



ED/EFA/MRT/2015/PI/21

Background paper prepared for the
Education for All Global Monitoring Report 2015

*Education for All 2000-2015: achievements and
challenges*

Making pedagogical practices visible in discussions of educational quality

Frank Hardman

2015

This paper was commissioned by the Education for All Global Monitoring Report as background information to assist in drafting the 2015 report. It has not been edited by the team. The views and opinions expressed in this paper are those of the author(s) and should not be attributed to the EFA Global Monitoring Report or to UNESCO. The papers can be cited with the following reference: "Paper commissioned for the EFA Global Monitoring Report 2015, Education for All 2000-2015: achievements and challenges" For further information, please contact efareport@unesco.org

Making pedagogical practices visible in discussions of educational quality

Abstract

The increasing focus on researching classroom processes over the last decade has been in response to the growing realisation that developing the pedagogy practices of teachers is central to improving the quality of education in resource constrained contexts. Drawing on a range of observation studies, the paper reviews the evidence suggesting that educational quality is largely obtained through pedagogical processes in the classroom. It concludes with a discussion of the key priorities for governments and the international donor community as they work towards improving pedagogical practices of both teachers and teacher educators, and raising learning outcomes for all children post-2015.

1. Introduction

The need to ensure that children receive quality teaching and actually learn as a result of their educational experience was highlighted in the 6 Education for All (EFA) goals established in Dakar, Senegal in 2000. It has been a running theme throughout each of the annual EFA Global Monitoring Reports (GMR) and quality is explicitly used in the titles of the 2005 and 2014 reports (UNESCO, 2005; UNESCO, 2014). It points to the need to strengthen access, quality and equity of provision for all children. While significant gains have been made in improving access to education for children in developing countries, new challenges have emerged for making sure all children receive a good quality education.

The 2014 GMR estimated that out of a total world population of 650 million primary age children, 250 million are not achieving the basics literacy and numeracy skills even though 130 million of them have spent at least four years in school (UNESCO, 2014). A key question for this paper is how can we improve learning for all children, particularly for the poorest and most marginalised children? In addressing this question, it will be argued that there is a clear link between pedagogy and learning outcomes, and that training in an effective pedagogy, informed by observations of how teachers teach and pupils learn in the classroom, is central to raising achievement.

The remainder of this paper is divided into four sections. Firstly, it discusses the main challenges facing governments and the international donor community in implementing effective pedagogic practices in the world's poorest countries and their policy responses. Secondly, it looks at the evidence on effective pedagogy that has started to emerge from observations of teaching and learning in low-income countries since 2000. Four case studies supporting the main arguments of the paper are presented in section three. Finally, the paper concludes with a discussion of the key priorities for governments and international donor agencies for improving the quality of teaching and learning for all children post-2015.

2. Challenges facing governments in identifying and implanting effective teaching and learning practices

Although vast numbers of children are still not learning the basics, some countries like Kenya and Tanzania have been able to get more children into school and ensure that once they are there they learn. They have recognised that teachers are central to improving the quality of education and have been putting in place reforms to teacher education. Such reforms have focused on improving the pedagogical practices of teachers and developing the capacity of teacher educators so as to bridge the theory-practice divide identified in studies of pre-service education and training (PRESET) and in-service education and training (INSET). Such initiatives have brought teachers together in professional learning communities in and beyond the school, informed by external expertise from teacher

supervisors and teacher educators, and regular follow-up in the classroom (Save the Children, 2011). In the case of Kenya and Tanzania, the teacher intervention programmes were informed by baseline evaluations making use of systematic classroom observation studies to study their impact on classroom processes and learning outcomes.

Alexander (2001) sees pedagogy as being made up of both the observable act of teaching and its attendant discourse. It comprises teachers' ideas, beliefs, attitudes, knowledge and understanding about the curriculum, the teaching and learning process and the learning of their students. In other words, it is concerned with what teachers actually think, do and say in the classroom, and how the act of teaching links with the social, cultural and political context in which teachers operate.

While classroom pedagogy is being recognised as a key variable for improving learning outcomes in many low-income countries, a major challenge has been the availability and competence of teachers. It is estimated that 1.6 million additional teachers are needed to achieve universal primary education by 2015 and 5.1 million to achieve universal lower secondary education by 2030 (UNESCO, 2014). Many serving teachers are also unqualified or under-qualified: in 34 of the 98 countries with data on trained teachers, less than 75% of teachers are trained according to national standards (UNESCO, 2014).

Where teachers have received PRESET it is judged to be of poor quality. It is found to be largely institution-focused, lecture-based (usually from trainers who lack experience and expertise in primary education) with little in the way of supervised practical teaching, thereby creating a large gap between theory and actual classroom practice (Lewin and Stuart, 2003; O'Sullivan, 2010; Hardman et al, 2012; Akyeampong et al, 2013). Similarly, the provision of INSET is also judged to be of poor quality with little transferability to the classroom. Where it does exist, it is often found to be ad hoc with little follow-up in the classroom and mainly concentrated in urban areas (Moon, 2007). The poor quality of teacher education and training often means that rote and recitation approaches to teaching and learning are the norm. Classroom talk in low income countries is largely found to be teacher-fronted, made up of teacher-led explanation, recitation, cued elicitation, chorus responses and use of chalk/white board. Such narrow pedagogical approaches do not support critical thinking, conceptual learning, or problem-solving and teamwork skills (O-saki and Agu, 2001; Hornberger and Chick, 2001; Pontefract and Hardman, 2005; Arthur and Martin, 2006; O'Sullivan, 2006; Ngware et al, 2014).

In response to the identified weaknesses at the PRESET and INSET stages, many low-income countries have started to overhaul their teacher education systems by moving away from largely college-based provision to a more long-term sustainable vision of CPD that systemically up-dates the key competences teachers require in the classroom. International development partners such as DFID, Save the Children, UNICEF, USAID and the World Bank have been assisting governments in many regions of the world to develop national CPD systems for teachers (Mattson, 2006; Save the Children, 2012; Hardman et al, 2011; Lea and Ginsburg, 2011; Mulkeen, 2010). In line with international research, the emphasis has been to bring together PRESET and INSET to ensure coherence, consistency and quality of training so that all children, including the most marginalised, have access to teachers with minimal competences (Avalos, 2011; Darling-Hammond et al, 2010; Timperley, 2011). Such trends represent a clear strategic shift away from institutional-based primary teacher education towards more flexible school-based provision. Many ministries of education have also been setting up INSET units with their own budgets to work through a decentralized network of provision at the regional, district and zonal-level in order to monitor and support school-based programmes, and putting in place local support agents to work with head teachers and teachers in the schools (DeStefano, 2011).

3. Emerging evidence of effective teaching and learning practice from low-income countries

Much of the evidence on effective teaching and learning practices comes from high income countries. For example, Hattie's synthesis of 800 meta-analyses involving over 50,000 studies related to achievement in school-aged children in respect of interactive strategies, such as reciprocal teaching, collaborative group work and peer tutoring encouraging student verbalisation and teacher feedback, shows that high quality classroom talk enhances understanding, accelerates learning and raises learning outcomes (Hattie, 2009). Such interactive approaches make the learning visible for both teachers and students allowing for the monitoring of learning and formative evaluation. They also point to the importance of investigating what can be observed in the act of teaching (i.e. task, activity, classroom interaction, assessment) as key indicators of quality (Alexander, 2008).

While much of the evidence on effective teaching and learning processes has come from high income countries, a substantial body of evidence based on observation studies from low and middle-income countries is starting to emerge. A recent review commissioned by the UK government's Department for International Development, building on a systematic review of 489 studies and an in-depth study of 54 empirical studies, concluded that classroom interaction is the pedagogical key (Westbrook et al, 2013). It found that teachers who promoted an interactive pedagogy also demonstrated a positive attitude towards their training and the students, and saw teaching and learning as an interactive, communicative process.

Three specific strategies that promoted an interactive pedagogy and visible learning from students were identified: providing feedback; sustained attention and inclusion in the classroom; creating a safe environment in which students felt supported in their learning; and, drawing on students' backgrounds and experiences. From the three strategies, six effective teaching behaviours were identified: frequent and relevant use of visual aids and locally produced learning materials beyond the use of the textbook; open and closed questioning, expanding responses, encouraging student questioning; demonstration and explanation, drawing on sound pedagogical content knowledge; and, use of local languages.

The review concluded that an interactive pedagogy could have a considerable impact on learning if it was supported by relevant school-based professional development. Such school-based teacher development had to be aligned with teachers' needs, have the support of the head teacher and involve teachers working together at school and cluster level, with follow-up in the classroom involving observation, coaching and feedback. Like the 2010 GMR report focusing on marginalised children, the review acknowledged that educational quality is largely obtained through pedagogical processes in the classroom, and what students achieve is heavily influenced by the knowledge, skills, dispositions and commitment of the teachers in whose care students are entrusted (UNESCO, 2010).

Similarly, in its most recent review of teacher education covering 65 countries from around the world, the OECD argued that much can be learned from high performing countries in terms of offering a quality education for their pupils (OECD, 2011). Countries like Finland, South Korea, Canada and Cuba place a high value on teacher education at the initial stage and through the provision of school-based INSET. In all high-performing education systems, teachers have a central role to play in improving educational outcomes, and are also at the centre of the improvement efforts themselves. Such systems are not driven by top-down reforms but by teachers embracing and leading on reform, taking responsibility as professionals, thereby developing a wider repertoire of pedagogic strategies for use in the classroom.

The OECD study also found that the most effective professional development programmes provide high quality PRESET and INSET initial training that upgrade teacher pedagogic knowledge and skills over a sustained period of time rather than through disjointed one-off courses. In this way, high performing education systems provide opportunities for teachers to work together on issues of instructional planning, to learn from one another through mentoring or peer coaching, and by conducting research on the outcomes of classroom practices to collectively guide curriculum, assessment and professional learning decisions. The high performing education systems also benefitted from clear and concise profiles of what teachers are expected to know and be able to do at different stages of their careers so as to guide PRESET and INSET, and create a lifelong learning framework for teachers (Darling-Hammond et al, 2009). The establishment of such benchmarks to assess progress in professional development over time meant that appraisal and feedback were used in a supportive way to recognise and reward good performance.

There is, therefore, growing recognition of amongst governments and development partners of the need to change underlying pedagogic practices that lead to the transmission of knowledge and rote learning. As will be discussed in the next section, it is increasingly being recognised that field-based models, made up of school-based training supported by distance learning materials, school clusters and follow-up in the classroom, can provide a way of closing the gap between theory and practice, and raise the quality of teaching and learning in basic education for all children (Schwille et al, 2007; Perraton, 2010; Schweisfurth, 2013).

4. Case studies

The following 4 case studies are illustrative of the moves towards school-based INSET being proposed and supported by national governments and the international donor community in middle- and low-income countries to improve pedagogic practices. As will be discussed, the general thrust has been to bring together ministries, colleges, donor-funded projects, decentralized ministry functions, teacher resource centres and schools to ensure coherence, consistency and quality of training so that all children, particularly girls and the most marginalised, have access to teachers with minimal competences.

Kenya

Kenya recognised the need to develop a national INSET and CPD programme to improve pedagogical practices in the late 1990s. It also recognised that professional development programmes need to focus on processes in the school and classroom as necessary levels of intervention for improving the quality of teaching and learning (Hardman *et al.*, 2009). Likewise, it saw the need to link teacher education with head teacher training and community empowerment, including the development of a school-based textbook management system and quality assurance procedures (Crossley *et al.*, 2005).

Support for school-based teacher development was provided through the two complementary projects – Strengthening Primary Education and Primary School Management – funded by DFID. The systems that were developed during this period were to prove critical when Universal Free Primary Education was announced in 2003 by the National Rainbow Coalition. Efforts to cope with the huge surge in enrolment and to attain the goal of universal primary education by 2015 focussed attention on the scaling up of textbook provision, as well as countrywide in-service training provision. Since 2003, Kenya has managed to significantly increase the proportion of children completing primary school so that more than three-quarters of primary school age children make it beyond grade 4 and 70 are able to read (SACMEQ, 2010; UNESCO, 2014).

The Ministry of Education through its INSET unit ran a national, distance-led teacher education scheme for classroom teachers known as the School-based Teacher Development (SbTD) programme. SbTD was designed to be cost-effective and to combine the benefits of distance education with school-based teacher development. The aims of the programme, which ran from 2001 – 2006, were primarily to improve the quality and cost effectiveness of teaching and learning in primary schools through teachers acquiring new skills that promote active learning and training them in the use of new textbooks (Hardman *et al.*, 2009).

SbTD was developed as a programme of self-study, using distance-learning modules combined with regular face-to-face cluster meetings. It successfully graduated over 47,000 primary school teachers throughout Kenya in the three core subjects of English, mathematics and science. This initial focus was important to SbTD's success in rolling out the training. Three teachers from every school, called Key Resource Teachers (KRTs), were trained to lead school-based professional development within their subject area in their schools. The programme was supported by a zonal-based teacher advisory system of over 1,000 teacher advisory centre tutors, who were trained to provide group-based support service to the KRTs who were working with distance learning materials while carrying a full-time teaching load in the schools. Head teachers also received training materials so that they could support the KRTs in providing school-based training.

Too often, it has proved difficult to assess the impact of interventions due to the lack of baseline data (Riddell, 2008). However, in the case of Kenya, SPRED supported the Kenyan national primary baseline in 1998, which incorporated the SACMEQ survey of the same year, as well as specific studies, including an evaluation on teacher-pupil interaction (Ackers & Hardman, 2001). The classroom interaction baseline was specifically designed to allow for the future measurement of the impact of SbTD. In common with many other east and southern African countries, the baseline suggested classroom pedagogy in many Kenyan primary schools was largely made up of teacher-led explanation, rote and recitation, chorusing of responses by pupils, and use of the chalkboard.

In response to the baseline findings, the SbTD programme recognised that school-based training can help teachers develop more of a dialogic pedagogy to broaden the repertoire of whole class teaching. In the training modules, dialogue and discussion through, for example, the use of open questions (i.e. allowing for more than one possible answer), probing and building on pupil answers, and peer-to-peer discussion, were promoted alongside the more traditional drilling, closed questioning and telling, thereby raising cognitive engagement and understanding. Such an approach was designed to build on the traditional model of whole class teaching found in many Kenyan classrooms, but avoid the simplistic polarization of pedagogy into 'teacher-centred' versus 'child-centred' that has characterised much educational discourse in the international donor community (Vavrus, 2009; Schweisfurth, 2013). It was also designed to help ensure there was a better balance and blending of local socio-cultural practices with internationally informed reforms to teacher education, particularly with regard to adult-child relationships (Crossley, 2009).

Building on the baseline study, follow-up evaluations using systematic observation and stakeholder interviews were conducted in 2005 and 2006 to investigate the impact of SbTD and the training of teachers in the use of textbooks (Hardman *et al.*, 2009). While the 1999 national primary baseline on classroom interaction found an overwhelming level of directive teaching and rote learning going on in the teaching of primary English, mathematics and science, characteristic of many classrooms in the region, the follow-up evaluations suggested that there had been major shifts in pedagogic practices in Kenyan primary schools. For examples, 34% of teachers in the 2005 sample used paired/group work in their lessons compared to only 3% in 1999. The findings also showed that a greater range of organisational arrangements were being deployed by teachers to meet different educational goals: in the 1999 national primary baseline, most classrooms (97%) were organised using a

traditional classroom layout (i.e. desks organised in rows); this compared to 42% of classrooms in the 2005 evaluation using an alternative classroom layout where pupils reorganised the classroom to accommodate paired or group work to promote peer-to-peer interaction and exploration of ideas. Textbooks were also far more in evidence compared to the national primary baseline with an average pupil/textbook ratio of 2:1 at Standard 6 and 3:1 at Standard 3.

Another premise for change that was addressed was the role of the head teacher, which was seen to go beyond the traditional role of administrator to include the leading of pedagogic change. The practice of having KRTs and head teachers collaborate with other educational professionals, such as inspectors and teacher centre advisers, to examine what is taking place in classroom and schools, and provide constructive and non-directive feedback, was also identified as an achievement by the study. In addition, the practice of having KRTs paying fees directly to the teacher advisory centre tutors so as to participate in the training was judged to have been a success: it increased resources, incentives and accountability at the local level as tutors were informally monitored in their effectiveness in programme delivery and record keeping.

However, findings from the evaluations suggested that the 'cascade' model of school-based training, whereby KRTs work with other colleagues in the school to pass on their training, was having less impact than had been anticipated by the programme's designers. It was found that 62% of KRTs used some form of peer interaction in their lesson, compared to 17% of the non-KRTs. A similar picture emerged with the use of open-ended questions: KRTs were twice more likely to ask an open question: 11% of the questions asked by KRT teachers were open compared to 5% asked by non-KRTs. The main reason given for the lack of effectiveness of the KRT in leading school-based training was the heavy workload of all teachers, which left little time for systematic input. This suggested the need for all teachers to undergo in-service training with official time being set aside for school-based training, and for KRTs to given time to observe, coach and provide feedback to their colleagues. The success of the expansion and sustainability of the SbTD programme is still evident in Kenya today (Pryor et al, 2012).

Tanzania

Tanzania, like Kenya, has made great strides in the numbers reaching the end of primary school and is doing better than many of its east-African neighbours. Between 2000 and 2007, the proportion of children completing primary school has risen from half to two-thirds. At the same time, learning outcomes have also improved with nearly 70% attaining basic levels in reading and 36% for mathematics, up from 49% and 19% respectively (SACMEQ, 2010; UNESCO, 2014).

Building on the experiences of the SbTD programme in Kenya, Tanzania evaluated a pilot of a school-based INSET programme in 2012 using a 2009 baseline measure of teaching and learning and comparison group of schools (Hardman et al, 2015). The findings from the 2009 baseline analysis of 300 lessons from 8 districts, covering the teaching of primary English, mathematics, Kiswahili and science at standards 3 and 6, found that teacher directed activities (explaining, question and answer, writing on the chalk board, reading to the class, asking pupils to read, lesson summary) took up over half (55%) of the lesson time. Individual seatwork, where pupils worked on exercises from the chalkboard or textbooks and teachers marked the exercises, accounted for 25% of the lesson time. More pupil-centred forms of learning (i.e. paired or group work, pupil demonstration) accounted for just 14 percent of the lesson time, with paired/group work making up 6% of the lesson time. Non-curricular activities (i.e. administration, no teaching activity taking place) took up a further 6% of the time.

Building on the baseline findings, guidelines for the development of an INSET strategy were subsequently developed. They recommended the development of a systemic approach to INSET. It included a national school-based model of INSET delivery, placing teacher development at the school, classroom and cluster level, an overarching national framework of teacher competencies covering both PRESET and INSET, and an agreed code of professional conduct and training for teachers overseen by a national teacher accreditation council.

Officially launched in February 2011, the Ministry of Education began piloting the new school-based INSET model in the seven district councils who had taken part in the 2009 baseline with a view to implementing the INSET strategy nationally. The 6-month, school-based INSET programme was designed to be mixed mode: a week's residential course delivered by college lecturers, followed by supported self-study of modules in mathematics, English and pedagogy. The mathematics and pedagogy modules were made available to the teachers in Kiswahili.

The modules emphasized an active teaching model through the use of problem-solving and discussion activities, and the promotion of high-quality dialogue and discussion between teachers and pupils in whole class, group-based and one-to-one situations. They also demonstrated to teachers how to plan paired and group work so that it was purposeful, well-structured and appropriate to the learning task, including the training of pupils in how to work collaboratively and to assign roles and tasks. Teachers were expected to work through the modules in their own time, supported by weekly, school-based study groups and monthly meetings of schools cluster brought together at the council ward level. They were led by INSET coordinators appointed from the district council advisory service and teacher colleges. The training was also designed so that teachers would receive coaching and observation in the classroom at least once a month from an INSET coordinator, inspector or head teacher, trained in mentoring skills and the use of a standardised observation schedule. By the end of 2012, 2052 primary school teachers from 141 schools across the 7 district councils had been trained through the pilot programme.

The baseline evaluation used systematic observation and interviews with national and sub-national stakeholders, including parents and pupils. Overall, the findings from the classroom observations revealed that teachers who had participated in the INSET showed significant differences in their use of the effective teaching behaviours: checking for prior knowledge, explaining material accurately and clearly, emphasising key points throughout the lesson, creating a positive classroom climate, using paired or group work, changing the classroom layout to facilitate the learning, and using a plenary to summarise, consolidate and extend the learning. Although not significant, teachers in the intervention schools were more likely to state the learning objectives of their lesson, to use a range of teaching and materials, and to set homework compared to the non-INSET trained teachers.

Teachers in the intervention group also showed significant differences in their use of open questions and asking pupils to demonstrate their understanding to the class when compared to the baseline and comparison group. They were also more likely to call on an individual pupil to answer a question rather than cue a choral answer. Similarly, teachers in the intervention schools demonstrated significant differences in their use of probing of a pupil answer, commenting on an answer, building an answer into a subsequent question, and encouraging pupils to ask questions. Overall, school-based INSET trained teachers appeared far more dialogic in their interactions with pupils in questioning exchanges and showed significant differences in the way they related to pupils and effectively managed the timing of the lesson.

Stakeholder interviews revealed that the school-based INSET pilot was well received at the district and school level, and that it was perceived as having a significant impact on teaching and learning practices of the teachers who had received the programme. The findings also showed that working at the school and cluster level helped ensure teacher education was part of a broader capacity development strategy that supported all actors in the education system, including, for example, head teachers, district education officers and teacher trainers. It was also found to be cost effective against college-based provision and other competing demands in a resource-poor environment like Tanzania.

One of the main lessons emerging from the evaluation was that school-based INSET can do much to enhance the capacity of Tanzanian primary teachers to deliver quality education. It was found that capacity building and incentives needed to be devolved down to those responsible for delivering school-based INSET, with a clear division of roles and responsibilities between national, regional and district offices, and between head teachers, schools and teacher educators (O'Sullivan, 2010; Hardman et al, 2012). It also pointed to the need to align teacher education with other reforms to the system such as curriculum reform, so that an effective school-based programme could ultimately be implemented at a national scale (Hardman et al et al, 2011; Tikly, 2011). Lessons from the pilot have subsequently been incorporated into the design of a school-based INSET programme launched in 2014 in over 20 of Tanzania's poorest district councils funded by a £60 million grant from DFID.

Myanmar

Since 2010, Myanmar (formerly known as Burma) has been emerging from decades of international isolation and ethnic conflict, and embarking on a wide range of political, administrative and legal reform reforms to its public services, especially education and health. As part of its education reforms, teacher education has been identified as a critical area of concern and a key strategy for improving the quality of education. It is recognised that a motivated and well-trained teaching force is a prerequisite for quality education, and that this can only be brought about by improving the status, quality, management, and training of teachers.

As part of its education sector review, a baseline study of teaching and learning practices in Myanmar primary schools was commissioned to feed into the development of a national teacher development strategy, and to allow for subsequent evaluations of interventions designed to improve the quality of teaching and learning (Hardman et al, 2014). A multi-method research design using both quantitative and qualitative methods of classroom observation, including frequency of activities, timeline analysis and discourse analysis of video recorded lessons, was used to study classroom processes. The baseline study consisted of a stratified sample of 200 schools selected from 1000 government schools in 20 Townships. The schools were selected to be representative of urban and rural setting, size of school and ethnicity of pupils.

Similar to an earlier study of monastic schools, the study found that teacher-led explanation, closed question and answer, rote and chorusing of answers by pupils, and use of the chalkboard by the teacher, were the most common teaching and learning activities in the mathematics and Myanmar language lessons observed at Grades 3 and 5 (Lall, 2011). Overall, teacher directed activities (explaining, question and answer, writing on the chalk board, reading to the class, asking pupils to read, lesson summary, class management and administration) took up 80% of the lesson time. Individual seat work, where the pupils were working from the chalkboard or textbook, took up nearly 12% of the lesson and non-curricular activities (i.e. interruptions, pupils are off-task) took up a further 5% of the time. More pupil-centred forms of learning (i.e. paired or group work, pupil demonstration) accounted for just

under 4% of the lesson time. The analysis also suggests there was little variation in teaching approaches across the two subjects at both stages of the primary curriculum.

While, the baseline study of Myanmar primary schools suggests improving the quality of primary education in such a poorly resourced context presents a considerable challenge, evidence from Kenya and Tanzania suggests it is possible to change pedagogical practices and raise learning achievement through a well-designed and supported PRESET and school-based INSET system that takes into consideration the contextual reality in which teachers work. In response to the baseline findings, a national review of the education sector recognised that changing teachers' pedagogical practices required professional development programmes that upgrade pedagogic knowledge and skills over a sustained period of time. It also recognised that teachers will need training in multi-grade teaching and in bi-lingual and multi-lingual education to reflect the ethnic and linguistic diversity of the country. A decentralised model of professional development that builds on existing systems and structures at the college, township and cluster level is currently being developed as a way of effectively supporting teachers.

In addition to developing school-based INSET for Myanmar teachers, the education sector review also recognises that the PRESET curriculum in Myanmar currently offered in 20 teacher colleges and 2 Institutes of Education is in need of reform. A recent review of teacher education found the model of teaching students are being presented with is essentially transmission-based, stressing a hierarchical learning of knowledge and conventional teacher-fronted classroom organisation (UNICEF, 2012). It was found that key areas in teacher preparation, such as multi-grade teaching, the teaching of languages other than Myanmar and inclusive education, were largely absent from the curriculum. The centralised education college curriculum, while creating a sense of uniformity, was found to be too general and overcrowded in its approach, and in need of radical reform to develop specialisms and expertise in the different phases of basic education (i.e. early years, primary, middle and secondary school).

The review also found the colleges lacked specialist teaching areas and resources, and that the ICT infrastructure was in need of a major overhaul to effectively connect staff and students to the global information highway. Partnerships with schools were largely underdeveloped and college staff played little role in the supervision of students while on teaching practicum. Because the links were minimal, student teacher support and supervision was mainly the responsibility of head teachers, with support from township education officers charged with overseeing and supporting schools.

To enable curriculum reforms to be implemented, the education sector review acknowledges the teacher colleges will need a major investment in ICT infrastructure and in libraries, laboratories and other specialist teaching areas to facilitate interactive, problem-based learning, and the practising of skills central to the act of teaching. The professional development of teacher educators also needs to be given a high priority to enhance knowledge, understanding and practice of effective pedagogy, and to train them in the skills of supervision and mentoring of students while on teaching practicum. The creation of a national competency framework for newly qualified, experienced and expert teachers to guide programme design is also being planned to bring together PRESET and INSET.

Overall, as Myanmar embarks on reforming its teacher education, it is recognised that those countries which have achieved the highest learning outcomes in the Asia-Pacific region, such as Shanghai, China, Singapore and South Korea, have also invested heavily in teacher education (Suzuki and Howe, 2010). They have moved towards school-based models of training at the PRESET and INSET stages by building enhanced partnerships arrangements between higher education and schools in order to blend theory and practice, and by bringing in the support of external trainers. In this way, the high performing education systems have

provided opportunities for teachers to work together on issues of instructional planning through the provision of study groups, mentoring, peer coaching, and the conducting of action research to collectively guide curriculum, assessment and professional learning decisions.

Malaysia

Language policy in Malaysia over the last ten years has undergone radical changes. In 2003, the Malaysian government announced the policy of teaching mathematics and science in primary and secondary schools through the medium of English to try to address concerns over poor standards of English and to position Malaysia so it could compete in the global market (Yang and Ishak, 2012). English was promoted for its utilitarian value as a means for gaining employment and for enabling access to the science and technology of the West. However, the policy met with a great deal of resistance from both Malay nationalists and Chinese educationists as it was seen as an attack on their culture and identity. In July 2009 the government announced a reversal of the policy starting from 2012. While many political groups, Malay nationalists, Chinese and Tamil educationists welcomed the move, many parents were unhappy with the decision. In response to the growing opposition to the policy shift, the government announced it was introducing a new English language curriculum to improve the teaching of English in 2011.

Published under the title *Malaysian English Language Curriculum for Primary Schools*, it was claimed that the new English curriculum would 'equip pupils with basic language skills so as to enable them to communicate effectively in a variety of contexts' (Ministry of Education, 2011:3). It was also stated that the new curriculum would develop higher-order thinking skills 'through interactive learner-centred approaches'. Children would be exposed to the English language at the earliest possible age to develop their oral skills and to lay a good foundation for the higher levels of competence required at secondary and higher education levels, and in employment. The new English curriculum was to be supported by a phased roll out of a national INSET programme for all teachers, starting with teachers of Standard 1 pupils (7 – 8 years of age). It was designed to equip them with the knowledge and skills to successfully implement the teaching of English in the classroom (Kabilan and Veratharaju, 2013).

In response to the new English curriculum, teachers were expected to use a range of pedagogic practices that were interactive in nature to improve pupil learning and competence in the use of English. They included the use of dialogue and discussion through, for example, the use of open questions, probing and building on pupil answers, and peer-to-peer discussion. Such dialogic approaches were to be used alongside the more traditional drilling, closed questioning and telling, thereby raising cognitive engagement and understanding.

The few studies of classroom interaction and discourse that had been carried out in Malaysian primary and secondary schools suggested one kind of talk predominated in the classroom: the so-called 'recitation script' where the teacher asks a question with a single right answer, calls on a student to respond, indicates whether the answer is correct, and moves on to another question (Martin, 2005). A recent review of the new primary English curriculum suggested little has changed in the interactive and discourse practices of teachers who had undergone the first phase of training in teaching the new primary English curriculum (Hardman and Haslynda, 2014).

An analysis of 32 English lessons showed teachers spent relatively little of the lesson time interacting with pupils: on average it occupied 35 percent of the time. Lessons normally started with action-based classroom activities such as songs and games, followed by teacher-fronted talk and by individual seat work based on tasks taken from the chalkboard or textbook. Although 5 of the 32 classes had the children sitting in a group formation of 6 or 8 pupils, no paired or cooperative group work was observed. Individual seat work on average

occupied 31% of the lesson time, often ending with teacher supervision of the class or the marking of work, with little teacher-pupil interaction taking place. It was also rare for teachers to share the learning objectives with the pupils and to use of a plenary to draw the whole class together to summarise, consolidate and extend what had been covered, and to direct pupils to the next stage of learning.

Detailed analysis of the questions asked by teacher showed they were often closed or were repeat questions, often cuing an elicitation from pupils in chorus, making up 63% of the teacher questioning exchanges. More thought provoking, open-ended questions, eliciting a range of responses, were rare, making up only 7% of the questions. Teacher direction to pupils occurred in nearly a fifth of the teacher initiation moves, reflecting a considerable use of action-based activities such as songs and games, and individual seat work. Pupil questions were rare, making up less than 1% of the initiations.

The majority of the pupil responses were choral: a combination of whole class and choral few answers. Choral responses were often very brief, fast-paced and ritualised, requiring the demonstration of little understanding on the part of the pupils. On the other hand, individual pupil responses that could be used to genuinely check on understanding through teacher probes, whereby the teacher stays with the same pupil and asks for further elaboration or explanation as to how they arrived at the answer, accounted for just under a tenth of the responses. Pupil demonstrations accounted for 21% of the responses, further evidencing the activity-based nature of the lessons made up of songs and games.

Over half of all the teaching exchanges identified lacked feedback moves. This was not surprising as a similar proportion of pupil responses were choral in the form of fast-paced, brief answers. Teacher feedback in the form of accepting and praising an answer accounted for just over a third of the feedback moves. However, this kind of feedback was often of a low level, simply accepting or affirming the answer by repeating it. Higher levels of feedback, through the use of probes to ask for further elaboration or explanation, or comments to exemplify, expand, justify or provide additional information on an answer, were rarely used, making up 3.6% of the feedback. Asking another pupil to answer a question and teacher praise (often phatic praise with no comment on the quality of the answer) accounted for 4.6% and 4.7% of the feedback respectively.

Code-switching was found to be another prominent feature of the Malaysian primary English lessons (Then and Ting, 2011). It occurred in two main forms: the mixing of English and Malay within a sentence or a stretch of discourse for reformulation, and translating directly between the two languages at the word, phrase and sentence levels. However, the analysis found there was little additional information being provided in the mother tongue through reformulations for exposition or clarification purposes. The use of code-switching also appeared to limit pupil exposure to the English language and discourage the practising of the target language. As in teachers' use of repetition, there was often little additional linguistic or conceptual understanding being added through the code-switching.

Interviews conducted with the teachers revealed they were relatively unaware of the patterns and function of teacher-pupil in the classroom. Most reported they had not been taught specific strategies as part of their PRESET and INSET, and felt there was a need for teachers to develop a deeper understanding of the role of talk in developing communicative competence. The systematic observation findings also suggested changing teachers' current pedagogical practices would require professional development courses based on the actual needs and existing practices of teachers, rather than the centralised, cascade-type (top-down) programmes currently in place in Malaysia, in line with high performing countries in the Asia-Pacific region (Suzuki and Howe, 2010).

As in other the other case studies discussed in this paper, research into the implementation of the new English curriculum in Malaysia suggests quality education is unlikely to be achieved through focusing on single initiatives alone. It will require a systemic approach that addresses the capacity and training needs of those charged with organising and providing the training, mentoring and coaching, such as teacher educators, district officials and quality assurance officers, and the creation of incentives for those teachers taking part in the training.

5. Conclusions

The growing body of research on effective professional development models for teachers from both high and low income countries reviewed in this paper provides support for the general trend in developing countries towards school-based INSET. Developing the capacity and training needs of those charged with organising and providing the training, mentoring and coaching, such as district officers and college tutors, remains a major challenge in the effective delivery of school and cluster-based training.

As discussed throughout this paper, teachers and teacher educators need to know the content of the relevant curricula and what teaching practices make a difference for students. They also need to be able to make new knowledge and skills meaningful to teachers and manageable within the practice contexts, to connect theory and practice in ways that teachers find helpful, and to develop teacher self-regulatory inquiry skills. Governments supported by the international donor community should continue to prioritise the development of teacher educators, pedagogic advisors and inspectors, as they are often overlooked in teacher professional development programmes, despite their centrality in delivering effective PRESET and INSET.

While it is vital that all children and young people acquire basic skills in literacy and numeracy, they need to be educated as responsible global citizens. Their education needs to include issues such as environmental sustainability, peacebuilding and disaster risk reduction, and the development of core transferable skills such as critical thinking, communication, cooperation, problem-solving, conflict resolution, leadership and advocacy, and the promotion of core values such as tolerance, appreciation of diversity and civic responsibility (UNESCO, 2014). It is essential that teachers are equipped with the pedagogic skills to teach such issues through the use of teacher-student and peer-peer dialogue and discussion (Alexander, 2008). It is also essential that teachers to address these themes in a manner that is relevant to the lives of the children, particularly those from the most marginalised and vulnerable communities.

For example, nomadic and pastoralist people for centuries have educated their children through traditional indigenous sources, passing on the socio-cultural and economic knowledge required to pursue their traditional occupations. However, growing urbanisation and disputes over natural resources are creating restrictions for this way of life. In order to prosper (even within their own traditional livelihoods) nomadic and pastoralist groups are finding that their indigenous forms of education are no longer sufficient, forcing them to move to urban areas where they often remain marginalised. Children from these communities are not easily accommodated by urban-orientated school systems, so enrolment is often low and almost non-existent at secondary level. In addition to curricular reform, school-based training, supported by distance learning can also help train teachers serving such remote communities (Dyer, 2006).

There is also the need to build a more rigorous evidence base for policy makers, teacher educators and teachers about the kinds of experiences that help build capacity and bring

about transformations in teaching practice and children's learning. Greater use of quasi-experimental and randomised designs with baseline and post-testing of student learning, combined with systematic observation of classroom processes, will enable both impact and process evaluations of teacher training interventions. It will help build a more robust evidence base for answering outstanding questions about the most effective approaches to teacher development. It will also help assess their cost effectiveness against other approaches to teacher education in resource poor environments. Research suggests systematic observation also works best when it is informed by a more nuanced understanding of classroom talk derived from linguistic and micro-ethnographic analysis (Mercer, 2010). It will therefore be important to capture the students' perspectives and experiences of school and classroom life, as well as eliciting teacher beliefs and understanding of their classroom practices through focus group discussions and interviews.

Such mixed-methods approaches, combining both quantitative and qualitative data, will help in the identification of promising variable and finding out 'what works' by investigating the differences between learning outcomes in schools where teachers have been trained in more dialogic approaches to help build reciprocity and student engagement compared to similar schools where teachers have not had this very directed training. Such studies will also enable the development of international benchmarks against which to evaluate and compare the status of professional development within and across countries. Longitudinal studies investigating the scale-up of national reforms to teacher education will also help build a rigorous evidence base for policy makers on the sustainability, efficiency and cost effectiveness of field-based approaches compared to other forms of professional development.

References

- Ackers, J. and Hardman, F. 2001. Classroom Interaction in Kenyan Primary Schools. *Compare: A Journal of Comparative and International Education*, Vol. 31, No. 2, pp. 245 – 261.
- Akyeampong, K., Lussier, K., Pryor, J. and Westbrook, J. 2013. Improving teaching and learning of basic maths and reading in Africa: does teacher preparation count? *International Journal of Educational Development*, Vol. 33, No. 3, pp. 272–82.
- Alexander, R. 2001. *Culture and Pedagogy: International Comparisons in Primary Education*, Malden, MA, Blackwell.
- Alexander, R. 2008. *Education for All, The Quality Imperative and the Problem of Pedagogy*, London, DFID.
- Arthur, J. and Martin, P. 2006. Accomplishing lessons in postcolonial classrooms: comparative perspectives from Botswana and Brunei Darussalam. *Comparative Education*, Vol. 42, No 2, pp. 177 – 202.
- Avalos, B. 2011. Teacher professional development in Teaching and Teacher Education over ten years. *Teaching and Teacher Education*, Vol. 27, pp. 10 – 20.
- Crossley, M., 2009. Rethinking context in comparative education. R. Cowen and K. Kazamias, K. (eds), *International handbook of comparative education*. Dordrecht: Springer, pp. 1173 – 1188.
- Crossley, M., Herriot., A. Waudu, J., Mwiroti, M., Holmes, K. and Juma, M. 2005. *Research and evaluation for educational development: learning from the PRISM experience in Kenya*. Oxford, Symposium Books.

Darling-Hammond, L., Chung Wei, R. and Andree, A. 2010. *How High-achieving Countries Develop Great Teachers*. Stanford, Calif., Stanford Center for Opportunity Policy in Education.

Darling-Hammond, L., Chung Wei, R., Andree, A., Richardson, N. and Orphanos, S. 2009. *Professional Learning in the Learning Profession: A Status Report on Teacher Development in the U.S. and Abroad*. Washington, DC, National Staff Development Council.

DeStefano, J. 2011. *Teacher Recruitment and Deployment in Malawi: A 15 year crisis*. Research Triangle Park, NC, RTI International.

Dyer, C. 2006. *The education of nomadic peoples: Current issues, future prospects*. Oxford: Berghah Books.

Hardman, F., Abd-Kadir, J., Agg, C., Migwi, J., Ndambuku, J. and Smith, F. 2009. Changing pedagogical practice in Kenyan primary schools: the impact of school-based training, *Comparative Education*, Vol. 45, No. 1, pp. 65–86.

Hardman, F., Abd-Kadir, J. and Tibuhinda, A., 2012. Reforming Teacher Education in Tanzania. *International Journals of Educational Development*, Vol. 32, pp. 826 – 834.

Hardman, F., Ackers, J., O’Sullivan, M. and Abrishamian, N. 2011. Developing a systematic approach to teacher education in sub-Saharan Africa: emerging lessons from Kenya, Tanzania and Uganda. *Compare: A Journal of Comparative and International Education*, Vol. 41, No.5, pp. 669 – 684.

Hardman, J. and A-Rahman, N. 2014. Teachers and the implementation of a new English curriculum in Malaysia, *Language, Culture and Curriculum*, 27:3, 260-277, DOI: [10.1080/07908318.2014.980826](https://doi.org/10.1080/07908318.2014.980826)

Hardman, F. Hardman, J. Dachi, H. Elliott, L. Ihebuzor, N. Ntekim, M. and Tibuhinda, A. 2015. Implementing School-based Teacher Development in Tanzania. *Professional Development in Education*, 41: 4, [10.1080/19415257.2015.1026453](https://doi.org/10.1080/19415257.2015.1026453) .

Hardman, F. Stoff, C. Aung, Wan., and Elliott, L. 2014. Developing pedagogical practices in Myanmar primary schools: possibilities and constraints. *Asia Pacific Journal of Education*, DOI: [10.1080/02188791.2014.906387](https://doi.org/10.1080/02188791.2014.906387)

Hattie, J., 2008. *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. Abingdon, Routledge.

Hornberger, N., Chick. K. 2001. Co-constructing school safetime: Safetalk practices in Peruvian and South African classrooms. M. Heller, and M, Martin-Jones (eds), *Voices of Authority, Education and Linguistic Difference*. USA: Ablex Publishing, pp. 31 – 56.

Kabilan, M.K. and Veratharaju, K., 2013. Professional development needs of primary school English-language teachers in Malaysia. *Professional Development in Education*, Vol. 39, No. 3, pp. 330 – 351.

Lall, M.2011.Pushing the child centred approach in Myanmar: The role of cross national policy networks and the effects in the classroom, *Critical Studies in Education*, Vol. 52, No. 3, pp. 219-233.

Leu, E. and Ginsburg, M. 2011. *In-service Teacher Professional Development. EQUIP1 First Principles Compendium*. Washington, DC: American Institutes for Research.

Lewin, K. M. and Stuart, J. S., 2003. *Researching Teacher Education: New Perspectives on Practice, Performance and Policy. Multi-Site Teacher Education Research Project (MUSTER) Synthesis Report*. London, DFID.

Martin, P. (2005). 'Safe' Language Practices in Two Rural Schools in Malaysia: Tensions between Policy and Practice. A.M.Y. Lin and Martin. W. P.(eds), *Decolonisation, Globalisation: Language-in-Education Policy and Practice*. Clevedon: Multilingual Matters, pp. 74 – 97.

Mattson, E., 2006. *Field-Based Models of Primary Teacher Training: Case Studies of Student Support Systems from Sub-Saharan Africa*, London, DFID.

Mercer, N., 2010. The analysis of classroom talk: Methods and methodologies. *British Journal of Educational Psychology*, Vol. 80, pp.1–14.

Ministry of Education. 2011. *Malaysian English Language Curriculum for Primary Schools*. Kuala Lumpur: Curriculum Development Division, Ministry of Education.

Moon, B. 2007. School-based teacher development in sub-Saharan Africa: Building a new research agenda. *Curriculum Journal*, Vol. 18, No. 3, pp. 355 – 371.

Mulkeen, A. 2010. *Teachers in Anglophone Africa: issues in teacher supply, training and management*. Washington DC, The World Bank.

Ngware, M., Oketch, M. and Mutisya, M. 2014. Does teaching style explain differences in learner achievement in low and high performing schools in Kenya? *International Journal of Educational Development*, Vol. 35, pp. 3 – 12.

OECD. 2011. *Building a High Quality Teaching Profession: Lessons from around the world*, Paris, OECD publishing.

O-saki, K.M. and Agu, A.O., 2002. A study of classroom interaction in primary schools in the United Republic of Tanzania. *Prospects*, Vol. 32, No. 1, pp. 103 – 116.

O'Sullivan, M. C., 2006. Lesson observation and quality in primary education as contextual teaching and learning processes, *International Journal of Educational Development*, Vol. 26, pp. 246 – 260.

O'Sullivan, M. C., 2010. Educating the teacher educator - A Ugandan case study. *International Journal of Educational Development*, Vol. 30, pp. 377-387.

Perraton, H. 2010. *Teacher Education: The Role of Open and Distance Learning*. Vancouver, BC., Commonwealth of Learning.

Pontefract, C. and Hardman. F. 2005. The discourse of classroom interaction in Kenyan primary schools. *Comparative Education*, Vol. 42, No. 1, pp. 87–106.

Pryor, J., Akyeampong, K., Westbrook, J. and Lussier, K. 2012. Rethinking teacher preparation and professional development in Africa: an analysis of the curriculum of teacher education in the teaching of early reading and mathematics. *The Curriculum Journal*, Vol. 23, No. 4, pp. 409–502.

Riddell, A. 2008. Factors Influencing educational quality and effectiveness in developing countries: A review of research. Bonn, GTZ.

SACMEQ. 2010. SACMEQ III Project Results. Available at: www.sacmeq.org

Save the Children. 2012. *Review: Teacher Support and Development Interventions*. London, Save the Children.

Schweisfurth, M., 2011. Learner-centred education in developing contexts: From solution to problem? *International Journal of Educational Development*, Vol. 31, pp. 425 – 432.

Schweisfurth, M. 2013. *Learner-centred Education in International Perspective: Whose Pedagogy for whose development?* Oxford, Routledge.

Schulle, J. Dembele, M. and Schubert, J. 2007. *Global perspectives on teacher learning: improving policy and practice*. Paris, UNESCO – International Institute for Education Planning.

Suzuki, S. and Howe, E. R. 2010. *Asian perspectives on teacher education*. London, Routledge.

Then, D.C.O. and Ting, S.H. 2011. Code-switching in English and science classrooms: more than translation. *International Journal of Multilingualism*, Vol. 8, No. 4, pp. 299 -323.

Tikly, L., 2011. Towards a framework for researching the quality of education in low-income countries. *Comparative Education*, Vol. 47, No. 1, pp. 1 – 23.

Timperley, H. 2011. *Realising the power of professional learning*, London, Open University Press.

UNESCO. 2005. *EFA Global Monitoring Report: Education for All – The Quality Imperative*, Paris, UNESCO.

UNESCO. 2010. *EFA Global Monitoring Report 2010: Reaching the Marginalized*. Paris, UNESCO.

UNESCO. 2011. *EFA Global Monitoring Report 2011: The Hidden Crisis – Armed Conflict and Education*. Paris, UNESCO.

UNESCO. 2014. *EFA Global Monitoring Report 2014: Teaching and Learning: Achieving quality for all*. Paris, UNESCO.

UNICEF. 2009. *The Quality of Teaching and Learning in Tanzanian Primary Schools: A Baseline Study*. Dar es Salaam, UNICEF.

UNICEF. 2012. *Development of a Teacher Education Strategy Framework Linked to Pre- and In-Service Teacher Training in Myanmar*. Myanmar, UNICEF.

Vavrus, F., 2009. The cultural politics of constructivist pedagogies: Teacher education reform in the United Republic of Tanzania. *International Journal of Educational Development*. Vol. 29, pp. 303-311.

Westbrook, J. Durrani, N. Brown, R. Orr, D. Pryor, J., Boddy, J. and Salvi, F. 2013. *Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries*. London, Institute of Education, EPPI Education Rigorous Literature Review. London.

Yang, L.F. and Ishak, S.A. 2012. Framing controversy over language policy in Malaysia: the coverage of PPSMI reversal (teaching of mathematics and science I English) by Malaysian newspapers. *Asian Journal of Communication*, Vol. 22, No. 5, pp. 449 – 473.