD, 2011; SABER; 2012; UNESCO, 2013), creating an environment that facilitates success in which effective teachers like to work. (See further information in rapid review on School Management and Leadership).

In-service teacher development: Helping great teachers become even better

Ongoing teacher education is seen as key to improving education and also supporting teachers (Westbrook et al., 2013; Hardman, Ackersb, Abrishamianc, & O’Sullivand, 2011; Nag et al., 2014; OECD, 2011; SABER, 2012; Timperley, Wilson, Barrar, & Fung, 2007; UNESCO, 2007a; UNESCO, 2007b; UNESCO, 2013). Even great teachers can always improve and context changes (i.e. curriculum, student population) can bring new challenges. Many of the above listed authors emphasize the importance of ongoing teacher education in developing countries and Sub-Saharan Africa, where pre-service education is lacking or of insufficient quality (UNESCO, 2007a). Research suggests that in East Africa teachers rely on choral lessons and recitation of factual information (Nag et al., 2014), and that, at least in Kenya and Uganda, the policy of teaching primary school in English presents communication issues that affect learning (Hardman et al., 2011). This is an important area for in-service support.

Generally, the content of in-service teacher education stressed as important is similar to that described above for pre-service education. Knowledge about effective strategies for in-service teacher development is not a mystery. Excellent reviews from the 1990s on teacher development strategies that make a difference in teachers’ knowledge and practice (e.g., Craig, Kraft, & du Plessis, 1998; Loucks-Horsley, Harding, Arbuckle, Murray, Dubea, & Williams, 1987) do not differ substantially from recent reviews globally (e.g., Timperley et al., 2007; OECD, 2011) and in developing countries (Westbrook et al., 2013; SABER, 2012; UNESCO, 2013). The availability of that knowledge, however, does not mean that it is universally and consistently applied in policy and in practice, regardless of contexts.

Effective strategies supported by the research include some of the following: a systematic long-term approach (“one-off” events are rarely effective) (Hardman et al. 2011; Timperley et al., 2007); engaging external expertise (Timperley et al., 2007); modelling effective practices in teacher development activities (Nag et al., 2014; OECD, 2011; SABER, 2012; Timperley et al., 2007); challenging problematic discourses and ideas (Timperley et al., 2007); peer collaboration (collaborative learning, research, planning, assessing, peer observation, etc.) in schools and/or wider networks (Westbrook et al., 2013; OECD, 2011; SABER, 2012; Timperley et al., 2007) and effective feedback and follow-up in the classroom (Westbrook et al., 2013; OECD, 2011). Also, teachers need to frequently see the impact they make on students (Westbrook et al., 2013) and have sufficient time to learn deeply (OECD, 2011; SABER, 2012; Timperley et al., 2007). For practical reasons, many countries (such as Kenya) are experimenting with distance and ICT approaches combined with face-to-face training and mentoring (Hardman et al., 2011; SABER, 2012; UNESCO, 2007b; UNESCO, 2013).
Incentives and evaluation: Motivating great teachers to become even better

At a summit on teacher policies organized by OECD (2011), the most controversial topic was teacher incentives and evaluation: how to define quality and evaluation criteria, protect against discrimination and unfairness, ensure quality instruments and methods, balance between teacher and school evaluations, relate evaluation to compensation, define the type of compensation (monetary or not, individual or for a group or school, etc.) and avoid distorting education by establishing narrow measures of quality. (For more details on these issues, see OECD, 2011 and Bruns, Filmer & Patrinos, 2011).

Even though controversy exists regarding how to conduct teacher evaluation (standardized testing or observations, linked or not to student performance, etc.), many advocate it as necessary to improve education (OECD, 2011; SABER, 2012). Evaluation can identify areas of needs in order to provide feedback, identify good practices and support for teachers as well as to inform policy (the improvement function) (OECD, 2011; SABER, 2012). It can also be used to hold teachers accountable for student performance (the accountability function) and in that case should be linked to improvement plans, career advancement and compensation (Bruns, Filmer, & Patrinos, 2011; OECD, 2011). Whether the envisioned benefits of teacher evaluation are accomplished in practice, particularly on a system-wide basis, has not been well documented.

There is even more controversy regarding incentives, especially ones linking student performance to teacher performance (OECD, 2011). UNESCO (2013) warns that these programs can be a disincentive to teachers of disadvantaged children as they often reward those teaching high achieving students in advantaged schools and areas. Some participants in the OECD summit mentioned other arguments against these types of programs: it is not fair to put the whole burden for student achievement on teachers; there can be negative side effects (such as reduced cooperation between teachers); teacher performance levels cannot be determined objectively; teachers are not mainly motivated by financial rewards; education will be restricted to what is measured and the costs of implementation are too high. On the other hand, some say it is possible to evaluate effective teaching and learning, although the measures must be agreed upon with teachers to be valid (i.e. OECD, 2011). They mention potential advantages, such as promoting system goals (Bruns, Filmer, & Patrinos, 2011; SABER, 2012), recognizing teachers’ work (OECD, 2011; SABER, 2012), raising teacher and student performance (although this depends on the type of incentive program) (Bruns, Filmer & Patrinos, 2011; OECD, 2011; SABER, 2012) and gaining support of the public for education (when the public sees spending tied to improved performance) (OECD, 2011). In sum, the evidence linking teacher evaluation, incentives and the quality of teaching and learning is mixed (Glewwe, Holla & Kremer, 2008; Kremer & Holla, 2009) and there is still much debate.

UNESCO (2013) states that while policies that recognize and reward teachers’ achievements should be given top priority, it is also necessary to address problematic issues such as teacher absenteeism or gender-based violence (see next section). Research indicates that teacher absenteeism can reach high levels (both in developing and developed countries), which can be damaging to student achievement (Kremer & Holla, 2009; SABER, 2012). For example, data from one study shows teachers in Uganda were absent 25% of the time, and in Kenya, 20% (Chaudhury et al., 2006 cited in Glewwe, Holla & Kremer, 2008). In addition, even
though teachers were in school, they were not necessarily in the classroom; in Kenya, while teachers were absent from school 20% of the time, they were absent from class 27% of the time.

Can incentives such as monetary bonuses or sanctions improve teacher attendance? The research evidence is mixed, with only some studies showing improvements in teacher attendance. In a program in Kenya where school principals rewarded teacher presence with bonuses, teacher attendance did not increase. Nor did teacher attendance increase in programs in Kenya and India where teacher pay was linked to students’ scores. On the other hand, a program in India that used cameras to monitor teacher presence did result in increased teacher attendance, as did a girls’ scholarship program in Kenya (in which parents may have pressured teachers so their daughters could win the scholarships) (Kremer & Holla, 2009). An additional consideration is that often teacher absences are related to low morale and poor job satisfaction (UNESCO, 2013); for example, one study found that the quality of school infrastructure affected teacher attendance (SABER, 2012).

Gender and Teachers

In Sub-Saharan Africa, as in many other parts of the world, there is still a long ways to travel towards gender equity. To increase gender equity in the teaching profession and to increase girls’ enrolment, retention and performance in schools, research suggests actively recruiting, training and hiring female teachers and school leaders, which requires specific policies to address gender-related barriers (Haugen et al., 2011; Global Campaign for Education, 2012; UNESCO, 2007b; UNESCO, 2013). In Sub-Saharan Africa there are generally low percentages of female teachers, but even less in rural areas and even less teaching math (in Kenya, Tanzania and Uganda, twice as many children have a female reading teacher than a male one) (UNESCO, 2007a), which calls for policies to reduce these gaps.

Finally, an issue which all countries must urgently address is gender-based violence in schools. While many times gender-based violence is initiated by male students, this review briefly addresses gender-based violence related to teachers in Africa as highlighted in a recent UNESCO report (UNESCO, 2013). According to the report, for example, approximately 20% of teachers surveyed in Malawi said they knew of others coercing or forcing girls into sexual relationships and in Sierra Leone, “almost a third of cases of forced or coerced sex in exchange for money, goods or grades were perpetrated by male teachers” (UNESCO, 2013, p. 269). Often, these cases are not reported and even if they are, few cases ever make it through the system and result in action taken against the perpetrators As stated by UNESCO (2013), “programmes and policies addressing gender discrimination and gender-based violence need to protect and empower girls, challenge entrenched practices, bring perpetrators to light and enforce action against them” (p. 269). Research is lacking on this issue.

Knowledge Gaps

As suggested throughout the preceding review, uncertainty and gaps in the knowledge base on teachers and teacher development are plentiful. The following list provides a brief summary of possible topics for future research within the East African region based on the review:
Effective strategies for recruitment and hiring, especially to attract underrepresented groups into teaching and also to motivate teachers to work in hard-to-staff schools.

Effective practices of initial teacher education (Westbrook et al., 2013) and also which flexible strategies for providing this education may prove most adequate for different East African contexts.

The qualities of effective initial teacher education providers (Timperley et al., 2007) and studies of effective teacher educators (i.e. how they are inducted and trained, how they develop their practice over time, how they participate in peer collaboration, etc.) (Westbrook et al., 2013).

Benefits and drawbacks of contract teachers, especially in the long-term.

The mentoring of beginning teachers (Timperley et al., 2007).

Interventions that support novice teachers becoming more effective experienced teachers (Westbrook et al., 2013).

Studies about more specific aspects of in-service training, such as characteristics of effective peer collaboration (Westbrook et al., 2013), and further research on distance programs and use of new technologies (Timperley et al., 2007).

The cost-effectiveness of different types of professional development (Westbrook et al., 2013).

Teacher incentives and evaluation practices and outcomes.

Effective strategies for hiring more female teachers and for eliminating barriers to their employment.

Effective strategies for combating gender-based violence in schools.

In addition, there is a need for research on the potential benefits of interventions that combine different initiatives, the interaction of teacher policies with other education policies and the benefits of different teacher policies on student achievement, in order to help countries prioritize initiatives (SABER, 2012).

Conclusion

This report reviewed salient issues related to teachers. One of the main messages found in many research reports, however, is that distinct teacher policies cannot be treated in isolation; they need to be part of a coherent, comprehensive approach to enhancing learning that includes changes in schools and curriculum, etc (OECD, 2011; SABER, 2012; UNESCO, 2013). A comprehensive and coherent set of policies oriented toward ensuring excellent teachers needs to be linked to all education policies oriented toward improving education. As stated by OECD (2011), “if high quality teacher recruits are placed into an unchanged school environment, the system will win every time” (p. 63).
Notes

1. The series of rapid reviews utilized a strategic search method in order to identify key resources related to the review focus including existing systematic reviews, literature reviews, reports and other grey literature from well-known and reliable sources on school improvement in general as well as in the contexts of developing countries and East Africa specifically. To this end our team identified search terms for, conducted, and recorded more than 765 individual searches (465 in Google and 362 in Google Scholar). We combed through and collected links to potential sources from approximately 4,135 pages of Google and Google Scholar search results. After the initial search was completed we identified 1) key sub-themes; 2) prominent authors and organizations; and 3) created a list of documents to be considered for the rapid review. We sorted through and summarized key resources making note of significant findings, the evidence-base supporting these findings, and any knowledge gaps identified in the literature. The final documents included in the series of rapid reviews focused primarily on knowledge from extensive systematic reviews of the literature related to the sub-themes of this series, supplemented by recent empirical studies of particular relevance to East Africa and other developing country contexts. The list of key documents synthesized for this review of school management and leadership appear in the references at the end of this review.

References


